

**Montana Board of Regents
Great Falls College-MSU
May 22-23, 2019
MINUTES**

Wednesday, May 22nd

Meeting convened at 8:32am

A roll call indicated a quorum present.

Regents Present: Bob Nystuen, Acting Chair; Paul Tuss; Martha Sheehy; Casey Lozar; Joyce Dombrowski; Brianne Rogers; and Dalton Johnson. Ex officio members included: Commissioner of Higher Education Clayton Christian; Ex officio Governor Steve Bullock, represented by Ms. Siri Smillie, and Ex officio Superintendent Elsie Arntzen.

Comments by Chair Nystuen

Chair Nystuen welcomed all attendees to the meeting and extended thanks to Dean Wolff and the staff and Great Falls College-MSU for hosting the meeting. Chair Nystuen extended well-wishes and congratulations to all recent graduates across the Montana University System (MUS). He noted the Regents' participation at commencement events across the state. Chair Nystuen expressed thanks to Student Regent Dalton Johnson for his work and dedication on the Board of Regent over the past year.

Welcome by Dean Wolff

Dean Wolff welcomed all meeting attendees. She gave a presentation detailing who Great Falls College-MSU serves, highlighting their commitment to students and the community alike. She described recent growth at the institution, noting a 4% overall increase since 1980. Dean Wolff discussed the percentage of dual enrollment students per semester which has increased from 5% in Summer of 2018 to 32% in Spring of 2019 this equates to 633 students and 4,272 total credit hours for a savings of \$803,900 for dual enrollment students for FY19. She highlighted the many successful partnerships GFC-MSU has within its community. Dean Wolff recapped a few of GFC-MSU academic program offerings including dental hygiene, nursing, computer information technology, and more. She shared feedback related to the 8 Week Advantage pilot; feedback supported five main themes including the shortened time to course completion; ability to take more courses; focus on fewer courses at a time; learning; motivation; and flexibility with work. Dean Wolff also discussed the successes associated with the Great Falls Career and College Readiness Center, which focuses on helping teens and adults improve their reading, writing, math skills, and more. She also shared information about Bright Horizons and Bright Beginnings, a new on-site child-care center located at GFC-MSU, currently with 82 FTE enrollees.

Approval of Minutes

- March 7-8, 2019 Meeting Minutes

A motion for approval of the March 7-8, 2019 meeting minutes was made by Regent Lozar; motion passed 7-0.

- April 5, 2019 Executive Session

A motion for approval of the April 5, 2019 meeting minutes was made by Regent Lozar; motion passed 7-0).

Commissioner's and System Report

Commissioner Christian acknowledged the number of graduates across the system and commended their dedication and grit as well as acknowledging the faculty and staff across the MUS their hard work and dedication. Commissioner Christian welcomed Dr. David Yarlott, representing the Tribal Colleges, to the meeting and thanked him for the continued partnerships and coordination between the MUS and Tribal College campuses. Commissioner Christian thanked everyone across the MUS for their hard work throughout the Legislative Session. He extended thanks to his team at the OCHE office, to Governor Bullock for his positive support of higher education, and the Legislators themselves. Commissioner Christian briefly discussed legislation in support of tuition freeze, need-based aid, etc. He addressed the veto of HB 735 – Revise campus free speech laws; he stressed the MUS's support of free speech but clarified that there were other issues within the bill that created concern. Commissioner Christian pledged that all MUS campuses would be asked to review their policies and procedures related to free speech to ensure the system is being supportive. He spoke to the efforts associated with program prioritization; reminding attendees that it was the Board of Regents who asked campuses to conduct prioritization to ensure that we are a good steward of limited state resources and that we are responsive to needs and interests of both students and local industry.

- Legislative Summary

Deputy Commissioner Tyler Trevor provided a summary overview of the 2019 Legislative Session. A tuition freeze agreement between Governor Steve Bullock and the Montana University System (MUS) was signed during the 2019 Legislative Session. The agreement states that the MUS will implement a resident undergraduate student tuition freeze for the 2020 and 2021 fiscal years if certain funding levels are provided. Mr. Trevor noted that the agreement hinges on factors such as present law adjustments, six-mill levy revenue, state employee pay plan; performance funding; and no shifting of cost to fees. The 2019 Legislature appropriated sufficient levels of funding for the tuition freeze agreement to be implemented. State appropriations include an increase of \$29.4 million in present law adjustments and pay plan funding to MUS Ed. Units. He discussed the rise in state funding over the biennium, noting an 8% increase between HB 2 and HB 175. He discussed legislation related to building, maintenance,

and authority noting that Romney Hall, the Dental Clinic Lab, and Research Labs were approved at \$31.25 million in cash/bond (\$7 million in authority). Deferred maintenance was funded at \$4.5 million, and authority only projects were approved at \$62.5 million for the following projects.

- General Spending Authority, MUS, \$16M
- American Indian Hall, MSU, \$12M
- Remodel Harrison Hall, Hospitality Management, Gallatin College, MSU, \$4M
- Facilities Services Yard Relocation, MSU, \$9M
- Visual Communications Building Addition, MSU, \$12M
- Renovate Renne Library, MSU, \$1.5M
- Upgrade Donaldson Hall, MSU-Northern, \$6M
- Upgrade McKenzie Hall Systems, MSU-Northern, \$2M

Deputy Commissioner Trevor discussed other legislation including SB 60 which generally revises the MT STEM Scholarship by shifting Lottery funding from the last dollar to the first dollar and extends the number of years that students can receive scholarships from two to four. HB 61 allows OPI to share students' personally identifiable information from a statewide assessment/college entrance exam with postsecondary education institutions, testing agencies under contract with a state entity to provide a college entrance exam to students, or with scholarship organizations. SB 218 exempts resident hall advisors who receive free or reduced housing in a university facility from minimum wage and overtime compensation requirements. HB 553 revamps the bonding process for the State of Montana by establishing new guidelines and structure. This bill sets a limit on the amount of general obligation bond debt that the state can accrue. It establishes a new process for obtaining maintenance funds from the legislature based on submittal of a prioritized list of projects and creates new funding criteria (80% life safety, 20% remodel/aesthetics). HB 619 allows OPI to share student-level information with OCHE and the Montana Department of Labor and Industry for research directed at ensuring that Montana's K-12 system meets the expectations of the Montana University System and the workforce needs of the state. HB 657 is an Interim study by the Legislative Finance Committee with a focus on Community College funding formula and Career & Technical Education credit values. HB 716 directs OCHE to negotiate the terms of a memorandum of understanding between the Board of Regents and the Idaho College of Osteopathic Medicine to establish a cooperative medical education program for Montana residents. Upon full accreditation of the college in 2022, the program will make up to 10 slots per year available to Montana residents. The state-funded support fee will be equivalent to the WICHE osteopathic medicine support fee and should be included in the preliminary budget submitted by the Board of Regents next biennium. HB 754 creates a study commissioner to review MUS restructuring. The

commission will focus on the history and structure of 2-year education within the MUS, analyzing the impacts of restructuring that occurred in the 1990's on 2-year campuses, governance structures in other states, the demand for career and technical education, and the potential for restructuring 2-year Education in the MUS to enhance career and technical education. Discussion followed.

- Enrollment Report

Director John Thunstrom, Montana University System IT, provided an enrollment report for FY19. He noted that Fiscal Year 19 numbers include end of term counts for Summer and Fall of 18 and the most current, but not finalized Spring 19 numbers. Resident totals reached a historic peak in FY11 and have been on the decline since. Non-resident totals gradually increased through FY17 but have begun to stabilize or slightly decrease over the past three years. He noted the most substantial increases in non-residents have been at MSU-Bozeman, masking flat or decreasing out-of-state enrollments for the other schools. Looking at the Regional 4-year schools we see some variations, but largely totals have returned to or remained at FY11 levels. Resident enrollments, as we saw earlier, have primarily been on the decline. MSU Bozeman is the only 4-year campus to increase resident student enrollment over the last ten years. Focusing on the 2-year schools, we've again seen some declines over the previous several years. There are exceptions to that trend, which can be seen in the growth at MCC, DCC, and Gallatin Colleges recently. Dashboard metrics across the system were reviewed. Discussion followed.

- Campus Reports (Linked to agenda)
- Introductions & Acknowledgements

Commissioner Christian reported a number of changes at OCHE related to staff and positions which are part of a broad restructuring effort. He acknowledged and welcomed new staff members including Ms. Jessica Weltman, MUS Compliance Officer; Ms. Diedra Murray, MUS Internal Auditor; Ms. Katy Brooke, Perkins Program Manager; Ms. Rebecca Power, Academic Initiatives Analyst; Mr. Brian O'Connor, MUS Chief Procurement Officer; and Ms. Shauna Lyons, MUS Budget Analyst. Commissioner Christian discussed other changes across the system including welcoming incoming Chancellor Dr. Les Cook to MT Tech and incoming Dean at Helena College, Dr. Laura Vosejpka. He acknowledged other changes including a new role for Dr. Kirk Lacy that is focused on leadership and coordination of CTE. Commissioner Christian extended thanks to Dr. Don Blackketter, Chancellor of the Montana Technological Institution and Dr. Stacy Klippenstein, President of Miles Community College, for their many years of service to the students and state of Montana and wished them well in all future endeavors.

Campus introductions were made to welcome and acknowledge staffing changes at MSU-Bozeman, UM-Missoula, and MT Tech.

- Other

Remarks by Superintendent Arntzen

Superintendent Arntzen shared with the Board a draft legislative summary detailing the 166 pieces of legislation related to education. She spoke to the importance of school safety and discussed teacher retention and recruitment across the state, noting the importance of having quality educators in classrooms. Superintendent Arntzen expressed thanks to Director Jacque Treaster for her support and leadership on Perkins V. She reiterated her commitment to continued partnerships with the MUS and State of Montana.

What's Up Great Falls?

Mr. Bob Kelly, Mayor, City of Great Falls; Ms. Teresa Schreiner, Investment Director, Great Falls Development Authority; and Mr. Shane Etwiler, President, Great Falls Area Chamber of Commerce convened as a panel before the Board. Mr. Etwiler spoke to the recent awards that Great Falls has received for being one of the best places for small businesses to start and develop. He spoke about the "Choose Great Falls" effort; a recruitment effort to encourage people to move to Great Falls and connect them with local leaders. Mr. Etwiler discussed various outreach opportunities and initiatives to better connect people with local job opportunities. He addressed the issue of workforce and similar efforts related to job shadowing and internships and how this helps to introduce higher education into people's lives. He discussed the various partnerships in place with GFC-MSU and their success. Mr. Etwiler mentioned the future opportunities associated with growth at Boeing and the need to work early to identify workforce needs and develop corresponding programs and educational pathways. Ms. Schreiner spoke to the unique demographic make-up of Great Falls and the number of opportunities at hand currently, thanks in part to the partnerships with GFC-MSU. She talked about the rebranding of the College Readiness Program and the exceptional tailoring and recognition of what Great Falls needs related to the workforce shortage. She spoke to recent growth in the Great Falls Downtown area and the budding business improvement plan. Mayor Kelly noted that success in Great Falls is due to the excellent partnerships in place. He stressed that Great Falls is a community on the rise and its choice to invest in itself. Mayor Kelly spoke to the need for creative innovations to better meet the needs of our changing society.

Two-Year and Community College Committee

INFORMATION

a. iGraduate

Director of American Indian / Minority Achievement and K-12 Partnerships Angela McLean presented an update on iGraduate and the 2019-2020 awardees efforts to date. Director McLean discussed an upcoming meeting over the summer in Helena to

discuss CTE, College Application Week, FAFSA Completion, College Signing Day, and Best Practices. Thanks and appreciation for this initiative were extended to the Dennis and Phyllis Washington Foundation.

b. Dual Enrollment

Director of Dual Enrollment and Career & Technical Education, Jacque Treaster presented an update on Dual Enrollment and the One, Two, Free Initiative. Director Treaster noted the growth in the number of participants from the last academic year, up 20% and the 16% growth in Dual Credit from the previous academic year. She reported that 20,119 credits were earned during the 2018-2019 school year. She reviewed the rates of growth related to dual enrollment over the last two academic years. Discussion followed.

c. Phi Theta Kappa

Ms. Heather Wells presented an update on Phi Theta Kappa, noting the mission of Phi Theta Kappa is to recognize academic achievement of college students and to provide opportunities for them to grow as scholars and leaders. Ms. Wells, Dean Wolff, President Klippenstein, and President Karas acknowledged and celebrated nine students across the MUS for their excellent work as PTK inductees.

d. *UM Become an Alum Initiative*

Commissioner of the Department of Labor and Industry, Galen Hollenbaugh, spoke to this pilot project and how it relates to an expected workforce exodus leading to a significant workforce challenge coupled with a low unemployment rate in the state. He spoke to the importance of combining data related to college completions and annual salaries. He discussed approaches and ideas about how to tackle this issue. Commissioner Hollenbaugh noted that this program was developed off an existing effort on the UM campus. Staff is working to make contact with those individuals how have some previous college credits to see why the individual stopped pursuing their postsecondary education and see if they can assist them in getting back on track toward degree completion. He noted that through a combined approach of mail, email, and phone outreach, 885 individuals have been contacted. A significant portion of these individuals reported that significant barriers restricted them from further pursuing a postsecondary degree. Discussion followed.

e. Perkins

Deputy Commissioner Tessman noted that this is a project of partnership with multiple stakeholders including K-12 partners, business industry, and the Legislature. Dr. Tessman reiterated the interest, throughout the Legislative Session, toward Career and Technical Education (CTE). Supporting this interest, a set of shared policy goals have been developed that OCHE will pursue over the next year to help further and achieve these goals. He explained that the success of the shared policy goals is strongly tied to

the successful implementation of the Perkins Grant, recently reauthorized. Dr. Tessman explained that Perkins is a \$60 million grant spread throughout the postsecondary and secondary education system in Montana, over a decade. He noted that Department of Education has encouraged states to be bold in crafting new state plans and being innovative in the way we train the workforce in Montana.

Budget, Audit and Administration Committee

CONSENT

- a. Request for Approval of University/System/Employee Equity Interest and/or Business Participation Under MUSP 407 - Youngbull; UM Missoula *ITEM 183-1009-R0519 | Attachment #1*
- b. Request for Approval of University/System/Employee Equity Interest and/or Business Participation Under MUSP 407 - Youngbull; UM Missoula *ITEM 183-1010-R0519 | Attachment #1*
- c. Request for Approval of University System/Employee Intellectual Property Joint Participation under MUSP 407 Sofie; MSU *ITEM 183-2005-R0519 | Attachment #1*
- d. Request for Authorization to Execute a Utility Easement with Northwestern Energy-Lambert Turf Complex, MSU *ITEM 183-2008-R0519 | Attachment #1*
- e. Request for Authorization to Execute a Utility Easement with Northwestern Energy-New Residence Hall; MSU *ITEM 183-2013-R0519 | Attachment #1*
- f. Request for Authorization to Renew the Operating Agreement between MSU and the MSU Foundation; MSU *ITEM 183-2006-R0519 | Attachment #1*
- g. Request for Authorization for the University of Montana to Enter into an Operating Agreement with the University of Montana Foundation; UM Missoula *ITEM 183-1006-R0519 | Attachment #1*
- h. Request for Approval of Operating Agreement between Montana Technological University and the Montana Tech Foundation; MT Tech *ITEM 183-1504-R0519 | Attachment #1*
- i. Request for Authorization for Amendment to the Operating Agreement between MSU-Northern and the Montana State Northern Foundation; MSU-Northern *ITEM 183-2802-R0519 | Attachment #1*
- j. Request for Authorization to Transfer Lewistown Property; MSU-Northern *ITEM 183-2801-R0519 | Attachment #1*

Staff Items:

- k. OCHE Staff Item | *ITEM 183-100-R0519*
- l. MT Tech Staff Item | *ITEM 183-1500-R0519*
- m. MSU Bozeman Staff Item | *ITEM 183-2000-R0519*
- n. MSU-Billings Staff Item | *ITEM 183-2700-R0519*
- o. MSU-Northern Staff Item | *ITEM 183-2800-R0519*

Emeriti Faculty:

- p. Mock; UM-Western *ITEM 183-1601-R0519*
- q. Wolfgram; MT Tech *ITEM 183-1501-R0519*
- r. Handley; MT Tech *ITEM 183-1502-R0519*
- s. Blackketter; MT Tech *ITEM 183-1503-R0519*
- t. Camper; MSU Bozeman *ITEM 183-2001-R0519*
- u. Stephens; MSU Bozeman *ITEM 183-2002-R0519*

ACTION

- a. 2021 Biennial Budget Recommendations; OCHE *ITEM 183-101-R0519*

Deputy Commissioner Trevor presented this request for the Board of Regents to adopt the 2021 Biennial Budget Recommendations for setting tuition and fees, allocating state appropriations, and distributing performance funding.

1. Tuition | Campus Tuition & Fee Schedules

Deputy Commissioner Trevor reviewed the tuition proposal noting the proposed resident student tuition freeze (both undergrad and graduate). He discussed the low to moderate non-resident tuition increases at a few campuses. He reported that MUS 4-year campuses resident tuition rates remain well below regional averages. MUS two-year campus resident tuition rates are close to regional averages. Deputy Commissioner Trevor also reported that the MUS 4-year campus non-resident tuition rates are also close to the national averages. He explained that over the past ten years, tuition increase in the western region has grown over twice as much as the MUS. The ratio of tuition and fees compared to median household income mirrors regional averages. Discussion followed.

1. Fees | Mandatory Fees Dashboard

Deputy Commissioner Trevor reviewed fees including mandatory fees, program and course fees, and room and board fees. He described mandatory fees, per BOR policy 940.12.1, as those assessed to all students registering at the campuses regardless of the academic program or course of study chosen by the student. The mandatory fee categories include athletic fees, building and facilities fees, building and facilities (non-

resident only), and computer/technology fees, equipment fees, health service fees, library fees, recreation fees, student government/activity fees, student support fees, and student union fees. Mr. Trevor stated that the annual increase in mandatory fees does not exceed 3% at any campus. Campuses who have recommended mandatory fee increases (above the 3% benchmark) include UM-Missoula who is seeking a student success fee; MSU-Billings who is seeking a health fee increase; Helena College who is seeking Student Government Fee increase; and Great Falls College-MSU who is seeking a mental health/counselor fee. Mandatory fees at most MUS 4-year campuses are above the regional average. Mandatory fees at most MUS 2-year campuses are below the regional average. The rates in Montana have ranged from \$100-\$250 higher than the regional average for the past ten years. Discussion followed.

Program Fees were discussed, which are additional fees assessed to students in certain high-demand occupational/professional/academic programs. Course fees are assessed to cover the unique or extraordinary costs associated with the delivery of a specific course. Appropriate uses of course fees are limited to specialized activities or equipment fees; field trips; study abroad programs; pass-through fees; laboratory consumables and class consumables; materials used by students to create a product that becomes the student's property after use in a specific course. Campuses discussed their respective program fee increase requests, including MT Tech and the University of Missoula. Deputy Commissioner Trevor reviewed room and board average annual rates noting the percentages of change per campus from FY13 to FY21. He examined the cost of attendance for academic year rates for full-time resident undergraduate students; this includes tuition and fees plus room and board. Deputy Commissioner Trevor discussed the cost of attendance on a national comparison noting that Montana is still below the national average cost of tuition and fees in addition to room and board. He reiterated that freezing tuition doesn't ensure a cap or reduction in the cost of attendance.

2. State Funding Allocation

Deputy Commissioner Trevor reviewed the proposed 2021 biennial appropriation for Program 9 – Ed. Unit base funding. He discussed the legislative audit costs, fixed cost increases, revenue associated with the 6 Mill Levy, which produces a biennial total of \$24,020,428.00. This \$400 million is the total education unit lump sum over the biennium, with the recommendation that \$350,000 per year be designated as regents priority funds; adding in the pay plan of \$5.1 million results in an increase of 7.8% over the base year for Program 9 – Ed. Unit base funding. Three metrics 1) state dollars per resident FTE, 2) State percentage share, and 3) total revenue per student were used to benchmark and assess change. Discussion followed.

3. Performance Funding

Deputy Commissioner reviewed the proposed FY 2020 allocation for MUS performance funding. He reviewed individual campus allocations for FY20 noting that the majority of

campuses are fully funded except for MSU-Billings who did not reach their performance level, and Helena College, which received 87% of the eligible amount. Discussion followed.

b. Campus Requests for Mandatory Fee Increases

1. Request for Authorization to Increase the Health Services Mandatory Fee; MSU-Billings *ITEM 183-2702-R0519 | Attachment #1 | Attachment #2*

Chancellor Edelman of MSU-Billings presented this request for the Board of Regents of the Montana University System to authorize Montana State University Billings, per Board of Regents Policy 940.12.1, to increase the health services mandatory fee as supported by the student government.

2. Request for Authorization to Establish a Counseling Fee; Great Falls College MSU *ITEM 183-2901-R0519 | Attachment #1 | Attachment #2 | Attachment #3*

Chief Student Affairs Officer of Great Falls College-MSU, Mary Kay Bonilla, presented this request, consistent with BOR Policy 940.12.1 (Tuition and Fee Approval) and BOR Policy 506.1 (Student Participation in Fee Decisions), for the Board of Regents of the Montana University System to approve the establishment of a new Counseling Fee, to be phased in over the two years of the 20-21 biennium.

3. Request for Authorization to Increase ASHC Student Fee; Helena College *ITEM 183-1905-R0519 | Attachment #1 | Attachment #2*

Dean Kirk Lacy, of Helena College, presented this request for the Board of Regents to authorize Helena College UM, on behalf of the Associated Students of Helena College (ASHC) to raise the current fee of \$15 per student each semester to \$35 per student each semester.

4. Request for Authorization to Initiate a Student Success Fee Mandatory Fee; The UM-Missoula *ITEM 183-1012-R0519 | Attachment #1*

Vice President of Administration and Finance at UM, Mr. Paul Lasiter, presented this request per Board of Regents Policy 940.12.1, for the Board of Regents to authorize the University of Montana to initiate a Student Success mandatory fee as supported by administration and student government. Regent Tuss expressed his concerns with the title of the fee; conversation followed about adjusting the title to a more accurate description of student support fee. Discussion followed.

- c. Revisions to the Performance Funding Model – Under-represented Groups; OCHE/MUS *ITEM 183-105-R0519 | Attachment #1*

Deputy Commissioner Trevor presented this request asking that the Board of Regents adopt recommendations for revising the performance funding model to strengthen the connection between the performance metrics for under-represented student groups and the allocation of performance funds. Discussion followed.

- d. Revision to BOR Policy 940.3 – Mandatory Fees; OCHE *ITEM 183-102-R0519 | Attachment #1*

Deputy Commissioner Trevor presented this request to the Board of Regents asking them to approve a revision to BOR Policy 940.3, striking language that exempts UM Law School students from paying regular student activity fees. In May 2018, the Taskforce brought forward a series of recommendations that consolidated and updated fee policies into a new overarching policy. One item that was left unresolved was the exemption for UM Law School students from the student activity fee. Since then, UM has determined that the student activity fee will be charged to all of its students, thus eliminating the need for the exemption language in Policy 940.3. Discussion followed.

- e. Distribution of Timber Sales Revenue; OCHE/MUS *ITEM 183-103-R0918 | Attachment #1 | Attachment #2*

Deputy Commissioner Trevor presented the request to the Board of Regents of Higher Education to elect to continue to designate trust land timber sales revenue as distributable revenue in years FY2020 through FY2021. Section 17-3-1003(4), MCA, requires the Board of Regents to designate, at least once a biennium, whether the timber sale proceeds from Montana University System lands must be distributed to the beneficiaries or placed in the permanent trust. Campuses will use the money as set forth in Policy 901.12, for the repayment of debt to which these revenues are pledged, the elimination or reduction of chronic or material negative fund balances, or for deferred maintenance and equipment and fixed asset expenditures that are non-recurring in nature. Discussion followed.

- f. Request for Authorization to Increase Authority and Expend Student Fees for American Indian Hall Project; MSU *ITEM 183-2011-R0519 | Attachment #1 | Attachment #2*

Director of Operations & Administration/Student Affairs, Mr. Ron Muffick, presented this request, Consistent with the provisions of MCA 18-2-102(c) and BOR policy 1003.7, before the Board of Regents of Higher Education to authorize MSU to expend up to \$20,000,000 to construct a new American Indian Hall. Consistent with Board Policy 940.9.2, the Board of Regents of Higher Education authorize MSU to apply \$2,000,000

in Student Building Fees Reserves to the American Indian Hall project. Discussion followed.

- g. Request for Authorization to Renovate Romney Hall, MSU [ITEM 183-2012-R0519](#) | [Attachment #1](#)

Director of Operations & Administration/Student Affairs Mr. Ron Muffick, presented this request, consistent with the provisions of MCA 18-2-102 2(c), BOR policy 1003.7, and as authorized in House Bill 652 of the 2019 66th Legislative session, for the Board of Regents of Higher Education to authorize MSU to renovate Romney Hall to provide modern instructional and student support facilities. The requested authority is for a total project cost of \$32,000,000. Discussion followed.

- h. Request for Authorization to Construct of Greenhouse Laboratories; MSU [ITEM 183-2301-R0519](#) | [Attachment #1](#) | [Attachment #2](#)

Director of Operations & Administration/Student Affairs Mr. Ron Muffick presented this request, consistent with the provisions of MCA 18-2-102 2(c), BOR policy 1003.7, and as authorized in House Bill 652 of the 2019 66th Legislative session, that the Board of Regents of Higher Education authorize New Construction of MAES Headhouse/Greenhouse Research Laboratories at four Research Centers (Central, Northern, Southern and Western Triangle). The requested authority is for a total project cost of \$2,000,000.

- i. Request for Authorization to Construct a new Dental Clinic and Dental Assisting/Dental Hygiene Lab; Great Falls College MSU [ITEM 183-2902-R0519](#) | [Attachment #1](#) | [Attachment #2](#)

Director of Operations & Administration/Student Affairs Mr. Ron Muffick presented this request consistent with the provisions of MCA-18-2-102(2)(c) and as authorized in House Bill 652 of the 2019 66th Legislative session, that the Board of Regents of Higher Education authorize Great Falls College Montana State University to construct a new Dental Clinic and Dental Assisting/Dental Hygiene Lab. This authorization provides authority to a total of \$4.25 million.

- j. Request for Authorization to Expend State Funds for Deferred Maintenance; OCHE/MUS [ITEM 183-106-R019](#)

Director of Operations & Administration/Student Affairs Mr. Ron Muffick presented this request that The Board of Regents of Higher Education authorizes campuses to expend \$4.55 million in State funds, contained in House Bill 5 of the 66th legislative session. These would be used for deferred maintenance projects as prioritized and determined by the Office of the Commissioner of Higher Education, Montana State University and University of Montana facilities and planning staff and the Department of Administration Architecture and Engineering Division.

- k. Request for Authorization of Social Sciences Datacenter Project; UM-Missoula
ITEM 183-1008-R0509

Director of Operations & Administration/Student Affairs Mr. Ron Muffick presented this request consistent with Board of Regents Policy 1003.7, the University of Montana-Missoula requests authorization from the Montana the Board of Regents of Higher Education to implement steps necessary to construct a new data center on the first floor in Social Sciences and decommission old data center in Social Sciences 002.

- l. Request for Authorization for Improvements to Existing Intercollegiate Student-Athletic Support Areas located in Washington-Grizzly Stadium and the Adams Center; UM-Missoula *ITEM 183-1007-R0519 | Attachment #1*

Director of Operations & Administration/Student Affairs Mr. Ron Muffick presented this request for The University of Montana – Missoula to receive authorization to implement steps necessary to make improvements to existing student-athlete support areas within Intercollegiate Athletics, consistent with Board of Regents Policy 1003.7. The overall project consists of multiple phases that include men’s basketball, women’s basketball, volleyball and track locker rooms, and an athletic equipment center. This request is for Phase one (1) which is to repair and improve the existing building envelope and phase two (2) which is to construct a new men’s basketball locker room and install infrastructure for a new equipment center. Discussion followed.

- m. Request for Authorization to replace Rimrock Hall Passenger Elevators (2); MSU-Billings *ITEM 183-2701-R0519*

Director of Operations & Administration/Student Affairs, Mr. Ron Muffick, presented this request before the Board of Regents of the Montana University System to authorize Montana State University Billings to expend up to \$450,000 for the design and construction of two replacement passenger elevators in Rimrock Hall per Board of Regent Policy 1003.7.

- n. Request for Authorization to Construct, Maintain, Repair and Replace New and Existing Parking, Street and Access Facilities; MSU-Bozeman *ITEM 183-2010-R0519 | Attachment #1*

Director of Operations & Administration/Student Affairs Mr. Ron Muffick, presented this request, Consistent with the provisions of MCA-18-2-102(2)(b) and BOR Policy 1003.7, for the Board of Regents of Higher Education to authorize Montana State University to construct, maintain, repair and replace new and existing parking, street and access facilities at MSU-Bozeman. This request is for \$2,500,000.

- o. Request for Authorization to Execute a Lease for the MSU Nursing Program at Kalispell; MSU ITEM 183-2014-R0519

Director of Operations & Administration/Student Affairs, Mr. Ron Muffick, presented his request, per Board of Regents Policy 1003.6, for the Board of Regents of the Montana University System to authorize Montana State University to renew its off-campus lease for space to accommodate the MSU Nursing Program at Kalispell.

- p. Request for Authorization to Execute a Lease for the MSU Nursing Program at Great Falls; MSU ITEM 183-2007-R0519

Director of Operations & Administration/Student Affairs, Mr. Ron Muffick, presented this request, per Board of Regents Policy 1003.6, for the Board of Regents of the Montana University System to authorize Montana State University to renew its off-campus lease for space to accommodate the MSU Nursing Program at Great Falls.

- q. Request for Authorization to Execute a Lease for Mil-Tech Research Space; MSU ITEM 183-2009-R0519

Director of Operations & Administration/Student Affairs, Mr. Ron Muffick, presented this request, per Board of Regents Policy 1003.6, for the Board of Regents of the Montana University System to authorize Montana State University to enter into an off-campus lease for space to accommodate Mil-Tech, a growing research entity.

- r. Request for Authorization to Execute a Lease for Research and Office Space at CFT 2; MSU ITEM 183-2015-R0519

Director of Operations & Administration/Student Affairs, Mr. Ron Muffick, presented this request per Board of Regents Policy 1003.6, that the Board of Regents of the Montana University System authorizes Montana State University to enter into an off-campus lease for space to accommodate research and office space.

- s. Request for Authorization to Exclude Certain Officers/Directors from Personnel Security Clearance; MSU Bozeman ITEM 183-2003-R0519 | Attachment #1

Director of Operations & Administration/Student Affairs, Mr. Ron Muffick, presented this request, noting that the Board of Regents has reviewed and considered the Exclusion Resolution to exempt members of the Board of Regents from having to meet Department of Defense personnel security clearance requirements necessary for the Applied Research Laboratory at Montana State University. Therefore, seeking the Board of Regents approval to adopt the attached Exclusion Resolution. Discussion followed.

INFORMATION

- a. MUS Internal Audit Update

Montana University System Internal Auditor, Ms. Diedra Murray, reviewed internal audit with the Board of Regents. She stressed that internal auditing is an independent,

objective assurance and consulting activity designed to add value and improve an organization's operations. Internal auditing helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes. Ms. Murray reviewed how internal audit adds value through assurance, insight, and objectivity. She clarified current steps of working with internal audit staff at MSU and UM; reviewing other university systems' internal audit structure and processes; developing a system-wide strategic plan for internal audit; developing a system-wide audit charter; developing a system-wide audit manual and reviewing Board Policy. She detailed next steps which include discussing risks, needs, and expectations; evaluating risk and conducting an assessment at a system-wide level; developing audit prioritization and audit plan; conducting fieldwork; reporting and following-up with the Board. Discussion followed.

b. Annual Facilities Projects Authority Update MSU | Attachment #1 & UM | Attachment #1

Deputy Commissioner Trevor reported to the Board, consistent with the provision of Regent's Policy 1003.7, MSU and UM reports for the status of existing project authority approved by the Board of Regents, and Legislative Authority. Discussion followed.

Public Comment

Dr. Don Blacketter, Chancellor at MT Tech shared farewell remarks, reflected on his time servings as Chancellor at MT Tech since 2011 and extended thanks to the MT Tech Faculty, Staff, Commissioner Christian and Dr. Royce Engstrom for their support over the years.

Ms. Savannah Merritt, incoming President for ASMSUB, spoke in support of the health services mandatory fee at MSU-Billings.

Ms. Abigail Belcher, incoming president for ASUM, spoke in support of the student success fee at UM-Missoula.

Ms. Hannah Johnson, outgoing President as ASUM-Helena, spoke in support of the fee increase proposed for Helena College.

Mr. Collin King, an MSU student in the Cell Biology and Neuroscience program submitted a student-led petition for the official record and spoke against the recent dissolution of the Cell & Neuroscience Department at MSU-Bozeman.

Dr. Roger Bradley, former Department Head of Cell Biology and Neuroscience at MSU , spoke against the folding the program into the new school of Human Biology and expressed his concerns and frustrations with this change.

Mr. Jake Fisher, a student at MSU, spoke in support of the Cell Biology and

Neuroscience Department at MSU.

Mr. William Rankin spoke in support of the Cell Biology and Neuroscience Department at MSU.

Dr. Frances Lefort submitted a document of communications for the official record. She spoke in support of the CBN program and spoke against the way the CBN Department was merged with the Cell Biology & Immunology Department.

Ms. Lauren O'Neill, a student at MSU, spoke against the process in which the CBN Department was merged with the Cell Biology & Immunology Department and against how the concerned students were treated.

Mr. Patrick Hanni, a recent graduate of the CBN Program, spoke against the dissolution and merging of the CBN department with the Cell Biology & Immunology Department.

Ms. Geena Fisher, a student at MSU, spoke in support of the CBN Department. She encouraged the MSU Administration to listen to student concerns regarding the proposed merger of the two departments.

Dr. Steve Stowers, a former faculty member at CBN Department, spoke against the decision to abolish the Department of Cell Biology and Neuroscience.

Ms. Brittany Gibbs, a recent MSU graduate of the Cell Biology and Neuroscience Program, spoke in support of the Cell Biology and Neuroscience Department.

Ms. Anne Parker, a student at MSU, spoke in support of the Cell Biology and Neuroscience Department.

Ms. Luke Channer, a student MSU, spoke in support of the Cell Biology and Neuroscience Department.

The meeting recessed at 5:46pm

Thursday, May 23rd

Board Reconvened at 8:17am.

Remarks by Governor Bullock (or Designee)

Ms. Siri Smillie spoke to the recent National Governor's Association (NGA) event – Good Jobs for All Americans Solutions Summit, held in Whitefish, MT with education and workforce leaders from across the country. This event focused on addressing the workforce of the future, second acts for mid-career workers, and rural resurgence. It was an excellent opportunity to highlight the efforts underway in Montana, including the expansion of apprenticeship in partnerships with two-year colleges. Ms. Smillie provided

a recap of the Legislative session noting the restoration of financial aid and a corresponding generous match from MUS Foundations; funding up for the STEM scholarship and funding the MUS at a level that allows this Board to set budgets without raising student tuition for the biennium. She discussed K-12 Funding inflationary adjustments, including for the special education allowable cost and several bills that provided additional flexibility for trustees to fund school safety efforts; Restored funding for the Quality Educator Loan Repayment Program; and a number of student success focused bills including the Advanced Opportunity Act (HB 387), Encourage Transformational Learning (HB 351), and WBL workers' compensation offset.

- Request for the Board of Regents Affirmation of Future Ready Cabinet Goals; OCHE/MUS *ITEM 183-104-R0519*

Ms. Smillie updated the Board on the Future Ready Montana Cabinet and corresponding attainment goal resolution item. She explained that with a growing economy, low unemployment, and the impending retirement of the Baby Boomer generation, Montana needs skilled workers to continue our economic growth. If Montana capitalizes on this opportunity, providing the necessary education and training to meet workforce demands, workers and employers will both benefit, in turn strengthening the State's overall prosperity. In 2013, Governor Bullock joined a growing number of states that were setting attainment goals by declaring in his State of the State address that Montana would increase the number of Montanans with a college degree, certificate or credential from 40% to 60% by 2025. This past year, Governor Bullock convened the Future Ready Montana Cabinet to re-examine this attainment goal, make adjustments if needed, and identify the concrete policy and strategic changes Montana can make to move the needle significantly. The Montana University System, represented by Commissioner Christian, has been actively engaged as part of the Future Ready Cabinet along with various state and local leaders, employers, educators, and other stakeholders. The resolution presented affirms the work of the Future Ready Cabinet and confirms that the Regents will support the Montana University System as it works diligently to collaborate in achieving the goals and objectives identified by the Future Ready Cabinet. Discussion followed.

A motion for approval of ITEM 183-104-R0519 was made by Regent Johnson. Discussion followed. An amendment to change the language in the 2nd to last section to read *the Montana Board of Regents will work diligently to collaborate in achieving the goals outline by the Future Ready Cabinet* was made by Regent Sheehy

An motion for approval of ITEM 183-104-R0519, as amended, was made by Regent Tuss. Discussion followed. motion passed (7-0).

Academic, Research and Student Affairs Committee

CONSENT

- a. Request for Approval of Transfer of Intellectual Property Under MUSP 401; MT Tech | ITEM 183-1505-R0519

ACTION

- a. Level II Executive Summary *Supporting Documentation | New Program Data*

Deputy Commissioner Tessman spoke to the process related to these submissions. Each campus spoke to their requests which include developing the Institute for Interprofessionalism Education and Collaborative Practice in Health and Medicine for the MUS. UM will offer an AAS in Paramedicine, a Social Work option in the Public Health PhD; retitle the Department of Modern and Classical Languages and Literatures to World Languages and Cultures; retitle the College of Visual and Performing Arts to College of the Arts and Media; and retitle the Phyllis J. Washington College of Education and Human Sciences to the Phyllis J. Washington College of Education. The Montana Technological University will offer a Master of Engineering program. Discussion followed.

INFORMATION

- a. Common Course Numbering

Director Joe Thiel, of Academic Policy & Research, provided an update to the board related to transfer across the MUS and the Common Course Numbering (CCN) system in place. He reviewed the history associated with CCN, noting that 1:6 students will transfer within the MUS at some point. CCN efforts help to facilitate the movement of 50,000 course credits each year and alleviate the effort required of students and advisors from navigating how courses transfer. He confirmed that CCN is a building block for other important transfer tools. He reviewed the progress to date noting that in March of 2018 47% of CCN courses lacked defined learning outcomes, as of May 2019 only 1% of courses lack learning outcomes and campuses have added learning outcomes to 5,601 courses. He discussed newly formed CCN Faculty Councils who are focused on key programs and potential areas of overlap and confusion to help ensure that the transfer of credits for these programs operates seamlessly. He discussed the concept of Transfer Pathways, an effort that identifies lower-division major requirements and suggested courses for students to take early on, with the guarantee of transfer and acceptance to a four-year institution at a junior level standing to then complete the degree. Joe discussed the goal of developing transfer pathways for high-demand degree programs to help ensure coverage of 80% of transfer students. He explained the next steps noting a three-year plan to help ensure MUS is in an excellent place to provide transfer pathways to students. Discussion followed.

b. Montana Project 10

Director Joe Thiel, of Academic Policy & Research, and Student Success Specialist, Ms. Crystine Miller presented an update on the Montana Project 10. This project focuses on integrating student success interventions, increasing retention, and on-time completion. The overall goal is to increase retention and on-time completion by 10%. MUS campuses involved in this pilot project include UM-Missoula, Helena College, and MSU-Billings. They discussed the motivation for this project, noting the focus on low-income, PELL eligible students, of which 50% drop out with debt. Discussion followed about the completion and retention strategies in place, including corequisite support, math pathways, 15 to finish, structured schedules, and high impact practices. They reviewed the core program elements noting a focus on academic momentum, financial support, and the sense of purpose and belonging. Mr. Thiel and Ms. Miller discussed the successes associated with this model in the form of improving timely completion of degree and cost savings related to on-time completion, such as graduating more students who are borrowing less. Discussion followed.

c. Update: UM Western Academic Restructuring

Dr. Deb Hedeem, Provost at the University of Montana-Western, provided an update to the Board about UMW's academic restructuring. Dr. Hedeem noted the reason for the restructure was due to three concerns. 1) The department chairs did not have supervisory and decision-making authority or evaluation responsibility, which is common practice at most universities. 2) Because the Provost is the only person with supervisory and evaluation authority, faculty were not receiving appropriate mentoring, ongoing feedback, and support at the department level. 3) Due to the flat academic structure, faculty did not have the ability to acquire and advance their leadership and management responsibilities and skills. The ten departments were arranged in four divisions. Four Division Chairs were selected during April 2018, and they assumed their role and responsibilities on July 1, 2018.

UMW has agreed on Division Chair role and responsibilities language, which will be added into the Collective Bargaining Agreement once negotiations are finalized. At this time, Division Chairs do not have full authority and therefore, partner with me on specific decisions related to faculty until Division Chair language is added to the CBA. Dr. Hedeem explained that as a result of the Academic Administrative Restructure, Division Chairs are now assisting and supporting departments and faculty through oversight of department budgets, coordinating division requests, establishing rapport with faculty, mentoring faculty, addressing faculty concerns; and advocating for faculty needs. Division Chairs gather information to problem solve an issue, resolve issues at the department level, monitor completion of plans and reports, manage faculty documents, assisting with faculty evaluations, curriculum proposals, and with the coordination of course schedules.

Dr. Hedeem explained how Division Chairs have assisted her, as Provost, with understanding faculty perspective on specific topics. Division Chairs have provided

objective information to situations which have made it easier and more efficient to make decisions. She noted that it has been advantageous to have Divisions Chairs help with problem-solving, brainstorming, and planning that benefits and enhances faculty teaching, scholarship, and service responsibilities. The four Division Chairs have offered to serve a second year, and division departments have supported this decision.

d. Level I Memorandum (February, March, April)

Deputy Commissioner Tessman discussed the process behind these approvals noting that they include minor changes and are approved by the Commissioner's Office via direction of the Board.

e. Intent to Plan Proposals (February, March, April)

Submitted April 2019 - Expiration December 2020

University of Montana

Bachelor's in Public Health

Montana Tech

Master of Science in Ecological Restoration

Submitted March 2019 - Expiration November 2020

University of Montana

A.A.S. in Addiction Studies

Committee Reports & Action

- Two-Year and Community College Committee

None.

- Budget, Audit & Administration Committee

CONSENT

- a. Request for Approval of University/System/Employee Equity Interest and/or Business Participation Under MUSP 407 - Youngbull; UM Missoula *ITEM 183-1009-R0519 | Attachment #1*
- b. Request for Approval of University/System/Employee Equity Interest and/or Business Participation Under MUSP 407 - Youngbull; UM Missoula *ITEM 183-1010-*

- c. Request for Approval of University System/Employee Intellectual Property Joint Participation under MUSP 407 Sofie; MSU *ITEM 183-2005-R0519 | Attachment #1*
- d. Request for Authorization to Execute a Utility Easement with Northwestern Energy-Lambert Turf Complex, MSU *ITEM 183-2008-R0519 | Attachment #1*
- e. Request for Authorization to Execute a Utility Easement with Northwestern Energy-New Residence Hall; MSU *ITEM 183-2013-R0519 | Attachment #1*
- f. Request for Authorization to Renew the Operating Agreement between MSU and the MSU Foundation; MSU *ITEM 183-2006-R0519 | Attachment #1*
- g. Request for Authorization for the University of Montana to Enter into an Operating Agreement with the University of Montana Foundation; UM Missoula *ITEM 183-1006-R0519 | Attachment #1*
- h. Request for Approval of Operating Agreement between Montana Technological University and the Montana Tech Foundation; MT Tech *ITEM 183-1504-R0519 | Attachment #1*
- i. Request for Authorization for Amendment to the Operating Agreement between MSU-Northern and the Montana State Northern Foundation; MSU-Northern *ITEM 183-2802-R0519 | Attachment #1*
- j. Request for Authorization to Transfer Lewistown Property; MSU-Northern *ITEM 183-2801-R0519 | Attachment #1*

Staff Items:

- k. OCHE Staff Item | *ITEM 183-100-R0519*
- l. MT Tech Staff Item | *ITEM 183-1500-R0519*
- m. MSU Bozeman Staff Item | *ITEM 183-2000-R0519*
- n. MSU-Billings Staff Item | *ITEM 183-2700-R0519*
- o. MSU-Northern Staff Item | *ITEM 183-2800-R0519*

Emeriti Faculty:

- p. Mock; UM-Western *ITEM 183-1601-R0519*
- q. Wolfgram; MT Tech *ITEM 183-1501-R0519*
- r. Handley; MT Tech *ITEM 183-1502-R0519*
- s. Blackketter; MT Tech *ITEM 183-1503-R0519*
- t. Camper; MSU Bozeman *ITEM 183-2001-R0519*
- u. Stephens; MSU Bozeman *ITEM 183-2002-R0519*

A motion for approval of consent items a. – u. was made by Regent Lozar; motion passed 7-0.

ACTION

a. 2021 Biennial Budget Recommendations; OCHE *ITEM 183-101-R0519*

1. Tuition | Campus Tuition & Fee Schedules

A motion for approval of tuition, as detailed in action item a. ITEM 183-101-R0519, was made by Regent Lozar; motion passed (7-0).

2. Fees | Mandatory Fees Dashboard

A motion for approval of item fees as detailed in action item a. ITEM 183-101-R0519, was made by Regent Sheehy; motion passed (7-0).

3. State Funding Allocation

A motion for approval of state funding allocation, as detailed in action item a. ITEM 183-101-R0519, was made by Regent Rogers; motion passed (7-0).

4. Performance Funding

A motion for approval of performance funding, as detailed in action item a. ITEM 183-101-R0519, was made by Regent Lozar; discussion followed. Motion passed 6-1 (Regent Sheehy).

b. Campus Requests for Mandatory Fee Increases

1. Request for Authorization to Increase the Health Services Mandatory Fee; MSU-Billings *ITEM 183-2702-R0519 | Attachment #1 | Attachment #2*

A motion for approval of action item b. 1. ITEM 183-2702-R0519 was made by Regent Tuss; motion passed (7-0).

2. Request for Authorization to Establish a Counseling Fee; Great Falls College MSU *ITEM 183-2901-R0519 | Attachment #1 | Attachment #2 | Attachment #3*

A motion for approval of action item b. 2. ITEM 183-2901-R0519 was made by Regent Sheehy; motion passed (7-0).

3. Request for Authorization to Increase ASHC Student Fee; Helena College *ITEM 183-1905-R0519 | Attachment #1 | Attachment #2*

A motion for approval of action item b. 3. ITEM 183-1905-R0519 was made by Regent Johnson; motion passed (7-0).

4. Request for Authorization to Initiate a Student Success Fee Mandatory Fee; The UM-Missoula *ITEM 183-1012-R0519 | Attachment #1*

A motion for approval of action item b. #4 ITEM 183-1012-R0519, as amended, was made by Regent Sheehy; discussion followed. The motion passed (7-0).

- c. Revisions to the Performance Funding Model – Under-represented Groups; OCHE/MUS *ITEM 183-105-R0519 | Attachment #1*

A motion for approval of action item c. ITEM 183-105-R0519 was made by Regent Lozar; motion passed 6-1 (Regent Sheehy).

- d. Revision to BOR Policy 940.3 – Mandatory Fees; OCHE *ITEM 183-102-R0519 | Attachment #1*

A motion for approval of action item d. ITEM 183-102-R0519 was made by Regent Rogers; motion passed (7-0).

- e. Distribution of Timber Sales Revenue; OCHE/MUS *ITEM 183-103-R0918 | Attachment #1 | Attachment #2*

A motion for approval of action item e. ITEM 183-103-R0519 was made by Regent Tuss; motion passed (7-0).

- f. Request for Authorization to Increase Authority and Expend Student Fees for American Indian Hall Project; MSU *ITEM 183-2011-R0519 | Attachment #1 | Attachment #2*

A motion for approval of action item f. ITEM 183-2011-R0519 was made by Regent Sheehy; motion passed (7-0).

- g. Request for Authorization to Renovate Romney Hall, MSU *ITEM 183-2012-R0519 | Attachment #1*

A motion for approval of action item g. ITEM 183-2012-R0519 was made by Regent Rogers; discussion followed. The motion passed (7-0).

- h. Request for Authorization to Construct of Greenhouse Laboratories; MSU *ITEM 183-2301-R0519 | Attachment #1 | Attachment #2*

A motion for approval of action item h. ITEM 183-2301-R0519 was made by Regent Rogers; motion passed (7-0).

- i. Request for Authorization to Construct a new Dental Clinic and Dental Assisting/Dental Hygiene Lab; Great Falls College MSU *ITEM 183-2902-R0519 | Attachment #1 | Attachment #2*

A motion for approval of action item i. ITEM 183-2902-R0519 was made by Regent Sheehy; motion passed (7-0).

- j. Request for Authorization to Expend State Funds for Deferred Maintenance; OCHE/MUS ITEM 183-106-R019

A motion for approval of action item j. ITEM 183-106-R0519 was made by Regent Lozar; motion passed (7-0).

- k. Request for Authorization of Social Sciences Datacenter Project; UM-Missoula ITEM 183-1008-R0509

A motion for approval of action item k. ITEM 183-1008-R0519 was made by Regent Dombrowski; motion passed (7-0).

- l. Request for Authorization for Improvements to Existing Intercollegiate Student-Athletic Support Areas located in Washington-Grizzly Stadium and the Adams Center; UM-Missoula ITEM 183-1007-R0519 | Attachment #1

A motion for approval of action item l. ITEM 183-1007-R0519 was made by Regent Lozar; motion passed (7-0).

- m. Request for Authorization to replace Rimrock Hall Passenger Elevators (2); MSU-Billings ITEM 183-2701-R0519

A motion for approval of action item m. ITEM 183-2701-R0519 was made by Regent Sheehy; motion passed (7-0).

- n. Request for Authorization to Construct, Maintain, Repair and Replace New and Existing Parking, Street and Access Facilities; MSU-Bozeman ITEM 183-2010-R0519 | Attachment #1

A motion for approval of action item n. ITEM 183-2010-R0519 was made by Regent Sheehy; motion passed (7-0).

- o. Request for Authorization to Execute a Lease for the MSU Nursing Program at Kalispell; MSU ITEM 183-2014-R0519

A motion for approval of action item o. ITEM 183-2014-R0519 was made by Regent Tuss; motion passed (7-0).

- p. Request for Authorization to Execute a Lease for the MSU Nursing Program at Great Falls; MSU ITEM 183-2007-R0519

A motion for approval of action item p. ITEM 183-2007-R0519 was made by Regent Sheehy; motion passed (7-0).

- q. Request for Authorization to Execute a Lease for Mil-Tech Research Space; MSU ITEM 183-2009-R0519

A motion for approval of action item q. ITEM 183-2009-R0519 was made by Regent Rogers; motion passed (7-0).

- r. Request for Authorization to Execute a Lease for Research and Office Space at CFT 2; MSU ITEM 183-2015-R0519

A motion for approval of action item r. ITEM 183-2015-R0519 was made by Regent Lozar; motion passed (7-0).

- s. Request for Authorization to Exclude Certain Officers/Directors from Personnel Security Clearance; MSU Bozeman ITEM 183-2003-R0519 | Attachment #1

A motion for approval of action item s. ITEM 183-2003-R0519 was made by Regent Tuss; motion passed (7-0).

- Academic, Research and Student Affairs Committee

CONSENT

- a. Request for Approval of Transfer of Intellectual Property Under MUSP 401; MT Tech | ITEM 183-1505-RO519

A motion for approval of consent item a. ITEM 183-1505-R0519 was made by Regent Sheehy; motion passed (7-0).

ACTION

- b. Level II Executive Summary *Supporting Documentation | New Program Data*

A motion for approval of action item a. Level II Memorandum was made by Regent Sheehy; motion passed (7-0).

Election of Officers

Commissioner Christian discussed the process as it relates to Article IV of the by-laws.

Regent Johnson made a nomination for Regent Lozar to serve as Board Chair. Motion passed 7-0.

Regent Sheehy made a nomination for Regent Tuss to serve as Vice Chair. Motion passed 7-0.

Regent Johnson extended thanks to the Governor for the opportunity to serve on the Board of Regents. He spoke in support of continued focus and support on providing

need-based aid and continued focus on CCN and transferability across the MUS.

Public Comment

Ms. Mariah Welch, outgoing President of ASUM, extended thanks to the Board for their representation and service to students. She also thanked Mr. Sam Forstag for all of his work at the Legislative Session this past few months. She presented Administrator of the Year Award the President of the Faculty Union to Megan Stark at UM.

Meeting Adjourned at 11:13am

Approved by the Board of Regents on

7/10/2019

Date



Clayton T. Christian
Commissioner of Higher Education
and Secretary to the Board of Regents

7/10/2019

Date



Casey Lozar
Chair, Board of Regents

S. Ryan Jacobus

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RECEIVED

MAY 21 2019

Montana University System

5/17/2019

Montana University System Board of Regents

Office of the Commissioner of Higher Education
560 N. Park Ave.
P.O. Box 203201
Helena, MT 59620-3201
(406) 449-9124

Hello, my name is S. Ryan Jacobus and I am a Cell Biology and Neuroscience graduate from Montana State University. Thank you for taking the time to listen to my comments today.

I am writing to express my adamant support for the Department of Cell Biology and Neuroscience at MSU-Bozeman, and to share my recent experiences in the Department. The majority of the reason that I came from out of state to attend school in Montana was because of the Neuroscience program at MSU-Bozeman. When I visited in 2013, the faculty in the department of Cell Biology and Neuroscience were the ones who captured my interest and curiosity. After completing my education in Cell Biology and Neuroscience, I can say that it exceeded my expectations and taught me more than I could have imagined. What I appreciated most about the program is that one could specialize in either neuroscience or cell biology electives, while still having a strong base in both. I chose the neuroscience electives specifically, and they proved to be extremely stimulating. Not only have I learned of aspects in neuroscience from the molecular underpinnings to the macro-organization of neural networks, but the professors I had the pleasure of being taught by were

people I will forever remember. Not many universities have faculty in such sophisticated fields that are willing to take the time to sit with students, whether that be in the classroom or in a coffee shop. This personal touch of the Cell Biology and Neuroscience faculty is unique to the MSU-Bozeman campus, and I would wager that in the programs height it was one of the highest quality of its kind in the nation.

The recent attempts by the MSU Administration to dissolve my department have greatly affected me. Because of downsizing in the program funding, one of the greatest professors I ever had the chance to learn from had to leave MSU-Bozeman. And not only that, but his entire department too; people who had given me the opportunity to work with them in research and who I had grown to know well. If the department of Cell Biology and Neuroscience is dissolved I am confident that MSU-Bozeman, and consequently the Montana University System as a whole, will be losing a hidden gem that could be developed instead. While I know that there are few applicants for the CBN program due to its difficulty, I would argue that its rigorous nature is what makes it beneficial for both pre-med and aspiring grad students. Instead of dissolving the department, I would strongly recommend investing more in both the integrity of the program (organization, funding, staff and supplies) and the promotion of it. MSU-Bozeman specifically has much to gain by fostering a truly quality department that will further its credibility as a research institution and produce students who will go far as a result. Please consider this possibility, and thank you for your time.

Sincerely,

S. Ryan Jacobus

2019 66th Legislative Session Summary of
Legislation Related to K-12 Education



Montana
Office of Public Instruction
Elsie Arntzen, Superintendent

Putting Montana Students First

May 21, 2019

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PLEASE NOTE: This document contains brief summaries of bills relating to K-12 education that were considered by the Montana Legislature during the 2019 Legislative Session. The summaries include all bills that had passed or were still active as of May 22, 2019. The summaries are not offered as legal advice nor as a definitive interpretation of these bills. For a more comprehensive understanding of the laws, please consult the original legislation.

Total number of bills in Education is 166 for the 66th Legislative Session.

LEGISLATION AFFECTING K-12 EDUCATION

ACCREDITATION/CURRICULUM

HB 33 Jonathan Windy Boy

Extend the Montana Indian Language Preservation Program

Chapter: 77 Effective Date: March 20, 2019.

HB 33 extends the Montana Indian language preservation program, 20-9-537, MCA, to the end of FY 2023.

HB 41 Jonathan Windy Boy

Extend the Cultural Integrity and Commitment Act

Chapter: 171 Effective Date: Upon Passage

HB 41 extends the Cultural Integrity and Commitment Act passed with SB 272 (2015) described in the following summary:

SB 272 promotes innovative, culturally relevant, Indian language immersion programs for Indian and non-Indian students with the goal of raising student achievement, strengthening families, and preserving and perpetuating Indian language and culture throughout Indian country and Montana. School districts are encouraged to create Indian language immersion programs; collaborate with other school districts, the Montana Digital Academy, tribal governments, and tribal colleges; utilize materials produced in the Montana Indian language preservation pilot program funded by the 2013 Legislature; utilize American Indian language and culture specialists as teachers of language and culture; and look to existing native language schools in Montana and around the world for guidance and best practices.

If a school district creates an Indian language immersion program, the district will receive the following:

- Three American Indian achievement gap payments for every Indian student participating in an Indian language immersion program;
- Three Indian Education for All payments for every non-Indian participant; and
- A quality educator payment for every full-time American Indian language and culture specialist teaching in an Indian language immersion program.

For a district operating an Indian language immersion program that improves the district's graduation rate for American Indians by 5 percentage points or more from the previous year, the district will receive an increase in its American Indian achievement gap payment.

HB 41 adjusts the termination date of this this legislation to June 30, 2023.

HB 153 Kathy Kelker

Generally revise education laws related to gifted and talented programs

Chapter: 93 Effective Date: October 1, 2019

HB 153 amends section 20-7-904, MCA, which specifies the process requirements for schools to apply for and the OPI to approve grants for programs for gifted and talented children. The revision adds a requirement for the OPI to report to the governor and the legislature by September 15 of even-numbered years on the status and effectiveness of programs serving gifted and talented students. The report must include the total number of schools applying for and receiving funds from OPI, a breakdown by school size, a description of the ways in which districts include a child's parents in the evaluation process, the number of students evaluated and identified, a description of the training provided to teachers, a description of services provided to gifted and talented students, and an evaluation of the effectiveness of gifted and talented programs.

HB 351 Wendy McKamey

Encourage transformational learning

Chapter: 402 Effective Date: May 9, 2019

HB 351 amends section 20-9-116, MCA, and revises education laws to support transformational learning which is defined in the bill as a flexible system of pupil-centered learning that is designed to develop the full educational potential of each pupil that: is customized to address each pupil's strengths, needs, and interests; includes continued focus on each pupil's proficiency over content; and actively engages each pupil in determining what, how, when, and where each pupil learns. State aid – termed transformational learning aid – is to be provided to districts on an intricate "first come first served" schedule on a four-year qualification and payment cycle. Qualifying districts are provided limited permissive levy and transfer authority while implementing a qualified transformational learning plan. An appropriation of \$2.6 M from the state general fund is provided for distributions of transformational learning aid to begin in the 2021 biennium and a termination date of June 30, 2027 is provided.

HB 387 Llew Jones

Create advanced opportunity act for Montana students

Chapter: 279 Effective Date: July 1, 2019.

HB 387 amends section 20-7-701, MCA, and creates the Montana advanced opportunity act which is defined as any course, exam, experiential, online, or other learning opportunity that is incorporated in a district's advanced opportunity plan and that is designed to advance each qualifying pupil's opportunity for postsecondary career and educational success. State aid termed *advanced opportunity aid* is to be provided to districts on a "first-come first-served" schedule including an annual qualification and payment cycle. At least 60% of the *advanced opportunity aid* is to be expended for the purposes of advanced opportunities and up to 40% may be expended for career and technical/vocational education. Qualifying districts are permitted to

make expenditures from the adult education fund for the purposes of advanced opportunities in an amount up to 25% of state provided advanced opportunity aid. An appropriation of \$750,000 from the state general fund is provided for distributions of advanced opportunity aid to begin in FY 2021.

HB 631 Kimberly Dudik

Create public private partnership to help workers in targeted industries

Chapter: 366 Effective Date: July 1, 2019

HB 631 creates a pilot program for public-private partnerships to increase skill training in targeted industries and job-readiness assistance for target populations and provides rulemaking authority to the Department of Labor and Industry (DLI). The objective of the program is for the DLI to coordinate with the Department of Commerce, the OPI, the board of education, the board of regents, and other state agencies to promote the creation of strategic industry partnerships across the state, advance the skills of the state's workforce, determine opportunities for resource sharing, and increase sustainable employment for residents of the state. The strategic partnerships will identify common workforce needs for high demand occupations within a target industry and a target population; plan, develop and implement strategies to meet common workforce needs, address shortages determined for a specific region, and encourage entrepreneurship for high-demand occupations, and apply to the DLI for grants to address strategic industry partnership objectives. These strategic partnerships must include a representative of a local government; a high school district, a community college or a unit of the Montana university system; and one or more target industries. Other entities may participate as well. The bill also establishes the Montana EARN (employment advancement right now) program under which the strategic partnerships may submit grant proposals to the DLI and establishes the parameters to be used by the DLI for awarding grants. The bill creates a state special revenue account to receive contributions from state, federal or private sources and transfers \$45,000 from the state general fund to initialize the account. As a pilot program, the statute will terminate at the end of biennium 2021 and the DLI will provide to the governor and the legislative council a report describing the results of the program.

APPROPRIATIONS

**HB 2 Nancy Ballance
General Appropriations Act**

Chapter: Effective Date: July 1, 2019

HB 2 and the guarantee account contain the majority of the Office of Public Instruction appropriations for the biennium beginning July 1, 2019. The following table shows the total HB 2 appropriations for OPI:

Total OPI Appropriations for the 2020-2021 Biennium

Funding Source	Distributed to Schools	State Level Activities	Total
State General Fund	\$1,668,502,739	\$21,437,939	\$1,689,940,678
State Special Revenue	\$7,826,000	\$490,578	\$8,316,578
Federal Special Revenue	\$310,470,782	\$34,949,034	\$345,419,816
Statutory Appropriations	\$92,272,969	\$0	\$92,272,969
Total	\$2,079,072,490	\$56,877,551	\$2,135,950,041

The legislature restored reductions to school funding implemented in the 2017 regular and special sessions and added the inflationary increases required by statute. The only general fund line item not restored was the block grants, but at the time the block grants were eliminated the GTB factors were increased over four years to offset the block grant totals statewide.

The following summary describes appropriations for K-12 Education in HB 2:

K-12 EDUCATION, HB 2:

- K-12 BASE Aid**

The total estimated BASE Aid to be distributed to school districts is estimated to be \$797.231 million in FY 2020 and \$817.494 million in FY 2021. BASE Aid is funded first by the guarantee account with the balance funded from state general fund. The funding increases are driven by changes to ANB and inflation of 0.91% in FY 2020 and 1.83% in FY 2021 as required by statute and made effective by HB 159. The following table summarizes the increases in each component of BASE Aid and the funding of the total increase:

<u>Component</u>	<u>FY 2020</u>	<u>FY2021</u>	<u>Biennium</u>
Direct State Aid	12,046,304	21,153,057	33,199,361
GTB - School General Fund	11,902,703	20,899,036	32,801,739
GTB - School Retirement	4,104,184	5,304,014	9,408,198

Quality Educator	645,249	1,406,444	2,051,693
Indian Ed for All	49,488	109,777	159,265
Close Achievement Gap	46,110	127,630	173,740
Data for Achievement	3,227,180	3,284,401	6,511,581
State Audit Fees	<u>18,218</u>	<u>18,218</u>	<u>36,436</u>
Total	<u>32,039,436</u>	<u>52,302,577</u>	<u>84,342,013</u>
From Guarantee Account	4,281,433	4,622,392	8,903,825
From General Fund (HB 2)	27,758,003	47,680,185	75,438,188

- **At-Risk Student Payment**

Appropriates \$5.541 million from the state general fund in FY 2020 and \$5.642 million in FY 2021 for at-risk student payments under 20-9-328, MCA, to the school district general funds.

- **Special Education**

Appropriates \$43.509 million from the state general fund in each of FY 2020 and FY 2021 for state special education payments to schools. No inflation for special education was appropriated in HB 2. However, HB 638 separately appropriates \$393,957 in FY 2020 and \$1,193,409 for special education inflation.

- **Transportation Aid**

Appropriates \$11.999 million from the state general fund in each year of the biennium for state reimbursements to school districts for pupil transportation. These appropriations increase transportation reimbursements by \$1.900M in both FY 2020 and FY 2021 from the base FY 2019 appropriation, restoring the reductions from the special session and accounting for a small amount of inflation.

- **In-State Treatment**

Appropriates \$787,801 from the state general fund in each year of the 2021 biennium for education services for students in in-state psychiatric residential treatment facilities. The appropriations restore the state funding for in-state treatment to the FY 2017 base appropriation level.

- **Career and Technical Education**

Appropriates \$2.000 million from the state general fund in each year of the 2021 biennium for secondary vocational education programs. The appropriations restore the state funding for CTE to the FY 2017 base appropriation level.

- **Adult Basic Education**

Appropriates \$525,000 from the state general fund in each year of the 2021 biennium for adult basic education programs. The appropriations restore the state funding for adult basic education to the FY 2017 base appropriation level.

- **Gifted and Talented Grant Program**

Appropriates \$350,000 from the state general fund in each year of the 2021 biennium for school district gifted and talented programs. The appropriations restore the state funding for gifted and talented to the FY 2017 base appropriation level and adds \$100,000 per year for this program.

- **School Foods**

Appropriates \$663,862 from the state general fund in each year of the 2021 biennium for school nutrition programs. The appropriations restore the state funding for school foods to the FY 2017 base appropriation level.

- **State Block Grants**

The 2017 legislature ended block grants. The only remaining block grant is the Coal-fired Generating Unit Closure Mitigation Block Grant which is appropriated in the amount \$1.693 million from the state general fund for each year of the biennium.

- **State Tuition Payments**

Appropriates \$377,675 from the state general fund in each year of the 2021 biennium for tuition payments to schools that enroll students placed by state agencies or courts under mandatory attendance agreements. The appropriations do not fully restore the appropriation to the base 2017 level, but the amount is in line with historical expenditures.

- **Advancing Agricultural Education in Montana**

Appropriates \$151,956 in FY 2020 and \$151,960 in FY 2021 from the state general fund to school districts to support secondary agricultural education programs and to implement 20-7-334, MCA.

- **Cultural Integrity Commitment Act – HB 41(2019)**

Appropriates \$47,590 in FY 2020 and \$48,470 in FY 2021 from the state general fund to support Indian Language Immersion Programs.

- **Major Maintenance Aid and Debt Service Assistance**

Appropriates general fund in the amounts of \$4.783 million in FY 2020 and \$5.391 million in FY 2021 for Major Maintenance Aid. HB 2 also appropriates state special revenue in the amounts of \$1.617 million in FY 2020 and \$2.209 million in FY 2021 representing expected receipts from the coal severance tax trust fund. During the 2017 legislative session, SB 307 created a program for providing regular state funding for major maintenance in school districts. The statute also allows excess funds to be redirected to debt service assistance. Due to a concern of potentially transferring general fund to a state special revenue account, the major maintenance account was renamed to allow expenditures for debt service to occur from either funding source.

- **Debt Service Assistance**

Appropriates \$0.00 in FY 2020 and \$2.500M of state special revenue in FY 2021 to provide for distribution of timber revenue received from state trust lands. These funds were transferred to the general fund in the current biennium, so the starting point is zero. The appropriation amount in 2021 is the anticipated timber revenue each year. In addition, excess revenue from the Major Maintenance Aid line item will also be used for the same purpose.

- **Traffic and Safety Education**

Appropriates \$750,000 of state special revenue in each year of the 2021 biennium for driver's education programs provided by school districts. The appropriations maintain the state funding for traffic education programs at the FY 2019 base appropriation level. Traffic and Safety Education revenues are generated from a percentage of the drivers' license fee and commercial drivers' license fee. Should these revenues exceed the appropriation, OPI can distribute the additional revenues so long as the total expended does not exceed \$1.800 million.

- **Federal Grant Awards**

Appropriates \$154.735 million in FY 2020 and \$155.735 million in FY 2021 for distribution of federal education grant monies to school districts. This spending authority represents an increase of \$2.500 million in FY 2020 and \$3.5000 million in FY 2021 over the FY 2019 base appropriation level. Increases are projected for Federal Title I Grants and the Individuals with Disabilities Education Act programs.

- **Guarantee Account Funding**

Monies from the guarantee account are statutorily appropriated. The amount available for distribution is estimated to be \$45.966 million in FY 2020 and \$46.307 million in FY 2021 for K-12 BASE aid payments and \$1.0 million in each year for grants for school technology purchases. Revenues for the state guarantee account are generated from state school trust lands. The guarantee account is the first source of funding for the K-12 BASE aid. Funds from the guarantee account offset expenditures that would otherwise be paid from the state general fund.

OFFICE OF PUBLIC INSTRUCTION (OPI) OPERATIONS AND TECHNICAL ASSISTANCE TO SCHOOLS, HB 2:

- **OPI Agency Budget**

At OPI's request, the legislature made a change to the appropriations structure for the agency operating budget. In the past, both the Montana Digital Academy (MTDA) and Audiological Services were funded partially from the agency base budget and partially from one-time only lines. The new structure puts the entire funding for MTDA and Audiological Services into their own line items. The one time only designation was completely removed.

HB 2 appropriates \$8.207 million in FY 2020 and \$8.213 million in FY 2021 from the state general fund for the agency's general fund operating budget. Although the legislature funded statewide present law adjustments, the legislature transferred \$627,000 to local education funding to help

pay for SB 261 restoration. In addition, the legislature lowered the agency's authorized FTE by 4.03 and reduced funding associated with the FTE.

Appropriates \$245,145 in FY 2020 and \$245,433 in FY 2021 of state special revenue for traffic education administration and cooperative purchasing.

Appropriates \$17.474 million in FY 2020 and 17.475 million in FY 2021 of authority to spend federal grant funds for the administration of federal grants.

- Montana Digital Academy

Appropriates \$2.001 million from the state general fund in each year of the biennium.

- Audiological Services

Appropriates \$508,000 from the state general fund in each year of the biennium.

HB 3 Nancy Ballance

Supplemental Appropriations Bill

Chapter: 204 Effective Date: April 29, 2019

HB 3 provides supplemental general fund appropriations to meet the state's legal obligations for the fiscal year ending June 30, 2019. The only education appropriation in the bill is \$100,000 for the state lands reimbursement block grant. This block grant was passed during the 2017 regular session to pay \$100,000 to any school district in a county with more than 20% of its lands owned by the state. The Scobey school district is the only school district that meets this definition. When the legislature eliminated all remaining block grants during the 2017 special session, section 20-9-640, MCA, which authorized this block grant was not modified. As a result, the OPI requested the legislature to provide the funding for this statute.

HB 4 Nancy Ballance

Appropriations by Budget Amendment

Chapter: 341 Effective Date: May 7, 2019

HB 4 extends spending authority into the 2021 biennium for federal grants received in the interim and approved as budget amendments by the Office of Budget and Program Planning. For the OPI this includes the preschool development grant, the striving readers comprehensive literacy project, the school violence prevention grant, and the technology innovation grant.

HB 638 David Bedey

Increases to the K-12 special education allowable cost payment

Chapter: 391 Effective Date: July 1, 2019.

HB 638 appropriates \$393,957 for FY 2020 and \$1,193,409 for FY 2021 over the base for state special education payments to schools. An additional \$272,853 appropriation is provided for increases to guarantee tax base aid related to the increases in the special education allowable

cost payment. The increase to appropriations in FY 2021 is to be considered part of the ongoing base for the next legislative session.

HB 662 Llew Jones

Implement provisions of HB 2, Sec E - Education

Chapter: 392 Effective Date: July 1, 2019

HB 662 is a companion bill to HB 2. A companion bill is a bill that includes any statute changes required for the appropriations in HB 2 to be valid. HB 662 amends 20-7-305, MCA, the statute that establishes the eligibility of CTE programs for funding and authorizes the Superintendent to determine the method for allocating the CTE appropriation. The amendment clarifies that the CTE appropriation funds both school district CTE programs and statewide Career Technical Student Organizations (CTSOs) under 20-7-320, MCA.

DRAFT

AT-RISK YOUTH

SB 197 Jeffrey Welborn

Generally revise education laws related to Montana youth challenge academy

Chapter: 233 Effective Date: May 1, 2019

SB 197 amends 10-1-1402, MCA, to add a provision that allows students, participating in the Montana Youth Challenge Academy (MYCA), to earn a high school diploma. The bill states that the ability to receive a diploma is based on the student's proficiency and is at the discretion of the resident district trustees.

DRAFT

ELECTIONS

HB 166 Mary Ann Dunwell

Revise display of sample ballots at polling places

Chapter: 135 Effective Date: September 1, 2019

HB 166 changes the requirement regarding the posting of sample ballots at a polling location. A single sample ballot must now be posted only in one conspicuous location at each polling place, rather than in each voting station and in places around the polling place.

HJ 3 Forrest Mandeville

Interim study resolution on accessibility for disabled electors

HJ 3 is an interim study bill designed to examine state and federal laws related to electors with disabilities, regarding accessible voting machines and technology, improving accessibility for electors with disabilities, and conflicts between state and federal laws. With the participation of stakeholders and the public the bill seeks to identify and analyze relevant policy and logistical issues and make recommendations on changes to state laws. The study must be concluded prior to September 15, 2020.

HJ 10 Alan Doane

Study resolution to address American Indian voting

HJ 10 is an interim study bill to identify and address barriers to voting by Montana Native Americans. The study will examine deadlines and procedures related to physical address and identification, analyze options for addressing barriers while ensuring election security, review mail ballot requirements and options, and consider any other matters related to voting by Montana Native Americans. The State-Tribal Relations Committee will request participation from election administrators, representatives from each of the tribal governments, and other interested parties, and provide a final report to the State Administration and Veterans' Affairs Interim Committee. The study must be concluded prior to September 15, 2020.

SB 130 Daniel R Salomon

Revise school election law

Chapter: 154 Effective Date: July 1, 2019

SB 130 extends the time to issue certificates of election and hold the school board's annual organizational meeting from 15 to 25 days.

SB 148 Bryce Bennett

Allow late registrant absentee ballots to be dropped off at polling locations

Chapter: 155 Effective Date: September 1, 2019

SB 148 gives an elector who late registers the option of returning the ballot to the county election administrator, or school clerk if the election is administered by the school clerk, or to any polling location within the county or district where the elector is registered, on election day.

SB 162 Roger Webb

Generally revise election laws

Chapter: 229 Effective Date: May 1, 2019

SB 162 establishes an early count process that begins up to 3 days before election day. In counties with 8,000 or more registered electors or 5,000 or more absentee electors as of the close of regular registration, election officials may separate voted ballots from the secrecy envelope in preparation for tabulation. In counties with fewer than 8,000 registered electors or less than 5,000 absentee electors, the process begins no sooner than the day before election day. This process can never occur on a Saturday or Sunday and must be open to the public.

When using a vote-counting machine, tabulation may begin up to one day before election day. Tabulation done by manual count must be conducted on election day. Access to the electronic system containing early tabulation results is limited to the election administrator and the election administrator's designee.

SB 162 also eliminates the requirement to sequester both the judges and observers of the early count process. Both judges and observers must take an oath affirming that they will not release election results until after the close of polls on election day. A person who knowingly releases early election results may be subject to a prison term not to exceed 2 years, fined between \$100,000 and \$500,000, or both.

SB 291 Fred Thomas

Revise laws on voting systems and ballot form

Chapter: 325 Effective Date: May 7, 2019

SB 291 directs county election administrators to ensure that at least one voter interface device is available at every polling location. The screen must be blocked from the view of other electors in the polling location. Non-disabled electors must also be encouraged to cast their ballot using the device. Any ballots cast using the device must be transcribed in secret using a standard ballot form, by not less than three election officials.

A voter interface device is defined as a voting system accessible to electors with disabilities that is able to communicate voting instructions and ballot information to a voter, allows the voter to select and vote for candidates and issues including the ability to verify and change selections,

and produces a paper ballot that electors may use to confirm the accuracy of their vote. Before a voter interface device may be used, the device must meet the electronic security standards adopted by the Secretary of State, provide accessible technology for electors with hearing, vision, speech or ambulatory impairments and have been made available for demonstration in at least one public event held by the Secretary of State. Disabled electors must be involved in making the determination that a device meets accessibility standards.

DRAFT

EMPLOYMENT RELATIONS

HB 204 Marilyn Ryan

Generally revise teachers' retirement system

Chapter: 276 Effective Date: July 1, 2019

HB 204 is a cleanup bill for the teachers' retirement system. The bill clarifies employer reporting and contributions, dormant membership status, withdrawal from membership, retirement benefit options, rollover provisions, designation of beneficiaries including when and how beneficiaries are designated and the effect of no designation or an ineffective designation, the order of priority for the payment of beneficiaries and payments to minor children. One key change for school district administration is the requirement for TRS employers to submit wage and contribution reports for every month of the year. Currently, some school districts submit their June report when school resumes in the fall. Also included is a technical fix to section 19-20-607, MCA setting the state supplemental contribution to the pension system resulting from an audit which is considered to be retroactive to contributions made on or after July 1, 2007.

HJ 39 Tom Burnett

Requesting Legislative Performance Audit on combining admin of TRS and MPERA

Chapter: Effective Date: July 1, 2019

HJ 39 is a joint resolution of the Senate and House of Representatives requesting that the Legislative audit committee prioritize a performance audit of administrative operations and costs of TRS and MPERA, to evaluate whether combining the two administrative entities into one would save money or result in other operational efficiencies.

SB 139 Mike Lang

Revise retiree return to work provisions in teachers' retirement systems

Chapter: 307 Effective Date: May 7, 2019

SB 139 revises the return to employment provisions under the teachers' retirement system by revising the criteria to be met for a retiree to return to employment in special circumstances without loss of retirement benefits. Generally, a retired teacher may return to work for up to three years without the loss of benefits if the position cannot be filled through the normal teacher recruitment process. The bill lowers the total years of creditable service from 30 years to 27 years in order for retirees to be eligible for this program. The bill adds a restriction that this option is only available to schools classified as second class or third class using the district classification that determines the number of trustees in the district. The bill also adds the requirement for the OPI to verify that the employer has advertised the position. Last, the bill requires the retirement board to report by September 15 of each even-numbered year to the Education Interim Committee and the State Administration and Veterans' Affairs Committee regarding the implementation of this section.

FACILITIES

HB 247 Bruce Grubbs

Provide greater flexibility for school districts in financing major maintenance

Chapter: 96 Effective Date: July 1, 2019.

HB 247 amends sections 20-9-471 and 20-9-525, 20-7-457, MCA, revises funding related to major maintenance projects by authorizing district trustees to issue obligations for limited purposes to certain financial institutions, specifically, a bank, building and loan association, savings and loan association, or credit union that is a regulated lender, as defined in 31-1-111, MCA, in addition to the board of investments. HB 247 requires trustees to give the board of investments the right of first refusal for these loans and clarifies the authority of trustees to utilize revenues in the building reserve fund to repay these obligations.

HB 652 Mike Hopkins

Revise the long range building bonding program

Chapter: Effective Date: Upon Passage

HB 652 amends Title 17 with the addition of several statutes providing for infrastructure funding in the form of general obligation bonds, general fund appropriations, and state special revenues from bonds. This bill specifically appropriates \$10.75 million to the Department of Commerce for local governments for school district infrastructure projects related to safety or security issues, major repairs or deferred maintenance, and major improvements or enhancements. Each project must be completed by September 30th, 2020, and cannot exceed \$750,000.

GOVERNANCE

HB 61 David Bedey

Revise School Data Privacy Laws

Chapter: 12 Effective Date: February 19, 2019

HB 61 amends 20-7-104, MCA, to allow the OPI to share a student's personally identifiable information specifically associated with the ACT or other college entrance exam that is also administered as a state assessment test with accredited postsecondary institutions, testing agencies under contract with the state, or scholarship organizations. Scholarship organizations are authorized to use the information only if it is for the sole purpose of scholarship opportunities. Under the law, the student must consent to their information being released.

HB 619 Daniel Zolnikov

Revise student data privacy laws

Chapter: 196 Effective Date: Upon Passage

HB 619 amends 20-7-104, MCA, to allow the OPI to share student-level information to the Commissioner of Higher Education and the Department of Labor for the purpose of research. The research must be directed at ensuring that the Montana K-12 education system meets the expectations of the Montana university system and the workforce needs of the state. The State Superintendent will determine the necessity of research requests from OCHE and DLI and will enter into an agreement to share the student information. The bill also places requirements on the Memorandum of Understanding between the OPI and said agency. These requirements state that the MOU must expire after 18 months and that all shared data must be deleted upon completion of the research project.

HB 715 Llew Jones

Generally revise laws related to state finance and provide for fiscal studies

Chapter: 398

Effective Date: July 1, 2019

HB 715 amends sections 17-7-130 and 17-7-140, MCA, revising percentages for reductions in spending and providing for a tax modernization study on the budget stabilization reserve fund. The bill also directs the legislative finance committee to conduct a study on long-term budget stabilization, sets the parameters for the studies, and provides for appropriations.

HB 745 Andrea Olsen

Enact a student online personal information protection act

Chapter: 369

Effective Date: May 7, 2019

HB 745 creates the Montana Pupil Online Personal Information Protection Act which addresses the issue of third party education software providers who collect student information and then sell the data to marketers. The first section of the act defines an "Operator" as the operator of a K-12 online application who knows or reasonably should know that the application is used primarily for K-12 school purposes. The bill prohibits an operator from engaging in targeted advertising, using information to amass a profile about a pupil, sell a pupil's information, or disclose protected information. Exceptions are listed such to ensure legal and regulatory compliance, to respond to or participate in the judicial process, to protect the safety of users or others or the security of the site, or to a service provider who is contractually limited to use the data for the intended purpose. An operator must also implement and maintain reasonable security practices and procedures. An operator who violates these restrictions could be found guilty of a misdemeanor and be fined up to \$500.

The bill also requires a school district that enters into a contract with a third party to provide a K-12 application to student data must ensure the contract contains a statement that pupil data continues to be the property of the school district.

Additional provisions include:

- Pupils retain possession of and control their own pupil-generated content
- Prohibition against the third party using any pupil information for any purpose not specified in the contract
- Procedures by which a parent, legal guardian or pupil may review pupil information and correct errors
- The actions the third party will take to ensure security and confidentiality of pupil records
- Procedure for notification in the event of an unauthorized disclosure
- Certification that pupil records will not be retained upon completion of the contract
- How the third party and the school district will jointly ensure compliance with FERPA
- Prohibition against the third party using personally identifiable information in pupil records to engage in targeted advertising

The bill does give an exception for contracts in place before the effective date of this act.

SB 2 Margaret (Margie) MacDonald
Allow government accounting standards to include DOA framework
Chapter: 73 Effective Date: July 1, 2019

SB 2 amends sections 2-7-504, MCA, and 7-6-609, MCA, to allow an additional financial framework for small government entities. The Department of Administration was given legislative authority to adopt administrative rules to govern small government financial reporting. While this bill has no direct effect on school district financial reporting, the Office of Public Instruction can adopt similar standards.

SB 58 Daniel R Salomon
Revise the Montana Bank Act
Chapter: 75 Effective Date: October 1, 2019

SB 58 amends section 20-3-324, MCA to exclude a reference to § 32-1-115, MCA, which defines a student financial institution. Instead, a school or education service is added to § 32-1-115, MCA; therefore, the reference to § 32-1-115, MCA in § 20-3-324, MCA is no longer necessary.

SB 302 John Esp
Generally revise laws related to local government budgeting and accounting
Chapter: 268 Effective Date: May 2, 2019

SB 302 amends Title 2, Chapter 7, requiring the Department of Justice (DOJ) to monitor and investigate non-compliance of local government entities regarding timely submission of financial reports and audits to the state. If local governments fail to report either financial audits or adopt budgets within two years of the deadline, the DOJ can file a cause of action against the local government entity.

SB 325 Steve Fitzpatrick
Create the Montana Business Corporation Act
Chapter: 271 Effective Date: June 1, 2020

SB 325 creates the Montana Business Corporation Act. In this bill, definitions in section 35-1-113, MCA, are repealed and replaced with Section 14 of SB 325. In § 20-5-320 (9)(b), MCA, the reference to the repealed section has been removed and replaced with the new definition of domestic corporation. This definition is applied to the "parent or guardian" in relation to a discretionary attendance agreement.

SR 16 Daniel R Salomon
Confirm Governor's appointee for Board of Regents

SR 16 confirms the appointment of the following as members of the Board of Regents of Higher Education:

- Dalton Johnson, Clancy, MT to a term ending June 30, 2019
- Casey Lozar, Helena, MT to a term ending February 1, 2025
- Brianne Rogers, Bozeman, MT to a term ending February 1, 2024.

SR 19 Daniel Salomon
Confirm Governor's appointees to board of public education

SR 19 concurs, confirms, and consents to the appointment of Jesse Barnhart (term ending February 1, 2025), Madalyn Quinlan (term ending February 1, 2026), and Scott Stearns (term ending February 1, 2020) to the Board of Public Education in accordance with section 2-15-1508 MCA.

SR 47 Daniel R Salomon
Confirm Governor's appointee for Board of Regents for Higher Ed

SR 47 confirms the appointment of Joyce Dumbrowski from Missoula, MT as a member of the Board of Regents of Higher Education for a term ending February 1, 2026.

HIGHER EDUCATION

HB 176 David Bedey

Clarify approval process for new community college district

Chapter: 69 Effective Date: October 1, 2019

HB 176 amends sections 20-15-204 and 20-15-209, MCA, which govern the creation of new community college districts. The key new provision gives the legislature the sole authority to approve a new community college district. After the county electorate approves the proposal to organize a new community college district, the county election administrator determines which candidates have been elected as trustees. The Board of Regents must inform the legislature of the election results prior to the next legislative session along with a recommendation. If the legislature approves the new district, the board of regents shall make an order declaring the new district to be organized.

HB 212 Llew Jones

Revise funding for community colleges

Chapter: 175 Effective Date: July 1, 2019

HB 212 amends 20-15-310, MCA, to clarify the general fund appropriation for each full-time equivalent resident student at a community college. The new formula states that the general fund appropriation will be the weighted average of state support per resident full-time equivalent student among community colleges, 2-year, and 4-year campuses of the Montana University system in the most recent year plus an amount equal to two standard deviations of the most recent 6 years weighted averages of state support per resident full-time equivalent student.

HB 657 David Bedey

Study community college funding formula and CTE funding

Chapter: Effective Date: Upon Passage

HB 657 provides for a legislative study of education-related topics to be conducted by a bipartisan subcommittee of the legislative finance committee. The topics include K-12 special education funding, the community college funding formula, and postsecondary career and technical education credit values. The results of the study must be presented to the legislative finance committee prior to September 1, 2020. The bill appropriates \$5,000 to the legislative fiscal division for purposes of conducting the study.

HB 716 Tom Woods

Developing an agreement with MUS and Idaho College of Medicine

Chapter: Effective Date: Upon Passage

HB 716 authorizes the establishment of the Idaho College of Osteopathic Medicine Cooperative Medical Education Program. The bill establishes the contract requirements of the program and requires the board of regents to request funding for all available slots in the program. The bill adds to Idaho College of Medicine to the program that exists with the University of Washington College of Medicine. Under this program, the state pays for the tuition for a Montana resident to attend medical school so long as the resident commits to return to Montana to practice medicine. The bill provides for up to 10 slots per year in the program.

HB 754 Sue Vinton

Create study commission to review MUS restructuring

Chapter: Effective Date: Upon Passage

HB 754 creates the Montana University System 2-Year Education Restructuring Review Commission. The commission will consist of four members of the House of Representatives, four members of the Senate, two members of the Board of Regents, a member of the Board of Public Education, the president of Montana Associated Students, two members appointed by the governor (one of whom must be a representative of the tribal colleges) and two members of the public. The commission will consider the history of the Montana University System incorporating vocational-technical institutions in the system, how the university system addresses student demand for career and technical education (CTE), and examine the potential for restructuring CTE in 2-year education settings. The commission will prepare a report of its findings and recommendations for the next legislature. The bill appropriates \$57,000 to the legislative services division for the purposes of funding the commission.

SB 60 Daniel R. Salomon

Generally revise laws related to financial aid programs

Chapter: 300 Effective Date: July 1, 2019

SB 60 revises undergraduate financial aid laws, revises the Montana resident student financial aid program, revises the Montana STEM scholarship program, extends eligibility for the STEM scholarship program to four years, eliminates the Governor's postsecondary scholarship council, and repeals the Governor's postsecondary scholarship program. The bill redefines the legislative intent of the Montana resident student financial aid program to include three types of aid programs: an incentive program for STEM students, a merit program for the highest achieving students, and an access to higher education program for students demonstrating financial need. The bill adds a requirement for the Commissioner of Higher Education to submit to the education interim committee an annual report concerning the financial aid program. The bill extends the STEM scholarship from two years to four years.

SB 60 revises the priority order of disposition of lottery net revenues to assign the first \$500,000 in FY 2020, the first \$1,000,000 in FY 2021, the first \$1,500,000 in FY 2022 and the first \$2,000,000 in FY 2023 and the first \$2,250,000 in FY 2024 and subsequent years to the STEM scholarship program.

SB 212 Susan Webber

Revise resident nonbeneficiary student laws

Chapter: 161 Effective Date: July 1, 2019

SB 212 amends 20-25-428, MCA, to revise the payment made to tribal colleges. The bill also requires the tribal college to submit current academic year eligible enrollment numbers for the calculation of the state payment. By June 15th of each year, tribal colleges will report to the regents the number of eligible resident nonbeneficiary students who attended the tribal college in that academic year. By August 15th of each year, the regents will calculate the payment for each tribal college based on the number of eligible students submitted.

SAFETY

HB 173 Shane Morigeau

Revise consent laws for elementary or high school students in a school setting

Chapter: 346 Effective Date: September 1, 2019

HB 173 amends 45-5-501 and 45-5-502, MCA, to provide protections for students in school, whether public or private. The law states that students cannot consent to a sexual relationship with a teacher due to the authority that the teacher holds over the student. The bill does provide for an exception if the two individuals are married. HB 173 is designed to coordinate language with SB 132.

HB 190 Bruce Grubbs

Revise local government authority to set school zone speed limits

Chapter: 174 Effective Date: October 1, 2019

HB 190 amends section 61-8-310, MCA, which allows local authorities to adjust the speed limit in a school zone. This bill change will allow the county commissioners to set the limit of school zones to no less than 15 miles per hour.

HB 413 Fred Anderson

Address vaping in schools

Chapter: 357 Effective Date: May 7, 2019

HB 413 amends 20-1-220, MCA, to prohibit the use of tobacco products on public school property. The amended language extends the prohibition on the use of tobacco products on public school property to vapor products, or alternative nicotine products. The amended language does allow tobacco, vapor, or alternative nicotine products to be used in a classroom or on other school property as a part of a lecture, demonstration, or education forum, if it is sanctioned by a school administrator or faculty member, to demonstrate the risks associated with using those products. Another exception that the bill allows is the use of smoking cessation products.

HB 601 John Fuller

Transfer funds within OPI for school safety professional development grants

Chapter: 388 Effective Date: July 1, 2019

HB 601 provides sideboards to an allocation made in HB 2. The bill moves \$100,000 from the section 6 budget to the section 9 budget for distribution to schools for professional development grants. Acceptable uses for the school safety professional development grants include but are not limited to individual training of school employees, improvement of facilities, and programs that promote the protection of students from violence, theft, bullying, exposure to weapons, and the sale or use of illegal substances on school grounds.

SB 35 Fred Thomas
Generally revise school safety laws
Chapter: 248 Effective Date: May 2, 2019

SB 35 amends 41-5-215 and 52-2-211, MCA, to improve county interdisciplinary teams in the state. The bill strikes sections 3 and 4 in 41-5-215 to clarify the notification of schools about students who have formal youth court records, preliminary inquiries, petitions, motions, other filed pleadings, court findings, verdicts, and orders and decrees. The second part of the bill in section 52-2-211 adds the requirement that county superintendents shall provide to the OPI a current copy of the written agreement for the county interdisciplinary information and school safety team. The OPI is then required to report any county that has not provided a written agreement to the education interim committee no later than September 15 of a given year.

SB 40 Frank Smith
Require OPI to create and maintain electronic directory photograph repository
Chapter: 250 Effective Date: July 1, 2019

SB 40 adds a new section in Title 20, chapter 7, part 13, MCA, and directs the OPI to create and maintain an electronic directory photograph repository of individual students for the purposes of providing photographs to law enforcement for any student who has been identified as a missing child. School districts must send an annual notice to the parent or guardian of each student with information on the new photograph repository, a form to allow the parent or guardian to have the student's photograph included, information about the use of the photograph if the student is identified as a missing child, and information about how to remove the photograph. This statute also directs the OPI to include the directory photograph on the monthly missing child list the OPI provides to districts. Finally, the bill requires the OPI to delete any photograph that is two years old or older.

SB 92 Daniel R. Salomon
Generally revise laws related to school safety
Chapter: 253 Effective Date: May 2, 2019

SB 92 amends sections 20-9-236, 20-9-502, and 20-9-525, MCA and clarifies permissible expenditures for school and student safety and security within the school safety sub-fund of the building reserve fund to include staffing for or services provided by architects, engineers, school resource officers, counselors, and other staff or consultants assisting the district with improvements to school and student safety and security to include, programs to support school and student safety and security, including but not limited to active shooter training, threat assessments, and restorative justice. SB 92 authorizes the trustees of a school district to seek voter approval of a levy for school and student safety and security within the district's school safety sub-fund of the building reserve fund. The bill also expands permissible expenditures of

state school major maintenance aid and major maintenance levies to include school and student safety and security within the district's permissively levied sub-fund of the building reserve fund.

SB 132 Keith Regier

Creating a student safety accountability act

Chapter: 305 Effective Date: May 7, 2019

SB 132 amends 45-5-501 and 45-5-502, MCA, to provide protections for students in school, whether public or private. The law states that students cannot consent to a sexual relationship with a teacher due to the authority that the teacher holds over the student. The bill does provide for an exception if the two individuals are married. The bill goes further to prohibit employers of those convicted of violations in 45-5-502, 45-5-503, 45-5-504, 45-5-507, 45-5-508, 45-5-601, 45-5-602, 45-5-603, 45-5-625, 45-5-702, 45-5-704, and 45-5-705 from assisting in obtaining employment for their offending employee. It also provides for a penalty of a fine up to \$1,000 and up to one-year imprisonment, for individuals who assist offenders in obtaining employment. SB 132 is designed to coordinate with HB 173 and states that if both bills passed, the amending sections of 45-5-501 and 45-5-502 are null and void. However, the sections prohibiting employers from helping convicted offenders and the penalties section will still be put into law.

SB 140 Cary Smith

Establish the Montana dyslexia screening and intervention act

Chapter: 227

Effective Date: July 1, 2019

SB 140 establishes the Montana Dyslexia Screening and Intervention Act. SB 140 requires school districts to identify children with disabilities and evaluate for special education as early as possible. In line with this requirement, the bill requires school districts to utilize a screening instrument aimed at identifying students at risk of not meeting grade-level reading benchmarks. The screening instrument must be administered to a child in the first year that the child is admitted to a school up to grade 2 and a child who has not been previously screened who fails to meet grade-level reading benchmarks. The screening tool must be administered by an individual trained to identify signs of dyslexia. If the screening tool suggests that a child has dyslexia, the school district must take steps to identify the specific needs of the child and implement best practice interventions to address those needs.

The OPI is required to raise statewide awareness of dyslexia and provide guidance to school districts related to the early identification of dyslexia including best practices for reliable screening methods, best practice interventions to support students with dyslexia as early as possible, and best practices for collaborating with and supporting parents of students with dyslexia. The OPI and the BPE must report to the interim education committee on progress made in addressing dyslexia no later than September 15, 2020. Finally, the act urges all entities in Montana with authority or a role to play in teacher preparation and professional development to ensure that teachers and other school personnel are well prepared to identify and serve students with dyslexia.

SCHOOL FINANCE

HB 127 Geraldine Custer

Generally revise laws related to state payments to schools

Chapter: 66 Effective Date: July 1, 2019

HB 127 amends section 20-9-344, MCA, by adjusting the state school payment schedule. The Guaranteed Tax Base Aid (GTB) payment currently distributed in November will be paid in December; and the Direct State Aid, Quality Educator Component, At Risk Component, Indian Education for All, Student Achievement Gap, Special Education, and Data for Achievement payments normally distributed in December will be paid in November. The change better aligns the large GTB payment with state revenue from property taxes

HB 159 Bruce Grubbs

Increase K-12 BASE aid, entitlements, and payments

Chapter: 24 Effective Date: July 1, 2019.

HB 159 provides inflationary increases of 0.91 percent for FY 2020 and 1.83 percent for FY 2021 to the funding components of school district general fund budgets. The increases are applied to the basic and per-ANB entitlements, the quality educator payment, the Indian education for all payment, the at-risk student payment, the American Indian achievement gap payment, and the data for achievement payment. (Note: The inflationary increase for the at-risk student payment is not included in HB 159; rather it is a line item appropriation in HB 2.)

The fiscal note for HB 159 shows a biennial cost of \$77.1 million.

Additionally, HB 159 includes legislative intent that funding is to be appropriated for the natural resources development K-12 school facilities payment as follows:

Calculated as the greater of: \$6.4 million in fiscal year 2020, \$7.6 million in fiscal year 2021, and \$10 million in fiscal year 2022, and \$10 million in fiscal year 2023, with each fiscal year's appropriation reduced by the amount of projected earnings from the school facilities fund pursuant to 17-5-703 for that fiscal year or 5% of the oil and natural gas production taxes deposited in the general fund pursuant to 15-36-331(4) for the fiscal year occurring 2 fiscal years prior to the fiscal year of the payment.

For fiscal years 2024 and beyond the appropriation for the natural resources development K-12 school facilities payment will be calculated as the greater of: \$10 million increased by an inflationary adjustment calculated as provided in 20-9-326 applied in fiscal year 2024 and in each succeeding fiscal year or 5% of the oil and natural gas production taxes deposited in the general fund pursuant to 15-36-331(4) for the fiscal year occurring 2 fiscal years prior to the fiscal year of the payment.

HB 237 Jasmine Krotkov

Allow school district bond issuance for a term of up to 30 years

Chapter: 137 Effective Date: April 16, 2019

HB 237 amends section 20-9-10, MCA, to allow school districts to issue a bond for up to 30 years without restrictions related to comparable bond rates on 20-year loans.

HB 319 Thomas Winter

Revise agency fund terminology

Chapter: 185 Effective Date: July 1, 2019

HB 319 amends sections 2-7-505, 2-18-402, 17-2-102, 17-2-105, 17-2-202, 17-8-101, 20-9-201, 39-3-213, 90-6-304, MCA. The language in the statute includes section 20-9-201, MCA, which defines fund types including the custodial fund, previously called the agency fund. This bill aligns state finance law with financial standards by renaming the agency fund the more appropriate custodial fund.

HB 388 Mary Caferro

Generally revise education laws related to students with exceptional needs

Chapter: 142 Effective Date: July 1, 2019

HB 388 amends 20-7-435, MCA, to allow the Superintendent of Public Instruction to distribute funds appropriated for contracts with in-state children's psychiatric hospitals or residential treatment facilities to public school districts. The purpose of the distribution is to support educational programs for children with significant behavioral or physical needs. This distribution has been authorized by language in HB 2, which is no longer necessary.

HB 403 Barry Usher

Generally revise coal tax laws

Chapter: 355 Effective Date: May 7, 2019

HB 403 amends section 15-23-703, MCA modifying granted tax abatements for new or expanding underground mines at 2.5% against the value of coal as provided in 15-23-701(4) for tax years beginning on or after January 1, 2011, and ending December 31, 2030.

HB 576 David Bedey

Revise school finance laws related to gifts and endowments

Chapter: 409 Effective Date: May 9, 2019

HB 576 amends section 20-9-604, MCA, relating to donations made to the endowment fund in school districts. This change in law allows school districts to deposit donations in any budgeted or non-budgeted fund if the donor does not specify the purpose of the funds. The language also allows previously donated endowment funds with no specific designation to be moved to

another fund at the discretion of the Board of Trustees. The legislature also encourages school district trustees to adopt a gift acceptance policy.

HB 633 Bradley Hamlett

Create digital library services state special revenue account

Chapter: Effective Date: July 1, 2019

HB 633 establishes a state special revenue account for the state library to use for the provision of digital library services throughout the state. The new account can receive payments for the use of the natural resource information system, legislative transfers to the account, and any funds allocated to the account. The bill has an appropriation to transfer \$100 from the state general fund to initialize the account. Also, the bill charges the interim Legislative Finance Committee to direct a study of funding to adequately and fairly distribute the cost of the natural resource information system and other digital library services among state agencies and private or commercial entities.

HB 636 Llew Jones

Revise laws related to protested taxes

Chapter: Effective Date: Taxes paid after December 31, 2019

HB 636 amends Title 15 related to payment of protested taxes or fees under protest. This change requires centrally assessed and industrial property taxpayers that protest more than 40% of their property tax bill deposit an additional 2.5% of the protested tax amount into a new local protested tax mitigation fund. The deposited funds are refunded to the taxpayer if the final assessed value is 60% or less than the original assessed value. If the final assessed value is greater than 60% of the original assessment value, the 2.5% deposit is retained by the taxing jurisdiction. In addition, if the final assessed value is less than 75% of the original assessment value, the local governing body can demand the Department of Revenue reimburse the local government the tax equivalent of the difference between 75% of the original assessed value and the final assessed value.

HB 643 Rhonda Knudsen

Extend state lands reimbursement block grant for schools

Chapter: Effective Date: July 1, 2019.

HB 643 amends section 20-9-640, MCA, extending the state lands reimbursement block grant for schools through the end of FY 2021 and provides an annual appropriation of \$100,000 for the 2021 biennium.

HB 656 Joel G Krautter
Generally revise oil and gas tax and distribution laws
Chapter: 414 Effective Date: July 1, 2019.

HB 656 amends sections 15-36-304, 15-36-331, 15-36-332, 82-11-131, 82-11-135, and 90-6-1001, MCA and provides a fixed tax rate for the privilege and license tax and the tax for the oil and gas natural resource distribution account as well as provides for the allocation of privilege and license tax revenue and revenue from the tax for the oil and gas natural resource distribution account. Additionally, the bill provides that the tax for the oil and gas natural resource distribution account be distributed to incorporated cities and towns in which oil production occurs.

SB 9 Daniel R. Salomon
Revise school funding related to overestimated ANB increases
Chapter: 128 Effective Date: April 10, 2019

SB 9 amends sections 20-9-141, 20-9-308, 20-7-457, and 20-9-314, MCA, revising laws related to overpayments of school district property taxes, ensuring that overpayments of school district general fund property taxes resulting from anticipated unusual enrollment increases that are not realized are fully returned to local taxpayers. The bill also modifies statute so that general fund voting limits in the subsequent year are recalculated to reflect a modified prior year budget amount that would have been permissible as related to actual materialized ANB.

SB 10 Daniel R. Salomon
Revise school funding related to major maintenance aid
Chapter: 10 Effective Date: February 19, 2019.

SB 10 amends section 20-9-525, MCA, to correct errors related to the calculation of school major maintenance aid and the natural resource development k-12 school facilities payment

SB 11 Daniel R. Salomon
Clarify age requirements related to the definition of pupil
Chapter: 16 Effective Date: October 1, 2019

SB 11 amends sections 20-1-101, 20-5-101, and 20-7-411, MCA, to update laws related to pupil minimum age, clarifying that a 5-year-old child enrolled in a public school is considered a pupil.

SB 12 Daniel R Salomon
Revise school funding related to oil and gas production taxes
Chapter: 247 Effective Date: July 1, 2019

SB 12 repeals outdated statutes related to oil and gas accounts. The statutes include sections 20-9-517, 20-9-518, and 20-9-520, MCA. The statutes are no longer valid as the oil and

gas accounts were restructured in the 2017 Legislative Session by HB 647 which diverted the revenue to the state guarantee account. Repealing these statutes removes outdated language.

SB 16 Daniel R. Salomon

Revise school funding related to special education joint boards

Chapter: 9 Effective Date: October 1, 2019.

SB 16 amends sections 20-3-361, 20-3-362, 20-7-457, and 20-9-321, MCA, to clarify laws related to special education cooperatives and joint boards, removing language related to special education funding for joint boards. Special education funding is paid on behalf of each school district and is not related to joint boards.

SB 292 Roger Webb

Revise laws related to financial administration of school districts

Chapter: 166 Effective Date: July 1, 2019

SB 292 amends section 20-9-235, MCA, allowing the Office of Public Instruction to remit transportation and debt service payments directly to school districts with investment accounts separate from the county.

SB 321 Brian Hoven

Revise laws pertaining to targeted economic development districts

Chapter: 270 Effective Date: October 1, 2019.

SB 321 amends sections 7-15-4286, 7-15-4291, 20-9-104, and 20-9-141, MCA and provides that the tax increment that is not utilized to pay costs or bonds by a targeted economic district that has issued bonds must be remitted to taxing jurisdictions in the same manner as it would have been distributed without tax increment financing.

SB 328 Tom Richmond

Authorize local abatement of coal gross proceeds tax for surface mines

Chapter: 331 Effective Date: May 7, 2019

SB 328 amends sections 15-23-703 and 15-23-715, MCA and authorizes a board of county commissioners to authorize a local abatement of the coal gross proceeds tax from a new or expanding surface coal mine and utilizes the same abatement provisions for surface mining as underground mining.

STATE LANDS

HB 695 Jim Keane

Appropriate funds to FWP for recreation easement

Chapter: 397 Effective Date: July 1, 2019

HB 695 appropriates \$12M to the Department of Fish, Wildlife, and Parks (FWP) to purchase a permanent recreation easement at Big Arm State Park from the Department of Natural Resources and Conservation, to be funded from license fees, federal land and water conservation funds, and campground fees. Big Arm State Park is 200 acres located on Flathead Lake. The bill addresses the issue that the current lease rate is \$20k per year and the lease is due for renewal. Because of the requirement that the lease rate be at least 3.5% to 5% of land value, the estimated new lease payment is at least \$500,000 per year. The \$12M will go into the trust fund and the interest, estimated at \$400,000 per year, will go to the guarantee account. While this bill appropriates the money for the easement, Land Board approval is required for the easement.

TEACHERS

HB 211 Llew Jones

Address recruitment and retention of K-12 quality educators

Chapter: 347 Effective Date: July 1, 2019

HB 211 renews the quality educator loan assistance program as a teacher recruitment and retention aid for rural schools and moves the responsibility for administering the program from the Office of the Commissioner of Higher Education to the OPI. In addition, the bill substantially changes the program.

The substance of the program is that newly hired teachers who teach a subject that has been identified as a "critical quality educator shortage area" at an "impacted school" are eligible to receive state paid loan assistance up to \$3,000 in their first year, \$4,000 in their second year, and \$5,000 in their third year so long as they remain full time employees at an impacted school. The local school district has the option to make a fourth-year payment of up to \$5,000.

The payments are made directly to the lender and are exempt from Montana income tax.

Impacted schools and critical quality educator shortage areas are contained in the "Critical Quality Educator Shortage Report" presented to the Board of Public Education by the OPI for approval and publication by December 1 of each year. The bill amends the definition of "impacted school" to be any public school that is greater than a 20-minute drive from a Montana city with a population greater than 15,000 as well as all special education cooperatives, the Montana School for the Deaf and Blind, the Montana Youth Challenge program, a state youth correctional facility, or a public school located on an Indian reservation. This new definition expands the number of schools meeting this definition from approximately 420 to approximately 670.

HB 211 defines critical quality educator shortage areas to mean a specific licensure or endorsement area in an impacted school which in any of the past three years has experienced a recruitment with less than five qualified applicants, a position that was advertised and remained vacant due to a lack of any qualified applicants for 30 days, or a position filled by a retired teacher, a teacher with a class five license, or via an emergency authorization. Also, the bill sets up a process whereby a school district can apply to the BPE for an immediate designation of a critical shortage due to a current recruitment which meets any of the criteria.

The bill appropriates \$500,000 per year for the program. If the appropriation is not sufficient to pay all qualifying loan assistance applications, the repayment assistance payments must be prorated accordingly.

LEGISLATION

INDEX OF K-12 EDUCATION RELATED BILLS

Bill	Sponsor	Short Title	Status	Category
HB 33	Jonathan Windy Boy (D) HD 32	Extend the Montana Indian Language Preservation Program	Pass	Accreditation/ Curriculum
HB 41	Jonathan Windy Boy (D) HD 32	Extend the Cultural Integrity and Commitment Act (language immersion programs)	Pass	Accreditation/ Curriculum
HB 153	Kathy Kelker (D) HD 47	Generally revise education laws related to gifted and talented programs	Pass	Accreditation/ Curriculum
HB 263	Jonathan Windy Boy (D) HD 32	Revise laws related to Indian language immersion programs in schools	Fail	Accreditation/ Curriculum
HB 295	Fred Anderson (R) HD 20	Create grant program to encourage work-based learning	Fail	Accreditation/ Curriculum
HB 351	Wendy McKamey (R) HD 19	Encourage transformational learning	Pass	Accreditation/ Curriculum
HB 371	Jonathan Windy Boy (D) HD 32	Provide ongoing funding to the Montana Indian Language Preservation Program	Fail	Accreditation/ Curriculum
HB 387	Llew Jones (R) HD 18	Create advanced opportunity act for Montana students	Pass	Accreditation/ Curriculum
HB 466	Jade Bahr (D) HD 50	Fund an Indian language and culture course through MT Digital Academy	Fail	Accreditation/ Curriculum
HB 631	Kimberly Dudik (D) HD 94	Create public private partnership to help workers in targeted industries	Pass	Accreditation/ Curriculum
HB 759	Emma Kerr-Carpenter (D) HD 49	Provide for digital literacy and computer science coordinator	Fail	Accreditation/ Curriculum
HB 774	Jonathan Windy Boy (D) HD 32	Create computer coding student employment pilot program	Fail	Accreditation/ Curriculum
SB 118	Keith Regier (R) SD 3	Revise laws related to online learning opportunities	Fail	Accreditation/ Curriculum
HB 2	Kenneth L Holmlund (R) HD 38	General Appropriations Act	Pass	Appropriations
HB 3	Kenneth L Holmlund (R) HD 38	Supplemental Appropriations Bill	Pass	Appropriations
HB 4	Dan Bartel (R) HD 29	Appropriations by Budget Amendment	Pass	Appropriations
HB 218	Sue Vinton (R) HD 56	Generally revise laws related to career and technical education	Fail	Appropriations
HB 638	David Bedey (R) HD 86	Increasing K-12 special ed allowable cost payment	Pass	Appropriations

HB 662	Llew Jones (R) HD 18	Implement provisions of HB2, Sec E - Education	Pass	Appropriations
HB 663	Llew Jones (R) HD 18	Implement provisions of HB2, Sec E - Education	Fail	Appropriations
HB 664	Llew Jones (R) HD 18	Implement provisions of HB2, Sec E - Education	Fail	Appropriations
HB 18	Sharon Stewart Peregoy (D) HD 42	Providing funding for school district programs serving English Learners	Fail	At-Risk Youth
HB 186	Mary Ann Dunwell (D) HD 84	Revise laws related to depression screening in public schools	Fail	At-Risk Youth
HB 187	Mary Ann Dunwell (D) HD 84	Revise laws related to youth suicide prevention	Fail	At-Risk Youth
HB 199	Barry Usher (R) HD 40	Generally revise laws related to bullying	Fail	At-Risk Youth
SB 197	Jeffrey W Welborn (R) SD 36	Generally revise education laws related to Montana youth challenge academy	Pass	At-Risk Youth
HB 166	Mary Ann Dunwell (D) HD 84	Revise display of sample ballots at polling places	Pass	Elections
HB 510	Jacob Bachmeier (D) HD 28	Allow youth election judges	Fail	Elections
HB 606	Andrea Olsen (D) HD 100	Revise payment for postage for absentee ballots returned by mail	Fail	Elections
HJ 1	Denise Hayman (D) HD 66	Interim study on voter qualifications for all special purpose districts	Fail	Elections
HJ 3	Forrest Mandeville (R) HD 57	Interim study resolution on accessibility for disabled electors	Pass	Elections
HJ 10	Alan Doane (R) HD 36	Study resolution to address American Indian voting	Pass	Elections
SB 112	Bryce Bennett (D) SD 50	Prohibition on distributing things at polling place not to apply to volunteers	Fail	Elections
SB 130	Daniel R.Salomon (R) SD 47	Revise school election law	Pass	Elections
SB 134	Sue Malek (D) SD 46	Generally revise campaign finance laws related to electioneering communications	Fail	Elections
SB 148	Bryce Bennett (D) SD 50	Allow late registrant absentee ballots to be dropped off at polling locations	Pass	Elections
SB 149	Bryce Bennett (D) SD 50	Provide that sec of state' s office pays postage for absentee ballot return	Fail	Elections
SB 162	Roger Webb (R) SD 23	Generally revise election laws	Pass	Elections
SB 180	JP Pomnichowski (D) SD 33	Remove prohibition preventing voter from showing voted ballot to another person	Fail	Elections

SB 291	Fred Thomas (R) SD 44	Revise laws on voting systems and ballot form	Pass	Elections
SB 297	Dee Brown (R) SD 2	Generally revise laws related to school elections involving property taxes	Fail	Elections
SB 298	Dee Brown (R) SD 2	Generally revise laws related to school elections involving property taxes	Fail	Elections
SB 366	Dee Brown (R) SD 2	Referendum on requiring photo ID to vote	Fail	Elections
SJ 21	Janet Ellis (D) SD 41	Interim study on electioneering	Fail	Elections
HB 204	Marilyn Ryan (D) HD 99	Generally revise teachers' retirement system laws	Pass	Employment Relations
HB 209	Moffie Funk (D) HD 82	Generally revise state employee pay laws	Fail	Employment Relations
HB 235	Dave Fern (D) HD 5	Provide options, conditions for financing school health group plans	Fail	Employment Relations
HB 323	Brad Tschida (R) HD 97	Provide for free association for non-union public employees	Veto	Employment Relations
HB 345	Mary Ann Dunwell (D) HD 84	Provide a stepped increase in minimum wage to a living wage	Fail	Employment Relations
HB 455	Jonathan Windy Boy (D) HD 32	Provide unemployment for certain teachers and adjunct school personnel	Fail	Employment Relations
HB 468	Jade Bahr (D) HD 50	Involve certain state agencies in disability integrated employment programs	Fail	Employment Relations
HJ 39	Tom Burnett (R) HD 67	Requesting Legislative Performance Audit on combining admin of TRS and MPERA	Pass	Employment Relations
SB 128	Jill Cohenour (D) SD 42	Generally revise laws related to state employee pay and benefits	Fail	Employment Relations
SB 139	Mike Lang (R) SD 17	Revise retiree return to work provisions in teachers' retirement system	Pass	Employment Relations
HB 118	Julie Dooling (R) HD 70	Create grant program to remove lead from school water supplies	Fail	Facilities
HB 247	Bruce Grubbs (R) HD 68	Provide greater flexibility for school districts in financing major maintenance	Pass	Facilities
HB 652	Mike Hopkins (R) HD 92	Revise the long-range building bonding program	Pass	Facilities
HB 704	Bruce Grubbs (R) HD 68	Establish a Montana solar schools grant program	Fail	Facilities
SB 193	Jill Cohenour (D) SD 42	Generally revise school bus safety laws	Fail	Facilities
SB 350	Jill Cohenour (D) SD 42	Encourage lap-shoulder belts on school buses	Fail	Facilities
HB 61	David Bedey (R) HD 86	Revise school data privacy laws	Pass	Governance

HB 171	David Bedey (R) HD 86	Create career and technical education and workforce development commission	Fail	Governance
HB 197	Daniel Zolnikov (R) HD 45	Require public agency IT contractors use software to verify hours worked	Fail	Governance
HB 270	Moffie Funk (D) HD 82	License speech language pathology and audiology assistants	Fail	Governance
HB 303	Greg DeVries (R) HD 75	Eliminate compulsory education requirements	Fail	Governance
HB 414	Jessica Karjala (D) HD 48	Generally revise laws related to school meals	Fail	Governance
HB 482	Alan Doane (R) HD 36	Require agency reporting on financial assistance to tribes	Veto	Governance
HB 526	Bridget Smith (D) HD 31	Change the name of Columbus Day holiday	Fail	Governance
HB 619	Daniel Zolnikov (R) HD 45	Revise student data privacy laws	Pass	Governance
HB 668	Marilyn Marler (D) HD 90	Require disclosure of PSAs by statewide elected officials	Fail	Governance
HB 693	Forrest Mandeville (R) HD 57	Requiring reimbursement of certain expenses by elected official	Fail	Governance
HB 715	Llew Jones (R) HD 18	Generally revise laws related to state finance and provide for fiscal studies	Pass	Governance
HB 745	Andrea Olsen (D) HD 100	Enact a student online personal information protection act	Pass	Governance
SB 2	Margaret (Margie) MacDonald (D) SD 26	Allow government accounting standards to include DOA framework	Pass	Governance
SB 58	Daniel R Salomon (R) SD 47	Revise the Montana Bank Act	Pass	Governance
SB 229	Brian Hoven (R) SD 13	Limit liability of private educational programs in admitting certain criminals	Fail	Governance
SB 281	Jennifer Fielder (R) SD 7	Provide federalism training for certain state employees	Fail	Governance
SB 302	John Esp (R) SD 30	Generally revise laws related to local government budgeting and accounting	Pass	Governance
SB 325	Steve Fitzpatrick (R) SD 10	Create the Montana Business Corporation Act	Pass	Governance
SR 16	Daniel R Salomon (R) SD 47	Confirm Governor's appointee for Board of Regents	Pass	Governance
SR 19	Daniel R Salomon (R) SD 47	Confirm Governor's appointees to board of public education	Pass	Governance
SR 47	Daniel R Salomon (R) SD 47	Confirm Governor's appointee for Board of Regents of Higher Ed	Pass	Governance

HB 135	Jonathan Windy Boy (D) HD 32	Create tribal college credit transfer and student opportunity task force	Fail	Higher Ed
HB 176	David Bedey (R) HD 86	Clarify approval process for new community college district	Pass	Higher Ed
HB 212	Llew Jones (R) HD 18	Revise funding for community colleges	Pass	Higher Ed
HB 254	Jacob Bachmeier (D) HD 28	Provide for a statutory appropriation for certain MUS tuition waivers	Fail	Higher Ed
HB 337	Ryan Lynch (D) HD 76	Increase university system supplemental contribution to TRS	Fail	Higher Ed
HB 495	Robert Farris-Olsen (D) HD 79	Expand exemptions from collections to include student loans	Fail	Higher Ed
HB 657	David Bedey (R) HD 86	Study community college funding formula and CTE funding	Pass	Higher Ed
HB 716	Tom Woods (D) HD 62	Developing an agreement with MUS and Idaho College of Medicine	Pass	Higher Ed
HB 754	Sue Vinton (R) HD 56	Create study commission to review MUS restructuring	Pass	Higher Ed
SB 60	Daniel R Salomon (R) SD 47	Generally revise laws related to financial aid programs	Pass	Higher Ed
SB 87	Keith Regier (R) SD 3	Requiring the University System to report on student loans	Fail	Higher Ed
SB 152	Dick Barrett (D) SD 45	Repeal sunset on 6-mill university levy	Fail	Higher Ed
SB 212	Susan Webber (D) SD 8	Revise resident nonbeneficiary student laws	Pass	Higher Ed
HB 120	Willis Curdy (D) HD 98	Revise local government authority of certain speed limits	Fail	Safety
HB 173	Shane A Morigeau (D) HD 95	Revise consent laws for elementary or high school students in a school setting	Pass	Safety
HB 190	Bruce Grubbs (R) HD 68	Revise local government authority to set school zone speed limits	Pass	Safety
HB 210	Derek J Harvey (D) HD 74	Generally revise traffic laws	Fail	Safety
HB 354	Rodney Garcia (R) HD 52	Restrict sexually explicit materials and sexually oriented businesses	Fail	Safety
HB 398	Gordon Pierson (D) HD 78	Require mental health and suicide prevention training in teacher preparation	Fail	Safety
HB 413	Fred Anderson (R) HD 20	Address vaping in schools	Pass	Safety
HB 453	Jonathan Windy Boy (D) HD 32	Revise laws related to suicide prevention	Fail	Safety
HB 477	Moffie Funk (D) HD 82	Enact child access prevention and education laws	Fail	Safety
HB 492	Sue Vinton (R) HD 56	Generally revise laws related to school bus safety	Fail	Safety

HB 541	Kathy Kelker (D) HD 47	Revise immunization notification requirements	Fail	Safety
HB 548	Kimberly Dudik (D) HD 94	Provide for reporting of abuse at juvenile treatment facilities	Fail	Safety
HB 564	David Dunn (R) HD 9	Revise medical exemption laws on immunizations	Fail	Safety
HB 567	Derek Skees (R) HD 11	Establish Montana school marshal program	Veto	Safety
HB 582	Mary Ann Dunwell (D) HD 84	Require suicide prevention materials to be distributed in hunter safety courses	Fail	Safety
HB 601	John Fuller (R) HD 8	Transfer funds within OPI for school safety professional development grants	Pass	Safety
HB 653	Willis Curdy (D) HD 98	Revise clean indoor air act to include vaping	Fail	Safety
SB 6	Edith (Edie) McClafferty (D) SD 38	Revise school funding related to school safety	Fail	Safety
SB 35	Fred Thomas (R) SD 44	Generally revise school safety laws	Pass	Safety
SB 40	Frank Smith (D) SD 16	Require OPI to create and maintain electronic directory photograph repository	Pass	Safety
SB 92	Daniel R Salomon (R) SD 47	Generally revise laws related to school safety	Pass	Safety
SB 99	Cary Smith (R) SD 27	Revise laws related to informing on legal opt out options for vaccines	Fail	Safety
SB 122	Sue Malek (D) SD 46	Revise clean indoor air act to include vaping	Fail	Safety
SB 132	Keith Regier (R) SD 3	Creating a student safety accountability act	Pass	Safety
SB 140	Cary Smith (R) SD 27	Establish the Montana dyslexia screening and intervention act	Pass	Safety
SB 164	Fred Thomas (R) SD 44	Generally revise school safety laws	Fail	Safety
HB 27	Moffie Funk (D) HD 82	Generally revise special education funding (SPED in Inflation)	Fail	School Finance
HB 127	Geraldine Custer (R) HD 39	Generally revise laws related to state payments to schools	Pass	School Finance
HB 159	Bruce Grubbs (R) HD 68	Generally revise education funding laws	Pass	School Finance
HB 177	Fred Anderson (R) HD 20	Allow school districts to use equalization aid for preschool programs	Fail	School Finance
HB 191	Bruce Grubbs (R) HD 68	Provide for K-12 synchronous distance learning payment	Fail	School Finance

HB 225	Ryan Lynch (D) HD 76	Revise school laws related to inflation, preschool, and special education	Fail	School Finance
HB 237	Jasmine Krotkov (D) HD 25	Allow school district bond issuance for a term of up to 30 years	Pass	School Finance
HB 298	Christopher Pope (D) HD 65	Revise funding for students with disabilities	Fail	School Finance
HB 300	Kerry White (R) HD 64	Generally revise taxes and the distribution of revenue through sales tax	Fail	School Finance
HB 319	Thomas Winter (D) HD 96	Revise agency fund terminology	Pass	School Finance
HB 372	Tom Welch (R) HD 72	Increase inflation limitation on government entities for property tax levies	Fail	School Finance
HB 388	Mary Caferro (D) HD 81	Generally revise education laws related to students with exceptional needs	Pass	School Finance
HB 403	Barry Usher (R) HD 40	Generally revise coal tax laws	Pass	School Finance
HB 576	David Bedey (R) HD 86	Revise school finance laws related to gifts and endowments	Pass	School Finance
HB 633	Bradley Hamlett (D) HD 23	Create digital library services state special revenue account	Pass	School Finance
HB 636	Llew Jones (R) HD 18	Revise laws related to protested taxes	Pass	School Finance
HB 643	Rhonda Knudsen (R) HD 34	Extend state lands reimbursement block grant for schools	Pass	School Finance
HB 656	Joel G Krautter (R) HD 35	Generally revise oil and gas tax and distribution laws	Pass	School Finance
HB 692	Greg DeVries (R) HD 75	Provide tax exemption for property taxes if no child enrolled in public schools	Fail	School Finance
HB 742	Tom Woods (D) HD 62	Revise individual income tax and reduce school property taxes	Fail	School Finance
HB 755	Frederick (Eric) Moore (R) HD 37	Generally revise pre-kindergarten laws	Fail	School Finance
SB 8	Keith Regier (R) SD 3	Generally revise laws related to participation in extracurricular activities	Veto	School Finance
SB 9	Daniel R Salomon (R) SD 47	Revise school funding related to overestimated ANB increases	Pass	School Finance
SB 10	Daniel R Salomon (R) SD 47	Revise school funding related to major maintenance aid	Pass	School Finance
SB 11	Daniel R Salomon (R) SD 47	Clarify age requirements related to the definition of pupil	Pass	School Finance
SB 12	Daniel R Salomon (R) SD 47	Revise school funding related to oil and gas production taxes	Pass	School Finance

SB 16	Daniel R Salomon (R) SD 47	Revise school funding related to special education joint boards	Pass	School Finance
SB 19	Roger Webb (R) SD 23	Revise laws related to local government budgeting and accounting	Fail	School Finance
SB 110	Edith (Edie) McClafferty (D) SD 38	Increase the age limit in the definition of pupil	Fail	School Finance
SB 135	Tom Jacobson (D) SD 11	Remove school levies from calculation of tax increment after 15th year	Fail	School Finance
SB 146	Daniel R Salomon (R) SD 47	Revise laws related to an inflationary adjustment for education	Fail	School Finance
SB 292	Roger Webb (R) SD 23	Revise laws related to financial administration of school districts	Pass	School Finance
SB 321	Brian Hoven (R) SD 13	Revise laws pertaining to targeted economic development districts	Pass	School Finance
SB 328	Tom Richmond (R) SD 28	Authorize local abatement of coal gross proceeds tax for surface mines	Pass	School Finance
HB 648	Robert Farris-Olsen (D) HD 79	Create state program to incentivize school breakfast program	Fail	School Nutrition
HB 667	Jacob Bachmeier (D) HD 28	Create farm to school grant program	Fail	School Nutrition
HB 265	Kerry White (R) HD 64	Revise laws related to approval of FWP easements	Veto	State Lands
HB 627	Jim Hamilton (D) HD 61	Revise laws regarding conservation licenses on state lands	Fail	State Lands
HB 695	Jim Keane (D) HD 73	Appropriate funds to FWP for recreation easement	Pass	State Lands
HB 760	Zach Brown (D) HD 63	Study of travel on state lands	Fail	State Lands
HB 211	Llew Jones (R) HD 18	Address recruitment and retention of K-12 quality educators	Pass	Teachers
HB 216	Kimberly Dudik (D) HD 94	Revise tax laws related to student loan reimbursements by employers	Fail	Teachers
HB 420	Tyson T Runningwolf (D) HD 16	Encourage grow your own programs to address teacher shortage	Fail	Teachers
HB 459	Becky Beard (R) HD 80	Provide support for rural school recruitment and retention	Fail	Teachers
SB 50	Edith (Edie) McClafferty (D) SD 38	Revise administration of Quality Educator Loan Assistance Program	Fail	Teachers

Thank you for the opportunity to speak here today. My name is Frances Lefcort, and I've been a member of the MSU faculty for 25 years. I helped start the Dept. of CBN almost 20 years ago, served as its DH for 4 years, brought in over 10 million dollars of federal research dollars to MSU, and helped establish the Center for Mental Health Research and Recovery, whose goal is to develop new neurotechnologies to treat MT's growing needs in mental illness – a mission which is inextricably dependent upon the survival of the innovative neuroscience research that occurs in the dept. of Cell Biology and Neuroscience. As an example of what we contribute to the university and to the state of Montana, my most recent award is a 2.9 million \$ grant from the NIH to develop new cures for neurodegenerative disease. 7 MSU undergraduates and 2 Ph.D students are currently working on this highly interdisciplinary project – hence this training is an investment in the exciting future careers of these outstanding students. Moreover, this NIH success is an economic boon for MSU and the tax payers of MT: for every million dollars we are awarded from the NIH for our research, MSU is given an additional \$440,000 on top of the award. So clearly CBN is carrying its weight. In spite of this vibrant neuroscience community we have worked so hard to create at MSU, and the joy we all draw from the success of our students, I resigned my faculty position last Wednesday in response to the unprofessional and egregious manner in which my department was eliminated. I am here to make 4 brief points.

1. CBN has 300 majors, many of whom are from out of state and chose to come to MSU specifically to study CBN. In a survey we conducted, half of our students stated that if CBN did not exist, they would not have come to MSU. Interestingly when asked where they would have studied instead, their 1st choice was not UM, but rather, out of state to schools like UW and U. of Colorado. My point is, destroying CBN will lose money for the state of Montana.
2. MSU is a land grant institution and as such our obligation is to level the playing field by providing the sons and daughters of the working people of MT with the same quality of education as obtained at the most elite institutions in the country. By killing the opportunity for our students to receive hands on training in cutting edge, federally-funded neuroscience research labs, we are telling the people of MT and that they don't deserve the same education students at the best schools in the country receive.
3. The university is misleading students & their families when they claim that killing the dept of CBN will not in any way damage the CBN major. You can not deliver a NS major to 300 majors with so few research-active neuroscientists – this is true no matter what department the major is in. Two years ago we had 11 TT faculty members who taught in CBN, this year we started with 9, and as of last week, we are down to at most, 5. For 300 majors. Real NS training takes place in the laboratory and with so few active NS labs to train in, our students are no longer going to get the high quality education, including the national awards and the publications, they have typically been achieving, and which help launch their successful careers
4. 537 MSU students signed a petition asking only that MSU honor its promise to provide them with the education they signed up for, paid for, and went into debt for. Already this fall, students will not be able to take the very popular courses they were looking forward to and which they need to graduate. Instead, MSU is defaulting on its obligation to these students and ignoring their very serious concerns. Students are worried about

graduating on time and being able to get into medical and graduate school given the elimination of their dept. and the consequential holes in their education. In that we as a society deem people of their age sufficiently mature to go off to war, why is the administration not listening to our students and not taking their very sincere and dire educational concerns seriously?

Thank you for your time.

May 22, 2019
The Board of Regents
Montana University System

Dear Regents:

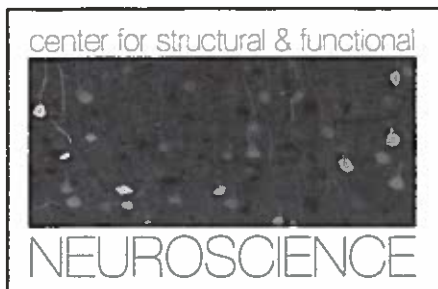
I am writing to express my strongest support for my faculty colleagues in the Department of Cell Biology and Neuroscience at Montana State University. As Director of the McLaughlin Research Institute in Great Falls and Professor of Neuroscience in the School of Health Professions and Biomedical Sciences at the University of Montana, I can attest to the impact of MSU's Neuroscience program on the state's research capacity and competitiveness for research grant funding. Examples include the award of multimillion dollar grants including Centers of Biomedical Research Excellence awards from the National Institutes of Health. These and other grants have supported inter-institutional programmatic and research collaborations between MSU, UM, and the McLaughlin Research Institute. In terms of its impact at MSU, although CB&N is a relatively small department, the success of its faculty in publishing high impact work and obtaining individual research grants is outstanding. Equally outstanding in my view is the devotion of the faculty to training and mentoring the many MSU undergraduate student majors in the department.

There is a growing recognition of the importance of neuroscience for many fields of human endeavor, not least human health. Consequently, neuroscience programs are thriving at Universities around the world- why would we neglect, or worse, undermine them here? Stronger support for neuroscience programs at both flagship institutions is vital to reach critical mass in Montana. This is a critical time for MUS to make meaningful investments in these programs or risk major setbacks if not losses of programs.

Sincerely,



Michael Kavanaugh
Director, McLaughlin Research Institute
Professor of Neuroscience, University of Montana



Richard J. Bridges, Ph.D.
Center for Structural & Functional Neuroscience
University of Montana
32 Campus Drive
Missoula, Montana 59812-1552

Phone: (406) 243-2972
Fax: (406) 243-5228
richard.bridges@umontana.edu

Professor Frances Lefcort
Department of Cell Biology & Neuroscience
Montana State University
Bozeman, Montana 59717

January 23, 2019

Dear Frances;

I must say that I was caught off guard and quite concerned when I read about the problems and challenges facing the Department of Cell Biology & Neuroscience. As I have known you the longest, I decided to direct this letter to you. Admittedly, I am on the outside and not fully informed on all of the issues you are dealing with, but I think the longstanding collaborative history of our neuroscience faculty and programs puts me in a position to make a few salient comments.

First, as we have discussed many times, neuroscience is a field of such breadth and relevance, that it deserves a place on every campus. The numbers of neuroscience majors in our respective programs, as well as its rising popularity at universities across the country attest to this conclusion. This issue seems to arise within the context of "duplication" within the MUS whenever either of our campuses brings forward a new degree, programs or center focused somewhere in the very, very broad field neuroscience. I have been pleased and proud of the mutual support that has been shown for developing strong neuroscience efforts at both UM and MSU.

Secondly, I (and I am confident this view is shared by my UM colleagues) recognize the quality and strength of the neuroscience faculty and research within CBN. Beyond the obvious external indicators of success, such as publications and grant funding, my appreciation of the MSU neuroscience faculty and their research comes first hand from many years of shared seminars, student presentations, retreats, and collaborative grants. In particular, it is last aspect that I think may be of greatest value. Collaborative efforts between UM and MSU neuroscientists such as yourself and Professors Hughes, Gray, Bradley, Merzdorf, Mazer, and Stowers (apologies to others I inadvertently omitted) have not only been rewarding from a scientific perspective, but have undoubtedly increased our collective competitiveness for extramural funding. The ability to strategically bring active researchers together, "combine forces", and compensate for a lack of critical mass characteristic of NIH IDeA states like Montana, has certainly played to our advantage. Our collaborative neuroscience efforts go back at least a few decades, many of which can be traced back to a Neuroscience COBRE grant that was funded in the very first cycle of the program and supported investigators at UM, MSU, and McLaughlin. The practice continues, as demonstrated by Nathan Insel's (UM Psychology) participation in a new COBRE submission with Jamie Mazer. I think it would be a highly significant loss if the neuroscience programs on either campus were reduced and one that would also have a noticeable impact on both long-term research capacity and funding.

Overall, I view the neuroscience program at MSU as a very strong and highly valued component in Montana's growing neuroscience community. I am not sure if these comments will help in any way with the challenges you are facing, but you are free to share them as you see fit.

Sincerely,

Richard J. Bridges, Ph.D.
Regents Professor and Director,
Center for Structural & Functional Neuroscience
University of Montana

An Equal Opportunity University

Dear Commissioner Christian, Members of the Board of Regents, and President Cruzado

I am the director of an NIH Center of Biomedical Research Excellence (CoBRE) at the University of Montana. For the past seven years, Thom Hughes in the Cell Biology and Neuroscience (CBN) department at Montana State University and I have convened biannual grant-writing workshops with faculty, particularly junior faculty, from both our campuses to help them write effective, fundable grant applications to the NIH and NSF. This has been a successful venture, not only measured in funding success, but also in sparking collaborations and collegial interactions among biomedical scientists from both of our campuses. Our "HotWater" workshops have been attended by MSU faculty from Chemistry, Engineering, Microbiology and CBN, along with an equally diverse group of faculty investigators from UM and Montana Tech.

Hence, you might understand how distressing it has been to learn that MSU plans to impose a moratorium on the CBN doctoral program, and seeks to curtail research activity in that department, in favor of heavier teaching loads for its faculty.

With the strengthening National focus on brain-related research, Neuroscience is a popular undergraduate major for current, and likely future, generations of biomedically oriented and pre-med college enrollees. In this state, MSU has been a leader in this discipline. Indeed, it has been an inspiration for creation of our own undergraduate Neuroscience program at UM, which, in a very brief time, has become one of the top two most sought-after baccularate programs in the biosciences. Masters and doctoral programs at both campuses have attracted considerable interest. The CBN program at MSU has attracted some 300 majors – 30 for every CBN faculty member! Research-active faculty in CBN each mentor an average of two graduate students. Department faculty currently hold \$11M in active extramural research awards. One of CBN's most talented and productive faculty members is submitting an application for a 5 year, \$10M award to create an MSU CoBRE at the intersection of engineering and neuroscience. It is difficult to imagine how such an application, however scientifically meritorious it may be (and it is strong – I and others reviewed its subprojects at our most recent HotWater workop), can succeed if MSU will not provide the institutional support sufficient even to maintain a doctoral program in the Neurosciences.

MSU's recent focus on expanding opportunities for undergraduate education to Montana's youth is compelling and important. Training in the biosciences should be strong component of this effort. Professions in biosciences and technology are highly remunerative, and graduates with skills in this area will attract high-technology industry to Montana. Yet, a strong research program at the doctoral level is essential to excellence at the undergraduate level. Talented undergraduates, including those headed to medical school, seek significant, long-term research experiences that afford opportunities to publish their best work. They know that these experiences are essential for admission to good post-graduate and medical schools. Research-active faculty, and particularly, doctoral students, are critical sources of mentorship and training for these students.

For many years, MSU has been regarded by many as the preeminent research-intensive institution of higher education in the State of Montana (of course, we at UM know that we share in this excellence!). It is inconceivable to me that MSU would want to degrade that reputation by dismantling research and doctoral training in one of its most productive departments in a research discipline of highest national priority. I sincerely hope, on

behalf of the greater Montana University System scientific community, that MSU will abandon this reckless course.

Sincerely,

<Stephen Sprang>

January 15, 2019

Dr. Waded Cruzado
Office of the President
Montana State University
P.O. Box 172420
Bozeman, MT 59717-2420

Dear Dr. Cruzado,

I am the Founder and CEO of Neuralynx, Inc., a Bozeman-based neuroscience research tool developer and manufacturer supporting over 1000 labs and hospitals worldwide. We design cutting edge systems for recording the electrical activity of the brain down to the individual cellular level - only one of a handful of companies with this expertise. Our products are used for both basic neuroscience and human clinical epilepsy research. Neuralynx employs 25 professional and technical people in the Bozeman area, including many MSU graduates.

During the 25 years that Neuralynx has been in business, I have personally visited hundreds of university research labs and teaching hospitals, including Mayo, Harvard, MIT, CalTech and Cedars Sinai in the US alone. I am keenly aware of the research and education levels of our customers and their institutions.

My daughter, Karen, graduated magna cum laude in December from MSU's Honors Program with a double major in Cell Biology and Neuroscience and Computer Science. I was very impressed with the quality of her undergraduate education, as well as the research she performed in the Kohout CBN lab as an INBRE grant recipient for 4 ½ years.

In my opinion, the quality of neuroscience research and class instruction performed at MSU is of the same high-ranking caliber as Neuralynx's customer labs I have visited, collaborated with, and been associated with in my 32 years of Neuroscience experience. I have such a high opinion of the CBN department at MSU that Neuralynx donated one of our advanced systems for neuroscience research at MSU, a system worth a quarter of a million dollars.

We also have an active NIH SBIR grant in which CBN Gray and Mazer labs are participants. This grant is over a million dollars for product development, and will generate future revenue, wages, and taxes in excess of \$5M for Montana, with direct benefit to MSU.

In my opinion, any action other than to actively support and grow CBN would be a serious disservice to the MSU students and faculty, the Bozeman community, and the state of Montana. Neuroscience is a critical research field for advancing our knowledge of the brain to cure debilitating diseases such as ALS, cancer, Alzheimer's, epilepsy and movement disorders. MSU's CBN can continue to contribute to this effort.

Please consider my experience and opinion as you pursue action concerning the Cell Biology and Neuroscience department at MSU. Feel free to contact me at Casey@Neuralynx.com or by phone.

Sincerely,

Keith "Casey" Stengel

From: **Richard Huganir** rhuganir1@jhmi.edu
Subject: **Fwd: Letter to the Editor Receipt**
Date: **January 12, 2019 at 1:55 PM**
To: **Thom Hughes** thughesglp@mac.com



I might have gotten young trouble if they publish this.

Richard L. Huganir, Ph.D.
Bloomberg Distinguished Professor
Director, Department of Neuroscience
Director, Kavli Neuroscience Discovery Institute
Co-Director, Brain Science Institute
The Johns Hopkins University School of Medicine
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Begin forwarded message:

From: <citydesk@dailychronicle.com>
Subject: Letter to the Editor Receipt
Date: January 12, 2019 at 3:53:42 PM EST
To: <rhuganir@jhmi.edu>
Reply-To: <citydesk@dailychronicle.com>

Letter to the Editor Submission

The submission id is: 4570

Contact Information

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Zip Code:	21205
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Your Letter

Type Your Letter:

Dear Editor,

I am the Director of the Department of Neuroscience at Johns Hopkins University School of Medicine and the past President of the Society for Neuroscience, the largest Society for Neuroscientists in the world. I am writing in support of the neuroscientists at the Montana State University and to assert that the quality of the neuroscience research and the graduate program MSU is outstanding. The amount of NIH funding the Department receives is impressive for a small department and the research being performed is cutting edge with the faculty publishing in the best journals in the field. Recently when I was writing a large grant for the NIH BRAIN Initiative I realized I needed help from someone with unique expertise in infrared lasers and fluorescent proteins and Thom Hughes at MSU is one of the few neuroscientists in the world with this type of expertise. Recently Thom and I submitted a multimillion dollar grant to develop new methods to use lasers to look at brain function. This department is not under performing. It is a jewel in the crown at MSU and should be supported.

Best, Richard Huganir

Richard L. Huganir, Ph.D.
Bloomberg Distinguished Professor
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Director, Kavli Neuroscience
Discovery Institute
Co-Director, Brain Science Institute
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May 22, 2019

Montana University System Board of Regents
Office of the Commissioner of Higher Education
560 N. Park Ave
PO Box 203201
Helena, MT 59620-3201
406-449-9124

Hello, my name is Colin King and I am a Cell Biology and Neuroscience student at Montana State University. Thank you for taking the time to listen to my comments today.

I was born and raised in the Gallatin Valley, where my father has been a doctor for more than 30 years. From a young age, I had a desire to understand the human form. This became an intense need at the age of 11. In 2006, my uncle moved to Montana to live in my house under the care of my mother and father. He had been diagnosed with an incredibly rare neurodegenerative prion disease, for which there is no cure. Over the course of 8 months, I watched as it slowly robbed him of control of his body and mind, and ultimately took his life. The experience of watching the life of a loved one leave their eyes in front of you at such a young age, and watching your family being so wholly unable to help was - and remains - incredibly traumatizing and has instilled a desperation to understand the human brain. When I entered Belgrade High School, I began to work towards satisfying this desperation, but felt that if the knowledge that I sought was unknown to the best neurologists, I would have no chance. It was my father, being a graduate of MSU's premed program and of the WWAMI program himself, who convinced me that MSU was the place to begin my journey.

I found a home in the Department of Cell Biology and Neuroscience when I began attending MSU. The professors had a wealth of knowledge, and a passion for teaching. I could see the opportunity before me. The active research that I have been fortunate to take part in has shown me that I can indeed make a meaningful contribution to neuroscience, and potentially treat individuals like my uncle. I have realized my potential, and I know that the CBN faculty is worthy of preparing me for graduate and professional schools.

The recent dissolution of my department has significantly affected me. I greatly disagree with the administration's reasoning behind the imposed merger with the Department of Microbiology and Immunology, and their actions which brought us to this point to begin with. During the time that I have spent at Montana State, I have experienced excellence in every regard. The faculty that have become my mentors have guided and instructed me in skillful fashion, preparing me and hundreds of others for graduate and professional schools. The department has an outstanding track record and holds influence nationally. This is largely what drew me to MSU to begin with. I was taken aback when the administration began making statements contrary to the success and excellence that I have heard of and personally experienced. By publicly stating that the department has been consistently underperforming, the faculty of CBN have been publicly disgraced. These are the very same faculty that have been responsible for educating me and my peers, and therefore our degrees have been disgraced as well.

In response to this, I helped to coordinate a petition to appeal to our administration. The intent of this petition was to state that hundreds of concerned

students saw a potential threat to their future viability into graduate and professional programs, as well as the education of those that come after us. We sought to repair the reputation of a department that we have all known to be phenomenal, as well as the reputation of our institution as a whole. Without Cell Biology and Neuroscience at MSU, the excellence of the vast, interdisciplinary scientific and biomedical community that helps make MSU so great would be greatly diminished. The existence of neuroscience alone at MSU sets it apart from many other institutions and has been a powerful attractant for students and faculty alike. We fought desperately to keep the program that has become our home alive. In response, the administration labeled our opinions as uninformed, insufficient and irrelevant. This even further damaged the influence of a degree in CBN, and therefore our ability to pursue our goals and dreams. While I concede that I cannot understand the intricacies of running an entire university, I believe that this situation was handled incorrectly and unprofessionally.

The recent merger with the Department of Microbiology and Immunology holds some promise. Having an internationally respected department head, Dr. Jutila, in charge of our program is a step towards the repair of our reputation. I do not, however, believe that this will be enough. Even with Dr. Jutila in place, we still require institutional support and resources to repair the damages that have been done. He himself has stated that you cannot have outstanding curriculum without outstanding expertise. The vacancies in neuroscientists on staff at MSU have left a number of CBN classes with nobody to teach them. Only a neuroscientist would be able to teach such classes at the level of excellence that CBN students have been able to experience in the past years.

Due to these vacancies in faculty, there is now only a very small number of neuroscience labs for students to work in, which is not enough to appropriately supply opportunities to nearly 300 students. Should the merger of CBN and MBI be as successful as it can be, support must be allocated. I fear that the administration will not decide to give this support on their own. For this reason, I am asking you, the Board of Regents, to hear the voices of concerned students and to act in their best interests.

I believe that a reasonable step forward is to change the way that mergers like this one happen in the future. I believe that working from the ground up, beginning with the students and faculty to find the best way to integrate two different departments, would be best. The students have great insight as to what curriculum is needed from a department, as we are the primary consumers. The faculty knows best how to meet these needs, as the primary interface between a student and a university. Using these to find a cohesive plan of merging would better allow the success and strength of the department. I would like to see the regents urge MSU administration to institute this sort of task force with the CBN/MBI merger, and to allocate resources towards neuroscience in order to strengthen and repair our program. Without this support, future students like myself, who have deep and personal reasons to pursue neuroscience, will be robbed of the opportunities that I have been given.

Sincerely,

Colin King

Jake Fisher
1225 W. Kagy Blvd. Apt#9
Bozeman, MT, 59715
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406-231-5212
May 22, 2019

Montana University System Board of Regents
Office of the Commissioner of Higher Education
560 N. Park Ave
PO Box 203201
Helena, MT 59620-3201
406-449-9124

Hello, my name is Jake Fisher and I am a Cell Biology and Neuroscience student at Montana State University. Thank you for taking the time to listen to my comments today.

I am here to express my adamant support for the Department of Cell Biology and Neuroscience at MSU-Bozeman, and to share my recent experiences in the Department. I have always been intrigued by the complexity of the nervous system and how the rest of the body connects with it. Studying neuroscience is comparable to space exploration as no one knows what will be found, and the “unknown” factor interests me. As a prospective dental student, understanding anatomy of the brain and the nervous system is essential.

The coursework is extremely challenging but has allowed me to grow. Conducting research under the supervision of Dr. Roger Bradley and Dr. Dana Rashid over the past few years has allowed me to deepen my knowledge in the field of neuroscience. I am studying neuroscience to help people, whether that be in the medical field or through research. I have received a more than exceptional education that has made me become an individual capable of thinking critically and logically through difficult problems. I have been encouraged to study my interests by my past professors. With the research I am doing right now, I can potentially discover the mechanism by which ankylosing spondylitis occurs. The mechanism discovery then could allow for the development of treatment and a possible cure.

The recent attempts by the MSU Administration to dissolve my department have greatly affected me. Over the past few years, I have been conducting research with Dr. Roger Bradley and Dr. Dana Rashid. This experience has allowed me to deepen my knowledge in the field of neuroscience. I have learned laboratory techniques and gained the ability to become independent in my studies. My research has taken me to conventions and through this, I have learned about other studies that strengthen my own research. Had I not been given the opportunity to participate in research, I would not have received this experience.

Sincerely,

Jake Fisher

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May 22, 2019

Montana University System Board of Regents
Office of the Commissioner of Higher Education
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Thank you to the Montana University System Board of Regents for giving me the floor. My name is Lauren O'Neill, and I'm going into my senior year at Montana State University. I'm a current senator for the Associated Students of Montana State University – specifically for the College of Letters and Science. Although I haven't been a Cell Biology and Neuroscience major in two years, I understand how this catalytic event is not only relevant to the faculty and students directly affected by the issue at hand, but is indicative to an overarching issue of how we as a university elect to treat our students, along with how we choose to handle topics that deserve transparency, and campus leadership that should be held accountable by the same students we work to represent fairly, driven by fair and equitable processes.

That being said, I want to go on record as seeing how both sides of this argument have acted poorly in some instances, and that we as a university could all be doing better for those we collectively are here to advocate for today: the student body. I am a passionate Bobcat, and care deeply for both this University and my peers. As we move forward with the proposed merger between the Microbiology and Immunology and the Cell Biology and Neuroscience Departments, I can see the value of such a move for expanding opportunities for faculty and students, but there are some fundamental points I'd like to make.

Firstly, the loss of Neuroscience as more than just a teaching department is incredibly detrimental to not only the currently three hundred some students that are studying and researching under the parameters of earning a CBN degree, but is detrimental to the positive future success we'd see for this University. We have so many resources and passionate, well-educated faculty that are clearly invested in their students' success and well-being. We draw in millions for cutting-edge research, and cultivate an environment that offers students tangible lab work-experience outside of the classroom. I understand the reasoning for merging the Departments, but I think that Cell Biology and Neuroscience deserves the same respect that was offered when Microbiology and Immunology merged a few years ago, which leads me to my second point.

When I was approached about helping my colleague in ASMSU's Senate with this issue, I admittedly was not as well-versed on the issue as I should have been. It took me countless hours of reading, meetings and conversation, with advisors, faculty, and students to garner a real understanding of both sides of this situation. As a passionate and engaged student on our campus, it should not be so hard for me to access information in order to vote as a trustee and representative in order to engage responsibly. Telling students that our voices do not matter when dissenting makes me wonder if our voices even matter when we're in agreeance. I understand and concede that there may have been moments of disrespect, frustration, and anxiety. However, students should be allowed to ask for transparency, especially in issues such as this, and should be expected to hold those responsible for changes accountable. Questions and dissent create healthy dialogue, something that Montana State University actively works to prove they support through varying campus organizations. Without a healthy dialogue, ideas cannot be challenged and improved upon, something that is so fundamental to the success of many and for the most.

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Moving forward, I respectfully request the University's current administration puts an added effort into engaging students to not only care about the administrative process as it pertains to students' colleges, but to encourage a concrete space for open communication to be heard. This is especially relevant when these decisions affect our degrees, Colleges, and personal successes at an institution we all love. We're all proud Bobcats, and today's effort shows that students should not be written off so flippantly for issues that affect them as aforementioned. I strongly encourage that ASMSU be given express permission and support from administration to form a student-led task force for oversight in order to contribute productively and maturely to conveying student voice to administration. This would give a platform for students to be heard, respected, and truly valued in more than just word alone. Program prioritization, curriculum changes, and departmental mergers could be much more palatable to students if we are given fair transparency to issues moving forward. Concretely including students in these processes through the understanding that there are capable, passionate, steady leaders is vital to not repeating these mistakes again.

I wish to see success for not only my peers in the Cell Biology and Neuroscience, but a successful precedent set for concrete inclusion of student voice on campus, and transparency on the sides of students, faculty, and administration. We have an opportunity moving forward to right the ship, and better the University. One of the best things about a university setting anywhere is an opportunity for personal growth, no matter what walks of life we come from or where we are going, and in spite of age or life experiences. I have immense sympathy for the job President Cruzado has to do at Montana State University, but none of us are done growing as individuals and professionals. I implore both sides to come back to the table and rectify this situation in the name of, and for, students.

Thank you for your time today,

Lauren O'Neill
Senator for the College of Letters & Science
Associated Students of Montana State University (ASMSU)

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Greetings, my name is Patrick Hanni, and I am a recent graduate from the Cell Biology and Neuroscience program. Please understand that although I am no longer a part of this community anymore, I will always endeavor to defend the department from any potentially hazardous changes that would make future students disenchanted with the idea of coming to MSU for research in the field nor deprive them of the impassioned professors lecture about their subject of expertise.

Today I stand before you to convey my experience as an undergraduate in the aforementioned program and hopefully convey my reasoning for the unwavering support I have for these faculty members' and their teachings. Moreover, I wish to be concise and succinct with my statement since your time is valuable and I feel as if hearing my plea for the reform of current plans might come off as emotional pandering; however, the students' efforts in garnering the respect requested from the administration on opinions of future changes has yielded no results. Thus, I implore you to hear my words as I speak not just for myself but others and potentially have you understand what opinions might have been lost due to the fear of speaking up for the department and the anticipated backlash or repercussions on our careers, the confusion of obtaining conflicting information from our professors and administration leading to undeserving fealty towards what others are now referring to as a "broken department," or out of fear that we may lose our voices as students in our own university later on if the right is exercised now. During this last semester, my cohorts and colleagues were worried that we would not even get to graduate with the degree we have spent years yearning for and admiring. This can be traced back to administration proposing a cataclysmic change to make the department more premedical based, eliminate research under the neuroscience banner, that which created reverberations to be felt in every corner of the current student's souls. Not only were the voices of the students shaken, they were intimidated/silenced through manipulation over massive disinformation campaigns and public attacks on the program. I digress, I do not wish to underscore the importance of my plea with these remarks and create a gilded undercut to the school.

I want to elaborate on my memories and provide information on moments to convince you this department is needed. To be entirely honest, I couldn't recall a single memory that encapsulated my emotional response from this reflection of my past four years. There isn't a quintessential lecture that I went to that made me full-heartedly decide to devote my life to an understanding in this field; but rather the continuous introduction to what amazing options this field of research has to offer from passionate individuals. Professors with worldly and renowned experiences that manifested into anecdotes encouraging students at every opportunity to follow suit; professors that can sit with me and discuss the intricacies of the brain's enigmatic mechanisms and be passionate about making sure my understanding is more than sufficient; professors who have different specialties which act as conduits into a new realm of knowledge; professors who challenge what ideas and hypotheses you've garnered by pushing you to strive further into the research; professors who care that not only the information is current but rather

understood. For four academic years, I have had the absolute privilege of gathering every piece of advice, every inkling of potentially undiscovered areas, and dive into the abyss of knowledge I feel compelled to pursue. No other department classes at campus I have taken were taught with such zeal to teach or be representative of their respective classes. These admirable teachers were accused of using class time to rally students to arms by administration as well as had publicly diminished reputations. However, with the vigor I recounted my love for this faculty and their devotion to us, would you believe that the students were not coerced to be voices wanting to abolish this proposed change by professors' opinions, but rather recognized what future students will be bereft from and wish to preserve the qualities that exemplify the department?

The plan currently proposed is going to limit the amount of research done by the department by making it now tailored to fit a new agenda rather than the advancement of the field close to us, make the classes less specific in neuroscientific fields and taught by adjunct professors, and fold us into a school the staff and students opposed to become a service department pushing a counterintuitive agenda for an R1 facility. I abhor this thought and will publicly state my disapproval of such. It is the antithesis of my personalized experienced offered by the Cell Biology and Neuroscience department and it is the reason I am here today.

I sincerely wish I have made my emotions on what I have gained, what I have seen lost to a dreadfully deaf school, and what I fear will be lost. I pride myself on being a Bobcat not because of what all MSU-Bozeman has to offer, but that this is what I had offered to me. If I were to be enrolled in the program under these new conditions, I might not have the same sentiment.

Sincerely,
Patrick Hanni

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Hello, my name is Gia Fisher and I am a Cell Biology and Neuroscience student at Montana State University. Thank you for taking the time to listen to my comments today.

I was born in Long Island, New York where my father became a podiatrist. When I was in fourth grade, my family moved to Great Falls, MT where my father currently practices. I have developed a passion for science, patient care and medicine throughout my life and I undoubtedly had to get a post-secondary education that would give me the background to act on my passion of, specifically, dentistry. Therefore, it was clear that I had to attend Montana State University to pursue a degree in Cell Biology and Neuroscience (CBN) with a minor in Global Health to get a well-rounded, challenging education that would prepare me to not only attend dental school, but to treat diverse, underserved populations.

Neuroscience is integral to understanding oral-facial mechanisms such as taste, speech, mastication, pain, etc. I am confident that the courses I have taken at Montana State University have more than prepared me to attend professional school. The faculty in the Cell Biology and Neuroscience department have been integral in elevating my critical thinking skills and overall understanding of the human body. Although I do not perform research within my specific department, my twin brother, and my boyfriend have been under the instruction of Dr. Roger Bradley, former department head of CBN. Their instructed research has been fundamental in their understanding of not only neuroscience, but valuable research skills that can be used in professional school.

I am here today to emphasize that Montana State University should merit the invaluable education and research opportunities that the CBN department has given me and every student within the program. I believe that President Cruzado truly has the best interest of students in mind, as I have witnessed it first hand. After my freshman year, my best friend could no longer afford to be a biochemistry major at MSU. I personally contacted Waded Cruzado, saying "I am asking for guidance, information, and even aid to bring my bright and determined best friend back to Montana State." President Cruzado gave me exactly that, as she gave me the resources to help my friend who was able to come back to MSU the following semester, at no cost. I am asking the Administration to do the same - accept and *listen* to student concerns about the merging of the CBN/Microbiology and Immunology, or even the dissolution of the CBN department. The department and its research are a staple for creating bright minds that can contribute greatly to the field of science. I simply ask for this to be considered in any decision that is made. My voice, as well my peers', have been heard by administration, however, I feel as if they have been ignored. I ask the Regents to urge Administration to consider and respect student and faculty opinions to make Montana State University one that is truly adherent to the concept of shared governance. Thank you for your time.

Sincerely,
Gia Fisher

Anne Parker
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May 22, 2019

**Montana University System Board of
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Good afternoon, my name is Anne Parker and I am a Cell Biology and Neuroscience student at Montana State University, and newly elected ASMSU senator representing students of the College of Letters and Science. Thank you for taking the time to listen to my comments today.

I am here to express my support for Cell Biology and Neuroscience at MSU-Bozeman, and to share my recent experiences in the Department. On the Friday of Dead Week, before Christmas Break last semester, I attended a musicale hosted by the Honors College at MSU - while I was enjoying hot chocolate and snowman cookies with my peers, one of my friends sat down next to me and whispered in my ear, "Did you hear, they're dissolving your department? Have a great break!" I was shocked - I hadn't heard anything about it, from teachers, from ~~administration, or my classmates. Over Christmas Break, we got emails from our department~~ head, Dr. Roger Bradley and from Provost Mokwa, and we saw articles in the Bozeman Daily Chronicle, all that did little to explain the situation at hand. On the first day of the following semester, in Dr. Steve Eiger's Human Pathophysiology class, multiple students, including myself asked him, "What the heck is going on?" Rumors were flying, no one really knew the truth, and it seemed no one had any solid answers. The decision to dissolve our department, from the

perspective of students, came completely out of the blue, and personally, as a member of the department on the chopping block, and as a newly elected senator representing the voice of my department and the College of Letters and Science, the lack of transparency in this decision has been a point of great alarm and concern.

Additionally, it was distressing to watch my faculty members be publicly vilified and my peers dismissed by administration. The CBN students I go to class with every day are some of the most dedicated, involved, and academically ambitious students I've ever met, and include Goldwater scholars, Truman scholars and finalists, and Rhodes scholars and finalists. To watch those achievements be reduced over the past few months, and to watch my own hard work and dedication toward my education be devalued by my own administration has been difficult to swallow. It makes me fearful for medical school interviews, when admissions committees look into my qualifications and education, that my, and my peers, thousands of hours of hard work at Montana State could be stained by this unfortunate and heated situation.

Finally, this situation has been distressing from the context of my elected role of student senator. I don't want my speaking today to affect my ability to do my job next year in student senate, I don't want this situation to mark me as someone who isn't proud to be a Bobcat. Bozeman has become a home to me, and the opportunities that have been provided to me at Montana State are ones I'll be eternally grateful for.

Similarly, I recognize the work of President Cruzado and administration, and I acknowledge the difficult job they have. I understand that Montana State does not operate with an eight or nine-figure endowment, and I understand why programs like program prioritization must exist. However, there has to be a way to go about prioritization decisions that does not include

the public defamation of faculty and blatant dismissal of student voices. I implore the Board of Regents and administration at Montana State to find a way to make the program prioritization process more transparent, and to take into account the comments of students and faculty. When a wall becomes a window, we can all see each other better. With more transparency, we will be able to better understand the massive undertaking that it is to make difficult decisions regarding program prioritization, and administration will be able to better understand the profound impact of those difficult decisions on the personal and professional lives of undergraduates, graduate students, and faculty members at our university.

Similarly, to patch the working relationship between students, faculty, and administration, one that should be based on trust and mutual respect, I respectfully request that administration make a public statement of support for CBN - to repair the reputation of, and acknowledge the competency and expertise of faculty as educators and as research scientists on the cutting edge of research in their fields, and to repair the reputation of the Cell Biology and Neuroscience degree as a pre-medical preparatory education, one that graduate schools, medical schools, and dental schools are proud to recognize and invite into their institutions.

Thank you very much for your time today, and for considering our comments today. It is ~~an honor to stand before this distinguished board and stand up for what I think is right.~~

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May 22, 2019

Montana University System Board of Regents
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Hello, my name is Luke Channer and I am a Senior at Montana State studying Cell Biology and Neuroscience. Thank you for taking the time to listen to my comments today. I am here along with some of my classmates to express our unwavering support of the Cell Biology and Neuroscience program and neuroscience research at Montana State University.

I grew up in the small town of Corvallis located in the Bitterroot valley, deep in the heart of Griz country. However, I was immediately drawn to the town of Bozeman and the top notch education that Montana State University offers. I entered as a somewhat naive freshmen, interested in pre-med, but lacking a real sense of which degree to choose. My experiences with the CBN courses, specifically the unique cadaver program, were crucial to my academic development and my passion for wanting to pursue medicine and return to Montana after my training. I have the utmost respect for all the faculty members in CBN. They have encouraged and pushed me to be a better student and fight for my goals. A CBN degree is not the “easy choice” as far as degrees go. It is one that has a high success rate of getting into medical school because it prepares you so well for the MCAT entrance exam and the rigorous classes you will face after acceptance.

President Cruzado has recently said, “ We have nothing but the most sincere interest of seeing that department thrive” but then announced soon after the forced dissolution of CBN and integration into the Microbiology department. She further stated she wanted “positive engagement” by faculty and students. However, the recent actions by the MSU administration seem to indicate otherwise. She dismissed student involvement as not representing “all” students, as if the concerns of 70% of CBN students who signed a petition protesting her decision are insignificant.

As an active student who is invested in this degree, I feel like I have no voice. From the provost suggesting our major would be turned into a “School of Biomedical Sciences,” to our masters and graduate programs being placed on moratorium, to most recently the transferal of CBN to the Microbiology department; students have been cast aside, ignored, and left in the dark. A department head we all knew and trusted was fired from his position for defending the students and department, only to be replaced by a Roman Historian who has never conducted neuroscience research and is patently unqualified to be the head of a Neuroscience department. The administration has set up this department to fail. Faculty who gave up distinguished roles to come to Montana State, and students who will become the next generation of researchers and medical professionals in Montana will suffer irreparable harm due to a “dumbed down” generic degree.

Because of this passion I have for the quality education I have received so far, and the lack of answers I was receiving, I reached out to classmates to see what they were concerned with. I found that many, like myself, just wanted transparency as to what the motivations were behind these drastic changes. We wrote a petition detailing the main concerns that students had. This was a student inspired and student led course of action. In only 5 days, we were able to get 537 student signatures. We presented this to the administration and they swept all 537 of us under the rug.

The students with me today are leaders who want to see this department succeed and have great ideas for how to accomplish that. We are simply asking to have a voice in *our* University. A University that dismisses the concerns of students and actively tries to keep them in the dark is not a University that I want to be a part of. Neuroscience research and the cell biology and neuroscience program is too valuable to *me* to not fight for. I hope you will consider options to ensure that future students will be afforded the same opportunity to receive a high quality CBN degree from Montana State University. Thank you for your time.

Sincerely,

Luke Channer

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Montana University System Board of Regents
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Hello, my name is Miranda Mullen, and I am in my final year studying Cell Biology and Neuroscience at Montana State University. Thank you for taking the time to listen to my comments today.


I am here to express my adamant support for the Department of Cell Biology and Neuroscience at MSU-Bozeman, and to share my recent experiences in the Department. I moved to Bozeman 5 years ago in order to further my education, and I completely attribute my decision to attend MSU solely due to the Department of Cell Biology and Neuroscience. My mother was diagnosed at the young age of 30 with a rapidly progressive form of Multiple Sclerosis. For those unfamiliar with the disease, it is an incurable, and often unpredictable nervous system disorder. My mother quickly went from being an independent, hardworking lady, to someone who needed help feeding herself or putting on clothes in the morning. She will never again be able to drive, hike, or even walk again. Watching someone you love suffer over the years, turning into a shell of who they used to be, due to a debilitating neurological disease is something that I would never wish upon anyone; however, one good thing stemmed from our experiences fighting her disease-I found a passion for neuroscience. This passion led me to discover MSU's renowned Department of Cell Biology and Neuroscience, and I made the decision to become apart of the community founded there in order to learn more about and research conditions such as my

mother's. Through my time here, I have been able to receive a level of high quality education that goes above any I could have found elsewhere. The outstanding cadaver and research labs have given me experiences and knowledge I would not have received as an undergraduate elsewhere, due also largely in part to the amazing professors that come with them. Learning from educators who are not only passionate, but have strong backgrounds in neuroscience has furthered my education in ways I could not have imagined 5 years ago.

The recent attempts by the MSU Administration to dissolve my department have greatly affected me. I fear that the incoming students will not be able to receive the type and quality of education that I have been fortunate enough to experience. I worry that the professors that may be brought on in the event of a dissolution will not have the same levels of knowledge in cell biology and neuroscience, and will not be able to live up to the standards that MSU has claimed it has. The amazing research opportunities that MSU boasts so highly will not be as readily available to those wishing to pursue careers in neuroscience. No one can argue that neuroscience is becoming a field that is more and more valuable to modern healthcare. I can only wish to understand why MSU would ever attempt to do away with a department that shows so much potential to have positive, long-term effects on the health of the Montana population and beyond. By getting rid of the Department of Cell Biology and Neuroscience, future students will not have as great of means to cultivate a quality education-one that they can take with them into their promising futures, in order to make a difference in the communities they find themselves in across the state.

Sincerely,

Miranda Mullen



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Montana University System Board of Regents
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Hello, my name is Makenzie Fry and I am a Cell Biology and Neuroscience student at Montana State University. Thank you for taking the time to read my comments today. I am writing this letter to express my adamant support for the department of Cell Biology and Neuroscience at MSU-Bozeman, and to share my recent experiences in the department.

I come from a very small town in Colorado called Hayden. Hayden is very secluded and as a result, drugs and alcohol abused were by many residents. I graduated with eighteen people, most of which I had been in school with since kindergarten. We were a very close knit class until high school, where I watched most of my friends turn to drugs and alcohol and turn away from education. They believed that they were not good enough for college. I lost many friends because I wanted to focus on education instead of partying.

When I was a sophomore, the school finally provided an anatomy class. Immediately I fell in love with the human body. I remember doing a small unit on the anatomy of the brain, and I had an overwhelming thirst for more information. I started looking at colleges with a neuroscience program. During this time, I got criticism from my classmates about wanting to go to college, being told college is a waste of time. This is a mindset that still resides in Hayden High School.

Finally, I landed on Montana State University as the best possible option for a neuroscience education that would shape me into a great doctor. The education I have gotten here has been invaluable. There are so many classes and faculty that set us up for success,



whether it be a cadaver lab or being able to pick the brains of faculty who do interesting and important research. These things made me more excited and motivated than ever to succeed in my aspirations of becoming a doctor. This rigorous program has taught me how to be hardworking, persistent, and how to delve deeper into the information presented than what is asked of me. All of these qualities will make me an excellent doctor who is respected and trustworthy.

The recent attempts by the MSU administration to dissolve my department have greatly affected me. I have put in so much time and so much hard work to be successful in this major. For the administration to try to rip that away from me and attempt to minimize my hard work has been tremendously demoralizing. It saddens me that an education I moved eleven hours away from my family for, an education that will result in around \$40,000 of student debt is under attack by the people we are supposed to entrust to protect our education.

The transparency that has been promised to us has been absent. It is still unclear as to why the administration sees it fit to dissolve our department. It is unclear as to why a Roman History professor was appointed as the head of the Neuroscience Department. It is unclear as to why our pleas for answers and cooperation are going unanswered. At freshman orientation we are told that, "This is *your* University," yet, that seems to be untrue for the 537 students that signed a petition asking for the longevity of the Cell Biology and Neuroscience Department. Most recently, we have been told that, "...the undergraduate Cell Biology and Neuroscience curriculum at Montana State University will remain intact." However, turning CBN into the "School of Human Biology" is still on the agenda to be reviewed at today's meeting. President Cruzado and the administration flat out lied to us. This is not the first time and it will not be the last. I hope that President Cruzado can take a step back and listen to us and understand why we

are upset by the administration's actions instead of continuing to attack and devalue the faculty, the students, and the students' education.

Completing my education in Cell Biology and Neuroscience is supposed to give me an opportunity to show the kids who are currently attending, or who will attend, Hayden High School that college is not unattainable and that they are absolutely worthy of furthering their education. I just hope that as my education continues to be devalued, it does not reinforce the idea in the minds of Hayden youth that higher education will be a waste of time.

Sincerely,

Makenzie Fry

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Hello, my name is Nick Johnson and I am a Cell Biology and Neuroscience student at Montana State University. Thank you for taking the time to listen to my comments today.

I am here to express my adamant support for the Department of Cell Biology and Neuroscience at MSU-Bozeman, and to share my recent experiences in the Department. I chose to attend MSU because of the pre-med program offered through the CBN department. With classes taught by professors doing cutting-edge neuroscience research, I have undoubtedly learned in a high quality environment. In the CBN department, I have had many valuable experiences that have shaped me as a student and future healthcare provider. I can recall with enthusiasm my first days at MSU, which included an introductory course to anatomy and physiology offered through and taught by a professor in the CBN department. In meeting with the faculty and discussing all of the possibilities for my future, I knew that the people in this department highly valued their connections to students and wanted to invest in my future success. With the phenomenal education provided to me by the compassionate team in the CBN department, I plan to apply to medical school and use my education as a tool to benefit underserved communities.

The recent attempts by the MSU Administration to dissolve my department have greatly affected me. As the events of the past year have unfolded, focus has been drawn unnecessarily away from my education. Mine and many students' time has been occupied by concerns for the future of our department. While I am assured I will be able to complete my degree at MSU, I am concerned for the quality of the education for future students pursuing CBN and for the longevity of the department. In the spirit of MSU's vision statement, I want for future students to discover and pursue their aspirations in neuroscience research and be best prepared for pursuing

health professions. It is my hope that more open and honest communication will occur between the administration and the CBN department and that the Board of Regents will listen to mine and other students' concerns.

Sincerely,

Nick Johnson

My name is Zach Matsko, a Spring 2018 graduate from MSU-Bozeman with a bachelor's in Cell Biology and Neuroscience.

I had an amazing education from some of the best teachers I've ever known, and had wonderful opportunities for activities and to go beyond just the classroom. One of the most powerful and influential components of my undergraduate education was my research that I conducted underneath Roger Bradley inside of the Cell Biology and Neuroscience department on campus. Learning laboratory techniques and practices really helped shape my professional education for the better and I wouldn't trade that for anything. It allows a deeper connection with concepts I learned in the classroom and allows actual exploring to try to find out the answer.

Humans are naturally curious, and this experience I had only further increased my curiosity for learning and causing me to ask "why?". Why is something the way it is, and how can I find out the underlying causes/components of it? This way of thinking is absolutely what research fosters; the striving for knowledge and learning each and every day, and knowing you have the power to discover.

It saddens me to hear about the political tension that threatens such a powerful experience. I am absolutely a better student because of research, and I would hope more students become involved in research. This is not the way to treat research at a university that just regained its 'very high research activity' designation in Carnegie classification.

Rosana Molina
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Bozeman, MT, 59718
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(406) 224-3706
May 22, 2019

**Montana University System Board of
Regents
Office of the Commissioner of Higher
Education**
560 N. Park Ave
PO Box 203201
Helena, MT 59620-3201
406-449-9124

Hello, my name is Rosana and I am a graduate student in the Doctorate of Neuroscience Program at Montana State University. Thank you for taking the time to listen to my comments today.

I am here to express my adamant support for the Department of Cell Biology and Neuroscience at MSU-Bozeman. As a graduate student here, I have done neuroscience research funded by the BRAIN (Brain Research through Advancing Innovative Neurotechnologies) Initiative, developing molecular tools to better understand the brain. I have presented my work at nearly a dozen conferences, including at the Society for Neuroscience meeting with 30,000 other neuroscientists from around the world. I recently attended a microscopy course at Cold Spring Harbor Laboratory in New York, taught by instructors from Harvard Medical School. This blend of amazing opportunities rivals what neuroscience departments from Ivy League institutions can offer. My graduate education at MSU has a unique advantage in that I have been able to work in a small lab directly alongside senior scientists. Eventually, I plan to become a professor and start my own neuroscience lab at a place like MSU.

The recent attempts by the MSU Administration to dissolve my department have greatly affected me. The past events, during which they threatened to place a moratorium on the graduate program, insulted my department and my mentors, and ignored the value of the

neuroscience research that I participate in and contribute to, have unfortunately disrupted my research and caused emotional stress. While the recent merge with the Department of Microbiology and Immunology has the potential to be very beneficial, the administration did it without warning and with no input from the students or faculty from either department. It is my understanding that I attend a public university where values such as shared governance and transparency should be upheld.

Sincerely,

A handwritten signature in black ink, appearing to read "Rosana Molina". The signature is fluid and cursive, with the first name "Rosana" and the last name "Molina" clearly distinguishable.

Rosana Molina

May 22nd, 2019

To: Joyce Dombrowski
Casey Lozar
Robert A. Nystuen
Brienne Rogers
Martha Sheehy
Paul Tuss

We, the undersigned students and alumni of Montana State University (MSU), harbor great concerns for the validity of degrees held by any and all graduates of the Cell Biology and Neuroscience (CBN) track as well as the longevity of neuroscience research at MSU. The recent and abrupt merger of CBN and Microbiology/Immunology (MBI) has left us troubled. Further, current CBN students have been affected substantially by changes and we see an opportunity to ensure that future students will not have the same difficult experience.

The actions taken by the administration have been unprofessional, and have tarnished the reputations of students and faculty alike. Public statements of students' ignorance, as well as the complete disregard of our concerns, have given us the appearance of being uneducated and uninformed individuals. Our department, major, and faculty have been described in the press as underperforming troublemakers who refuse to see our faults. Administration has chosen to use students like chess pieces, accusing our faculty of "weaponizing" students for personal gain. These accusations have damaged the reputations of students, faculty, and MSU as a whole. Our once strong and influential program is now facing grave and undeserved scrutiny with respect to its actual ability to train students. This impacts our futures greatly and reflects negatively on all parties involved.

Had this merger not been suddenly imposed by the administration, and CBN and MBI were given time to find an appropriate means of integration, this change could have been a great solution. Contrary to being a solution, this promises even more difficulty keeping high quality neuroscience education alive at MSU. The threat to neuroscience is now one of resources. We must now compete with the entirety of the MBI department for faculty lines. The questions remain, "Who will teach our classes? What will be done about the faculty vacancies? Will students still be able to engage in the meaningful experiences of neuroscience research?". We have attempted to speak to our administration, which has yielded nothing. Without immediate intervention from the Board of Regents, it is our fear that neuroscience education and research will cease to exist at MSU. We fear that the relationship between students and administration will further decline without oversight.

We ask that the Board of Regents recognize the importance of neuroscience at MSU, and take action to strengthen and repair the reputations of neuroscientists and neuroscience students. We see four ways that the Board of Regents can offer this support. Firstly, we request the allocation of sufficient faculty hires explicitly towards neuroscientists to fill gaps in CBN curriculum as well as provide undergraduate research opportunities. Secondly, we request that the Board of Regents urge the university administration to issue a public statement indicating support for our program and faculty to reverse the damage of previous statements. We request that students be involved in the planning process for Neuroscience at MSU moving forward; specifically, we ask that the BOR urge MSU administration to form a task force that is representative of CBN students and faculty to facilitate a successful bottom-up transition into the MBI department. Finally, moving forward, we request that the process of program prioritization, curriculum changes and departmental mergers be changed to formally involve the student voice.

April 29, 2019

To: President Waded Cruzado

c.c. Robert Mokwa
Nicol Rae
David Cherry
Abigail Richards

We, the undersigned students and alumni of Montana State University (MSU), harbor great concerns for the future of the Cell Biology and Neuroscience (CBN) department. Regardless of their true intent, the actions taken by the MSU administration against the CBN department demonstrate, with clearly malicious intent, the implementation of a strategy to strangle the department over the coming years, culminating in its total and absolute dissolution. In an effort to ensure the future and autonomy of CBN in its entirety, we have compiled the support and signatures of the following students from April 22nd through April 26th. We have done this out of great concern for future of our department, the degrees we and our colleagues will receive, and the degrees already held by our alumni.

Firstly, we demand an immediate appointment of an individual from our own department to the position of department head. This is important for appropriate mediation between students and professors by an individual with an understanding of the curriculum, the management of a research heavy field, the recruitment of renowned researchers, and the continuation of the longstanding tradition of excellence in education provided by Montana State University.

Second, we demand the immediate hire of three additional tenure-track faculty for the CBN department. The hiring of additional CBN faculty has been ignored despite outside reviews, the department, and the dean of CLS stating the necessity of more faculty. Left in this current understaffed state, the CBN department will be unable to continue to provide the same breadth and depth of courses offered by research-active instructors, diminishing the quality of education received by CBN students. This constitutes a violation of MSU administration's responsibility to enhance learning and promote departmental stability.

Third, we demand a written and public affirmation for the continued support and longevity of the CBN department. The existing lack of support and subversive actions taken by MSU administration have devalued the degrees already held by our alumni, sabotaged our researchers' eligibility to obtain research grants from the NIH, and gravely wounded alumnis' qualifications for medical and graduate schools. Already, one student was asked in an interview to explain "why should a medical school value a degree that MSU does not?" We aim to prevent this from happening to anyone else, as should our administration.

These demands being met will prove to the students of CBN, the campus community as a whole, and the many educational institutions of this nation that MSU is dedicated to open, clear communication and shared, transparent governance that exists with the best interest of any and all students in mind. We demand that these changes be implemented immediately, so that we, the students, feel that it is worth attending MSU this coming academic year.

Stand for the Future of Cell Biology and Neuroscience


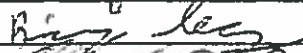




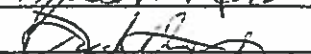



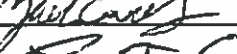

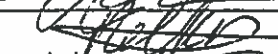



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The loss of two additional faculty members this coming fall will leave CBN short 5 faculty members in total. Losing renowned researchers and teachers not only negatively impacts the availability and diversity of the curriculum, but further perpetuates the possibility of the complete dissolution of the department and all of its accomplishments.

Should this transpire, the loss of our department will not only devalue the degrees of CBN alumni, but also harm both the culture and the availability of undergraduate research at MSU — the same culture MSU administrators claim to emphasize and advocate for. Moreover, this research helps MSU maintain our “very high research activity” ranking through the Carnegie Classification of Institutions of Higher Education.

As a direct result of the actions taken by Montana State University's administration, the following signees of this document stand firm in our belief that that the following actions are necessary to ensure the future of the CBN department, its research, students, faculty, and alumni.

- ❖ The *immediate* appointment of a department head from existing CBN faculty who embodies the goals of our department as demonstrated through their research and education of students in a wide range of biological areas.
- ❖ The hiring of three additional tenure-track faculty members to be conducted in the Summer/Fall of 2019.
- ❖ A public, *written* statement of commitment to the future of the CBN department including its students, faculty, research, and courses.
- ❖ Restoring an “environment that will allow for positive, constructive, and effective communication” that was emphasized in the University's explanation of its actions.

Printed Name	Signature	Major	Graduation Year
William Rankin		CBN	2020
Britney Gibbs		CBN	2019
Heather Cox		CBN	2020
Alex Kubacki		Health Sci	2020
Daniel Mincisin		CBN	2019
Brianna Baerger		grad	—
Jacelyn Gate		CBN	2019
Devin Wallace		Post Bacc	2019
Tanner Melany		HHD	2019
Erin Calkins		CBN	2019
Alexis Browner		CBN	2020
Ezra Connolly		—	2017
Adam Craig		CBN	2020
Miranda Mullen		CBN	2019
Nathan Bizer		CBN	2020
Hannah Bell		CBN	2020

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<u>Printed Name</u>	<u>Signature</u>	<u>Major</u>	<u>Graduation Year</u>
Cassidy McCarthy		CBN	2020
Erin Wolfe		CBN	2020
Risa Hedges		CBN	2020
Isbah Khan		CBN	2020
Emily Dummer		HAD	2020
Savannah Choff		CBN	2021
Katelyn Hemminger		CBN	2021
CECILE B. BEE		General Bio	2020
Claudia Fuller		CBN	2021
Mahlet Kebede		CBN	2021
Clayton Stirling		CBN	2021
Dominick Faith		CBN	2019
Alpha Scheel		CBN	2019
Jacob Smith		CBN	2019
Olivia Crickshank		CBN	2020
HARZ POINTE		CBN	2020

Stand for the Future of Cell Biology and Neuroscience

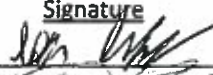

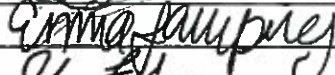

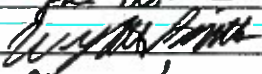
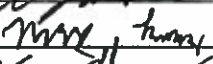






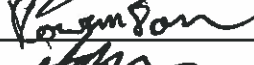



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Clark Copeland		CBN	2019
Leah Hetherington		CBN	2019
Emma Lamping		CBN	2019
Jake Fisher		CBN	2020
Wyatt Smith		CBN	2020
Nicholas Looby		CBN	2020
Kannan Hodler		CBN	2020
Mac Turner		CBN	2020
Nathan Hamner		CBN	2019
Luke Channer		CBN	2020
Lejon McCreery		CBN	2020
Brytanni Stevenson		Microbiology	2020
Kelsam Songestry		Organismal Bio.	2019
Nitch Blake		F&W Mgmt.	2019
Chris Emmens		F& Wildlife	2019
Cora Steinbach		Con Bio	2019

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Larkin Lynds		Ex. Sc.	2019
Olivia Kesterson		Liberal Studies	2019
Colin Hancock		Cell Biology + Neuroscience	2019
Johannie K. Smith		Cell Biology + Neuroscience	2019
Michelle Namisan		Cell Biology + Neuroscience	2019
Veronika Shelypelkina		Cell Biology + Neuroscience	2019
Ali Panigrahi		Cell Biology + Neuroscience	2019
Delancey Votey		Cell Biology + Neuroscience	2019
Chebra Kossel		Cell Biology + Neuroscience	2019
Ethan Campbell		Cell Biology + Neuroscience	2019
Abriana Warm		Cell Biology + Neuroscience	2019
Amr Khaled		Cell Biology and Neuroscience	2019
Taryn Olmstead		Cell Biology + Neuroscience	2019
Jack Roberts		Cell Bio + Neuro	2019
John Bozeman		CBN + Micro	2019
Tianna Gordon		CBN	2019

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Quinn Krause	Quinn Krause	CBN	2021
Anna Ripley	Anna Ripley	CBN	2022
Collin Wright	Collin Wright	CSU	2022
Melissa Lather	Melissa Lather	Psychology	2021
Hattie Richardson	Hattie Richardson	CBN	2021
Mecca Jones	Mecca Jones	Micro-Bio	2021
Emily Haskell	Emily Haskell	Organismal	2020
Clay W King	Clay W King	CBN	2021
Emma Sibler	Emma Sibler	CBN	2022
Mikayla Ming	Mikayla Ming	Undeclared	2022
Coleman Good	Coleman Good	Microbiology	2022
Karen Thayer	Karen Thayer	Biochem	2022
Sarah Vangi	Sarah Vangi	CBN + Microbiology	2019
Shelby Sweeney	Shelby Sweeney	CBN + Psych	2019
Nathaniel Cornwell	Nathaniel Cornwell	CBN	2020
Anders Pedersen	Anders Pedersen	CBN	2019

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Treyton Johnson		F&W	2018
Daniel Malone		M. Microbiology	2017
Alex Althof		CBN	2020
Tia Bakker		CBN (might change)	2020
Karim Ordo		E. Bio	2019
Madeline Clark		CBE	2019
MARLENE KANE		CBN	2020
GIA FISHER		CBN	2020
Maria Michelotti		CBN	2019
McKenzie Markson		CBN	2019
Haley Rogers		e. BN	2019
Samantha Clark		CBN	2019
Alex Johnson		CBN	2020
Randy Cane		MS Health Sciences	2019
Isabel Reese		EHHB	2019
Allison Haffner		EHHB	2019

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Jane Wallace		CBN	2020
Lore Andersen		CBNU	2020
Kyle Tison		CBN	2019
Ever Moorebach		CBN	2019
Scott Killian		CBN	2019
Morgan Chamberlin		EXPhyc/Nutrition	2020
Hannah Nomenik		Nutrition Science	2019
Julia Houston		CBN	2021
Trisha Carlson		CBN	2021
Jacob Kempa		Biochem	2020
Levi Coan		CBN	2021
Ryan Lovell		Psychology	2021
Prige Ramirez		CBN	2020
Jabin Spruel		CBN	2021
Joshua Mindez		Biochemistry	2020
Tatum Whatford		CBN	2021

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Bria Burns		CBN	2022
Steven Seizon		Biochem	2021
Quinn Alkhalaf		CBN	2022
Haley Swanson		Biochem	2022
Matthew Magee		Biochem	2022
Benjamin Hange		CBN	2021
Olivier Swain		Nutrition	2021
Erin Peck		CBN	2022
Madison Prindel		Pre-med	2022
Sophie Randak		Pre-Med	2022
Caden Messer		CBN	2022
Luxi Wrigley		CBN	2022
Kenzie Lindeman		Art	2023
Maddy Gromer		CBN	2022
Laurie Tapp		CBN	2022
William Baker		CBN	2021
Christenbaugh		CBN	2021

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Marina LaBouque		CBN	2019
Cordelia Cluett		MS HS	2019
Breanna Cyr		Organismal Bio	2020
Emily Bayden		Exercise Science (EHP)	2019
Angela Macdonald		CBN	2020
Tatjana Guerenwald		CBN	2020
Sierra Tucker		CBN	2020
Katherine Kubacka		CBN	2020
Ally Stallman		Community Health	2021
Chloe Hoessl		CBN	2020
Beth Brash		CBN	2020
Felicia Sappington		CBN	2019
Henry Haskinson		CBN	2020
Kendal Danjanovich		CBN	2020
Kayla Pullman		BCH/CBN	2019

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Rebecca Boylan		CBN	2019
Fereza Khalil		CBN	2020
Daniel Koehler		CBN	2020
Hannah McKinney		CBN	2020
Robert Gustafson		CBN	2022
Hannah Luolan		Anth	2020
Jacqueline Bussiere		Psych	2020
Heidi Sielbach		Microbiology	2019
Ian Muir		CBN	2021
Zariah Tolman		CBN	2020
Christille Seheckel		Anthro/Premed	2021
VALERIE ALLEN		CBN	2021
Dana Kramer		BCH	2019
Hunter Thernault		CBN	2020
Katherine Budeski		BCH	2019
Madison Wade		organismal biology	2020
Claire Bushell		Biochemistry	2020

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Emi Fujimori		microbiology	2022
Katie Kauer		Biochem	2022
Aidan Egan		CBN	2022
Jackie Martin		CBN	2022
Cooper West		CBN	2022 2022
Kanor Lyons		CBN	2022
Kyle Taylor		Biochem	2022
Chyd Schuler		CBN	2022
Brook Ploet		CBN	2022
Abigail Alder		CBN	2022
Brennae Hodgson		Physics	1615
Mackenzie Bernhardt		CBN	2019
Lauren King		organismal biology	2022
Nicki VanHerssen		CBN	2020
Nathaniel Sisson		CBN/ Teaching Asst	2019
Gray Pesta		CBN	2019

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Corbett Black		CBN	2019
Zach Crowen		CBIV	2021
Merrilee Thomas		CBN	2022
Logan Platt		CBN	2020
Jocelyn Waggons		CBN	2021
Carter Gall		CBN	2022
Maryona Mall		CBIV	2020
Fritz Kulakay		Cons Bio/Ecology	2020
Dovom Ruff		HDFS	2020
Kayla Farago		Exercise Science	2021
Alex Allred		CBN	2020
Jacob Holmes		CBN	2021
Eris Banks		Psych	2021
MARISSA HERWEG		CBN	2022
Hannah Cooper		EDEC	2020
Graff Steichen		PSYX	2022

Stand for the Future of Cell Biology and Neuroscience




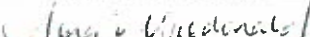

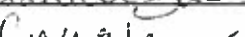
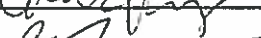

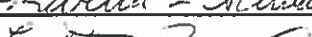
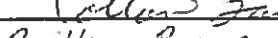

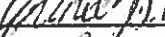



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Elena Lewis		CBN	2021
Lea Henderson		CBN	2021
Nicole Lemon		Biological Sciences	2019
Angela Macdonald		CBN	2020
Mariah Drown		CBN	2020
Grace Richardson		CBN	2021
Ben Sisson		BS-FW	2019
Rebecca Schnabel		CBN	2020
Colton Bower		CBN	2019
Brittney Bower		Microbiology	2019
Erinlee Morton		Biochemistry	2019
Jay Pollins		Ecology	2017
Madeline Clark		CBE	2019
Lila Hamburg		Biochem/Ecology	2020
Oliver Zehner		Biochemistry	2019

Stand for the Future of Cell Biology and Neuroscience





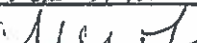


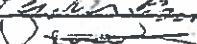
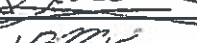





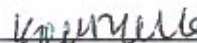

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Alessandra Miller		CBN	2022
Jack Porser		CBN	2022
Sydney Nerson		CBN	2022
Daria Kotov		CBN	2022
Cherie Tate		CB	2021
Ellie Jackson		CBN	2022
Andre Bidegway		BCHMY	2022
Vincent Davison		CHEM	2022
Bernard Lacey		CBN + Psych	2022
Robell Bassett		CE	2019
Gabrielle Rizzo		Biological Science	2022
Nyle Mulcahy		undecided	2022
Rachel Barunek		CBN	2022
Kelli Shari Kuehnstrot		BCHMY	2022
Jarrett William Richey		BCHMY	2023
Jordan Machado		BCHMY	2021

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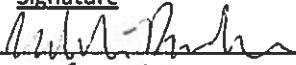
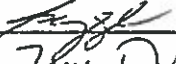
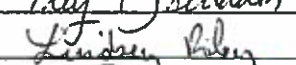

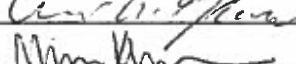
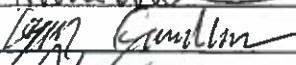
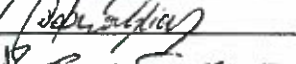
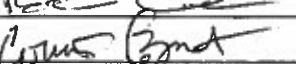
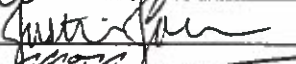

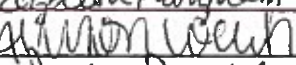
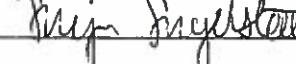
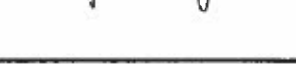

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Saba Foggge		Photography	2019
Trey Dschaak		Cell Bio & Neuroscience	2020
Lindsey Riley		Cell Bio & Neuroscience	2020
Robert Erickson		CBN	2020
Andrew Sprague		CBN	2020
Mia Vilvesher		CBN	2021
Kegan Gunderson		CBN	2020
Josephia Elias		Biochem	2020
Daniel Alne		Biochem	2019
Corinn Bryant		Nutrition Science	2019
Justine Johnson		Nutrition Science	2019
Matthew D. Barr		CBN	2021
Elizabeth Frothingham		CBN	2020
Allison Leach		Nutrition/Exercise Science	2020
Sonja Singelstad		CBN	2020

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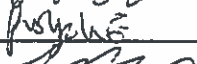

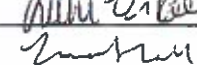
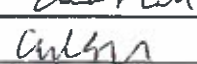
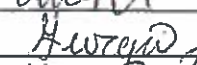



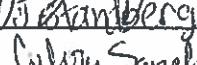
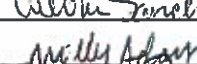
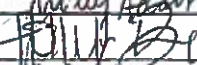




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Vander Swensen		Microbiology	2022
Pushya Krishna		CBN	2022
Trevor Phelps		CBN	2022
Kathleen Kay		Biochem	2022
Lara Hull		Biochem	2022
Caitlin Sullivan		MicroBio	2022
Georgia Lanning		CBN	2021
Gwendolyn Brenne		CBN	2022
Nathaniel Gorski		Pre-med	2022
Ryan Swintney		Chemistry	2022
Di Stenberg		CBN	2022
Celina Sanchez		Biochem	2022
Molly Adams-Hyde		CBN	2022
Hollie Bennett		Biochem	2022
Sue Stevens		History	2022
Erin Weller		Biochem	2021

+3 m back :)

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Brennan Lytle		Finance	2020
Eli Grossenbacher		Finance	2020
Alex Lovene		Marketing	2020
JANE STHYHA		BIOCHEM	2021
Shae Fisher		Psychology	2020
Emma Wickham		Nutrition	2021
Sara Anderson		Education	2021
WILL BIRRELL		GEOLOGY	WHO KNOWS
LIZ ROBINSON		GEOLOGY	2020
Mitchell Buford		Snow Science	2021
Charlotte Mille		Sociology	2020
Greg Colquhitt		Marketing	2020 2021
Nathalie Watson		Psych	2021
Olivia Poole		HDFS	2021
Jack Bernter		Accounting	2020
Beth Evenhuis		HDFS	2020

Kayla White	Kayla White	Sociology	2022
John Dwyer	Dave Jacob Dwyer	Horticulture	2020
Kameron Cook	M. Cook	Horticulture	2020

Stand for the Future of Cell Biology and Neuroscience



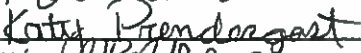





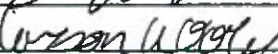
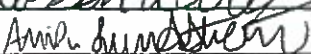
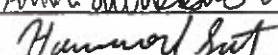





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Sierra Osborne		Ag Ed-Teaching	2021
Maddy Bremel		Ag Ed-Extension	2021
Katy Prendergast		Microbiology	2021
Victoria Barney-Earney		Psychology	2020
Natalee Glanville		Animal Sci	2022
Jahann Fritgraff		Psychology	2020
Isabella Ridgeway		Latin American Studies	2020
Emma Waterman		Community Health	2020
Corson Ooley		PSCT	2020
Annika Lundstrom		Business	2021
Hammond SLOTT		community Health	2021
Mychael Rauch		microbiology	2019
Trishera Killa Pretty Emory		microbiology	2019
DANIEL MICHELS		M.E.	2020
Gregory Wilson		Civil	2022
Hayla Bunkerhoff		Biological engineering	2022

29 signatures Front & Back :)

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Abby Schwartz	Abby Schwartz	psychology	2022
Emma Harrison	Emma Harrison	undecided	2022
Maria Strom	Maria Strom	Elementary Ed	2022
COYA BEANST	Coyla Beanst	Cellular & Molec. Bio.	2021
Lucy O'Hara	Lucy O'Hara	Teaching	2021
Patrick Hedden	Patrick Hedden	Natural Areas	2020
Monte Meyerink	Monte Meyerink	Education	2022
Zach Rolands	Zach Rolands	Fish and Wildlife	2021
Mikaela Peters	Mikaela Peters	Political Science	2019
Aimee Heffernan	Aimee Heffernan	Biology	2019
Cree Smith	Cree Smith	Biology	2020
William Manz	William Manz	Ecology	2019
Jordyn Rumphrey	Jordyn Rumphrey	Geology/Paleontology	2020
Kathleen Williamson	Kathleen Williamson	Geology/Paleontology	2020
Alexander Parks	Alexander Parks	Bio Engineering	2021
Eric Merkel	Eric Merkel	Bio engineering	2022

Ryan Barna	Ryan J Barna	chemical & biological engineering	2021
Kesler Holmes	KH	biological engineering	2021
Britta Binde	Britta Binde	nutrition	2022
MAIA REDDINGTON	MAIA REDDINGTON	ENVIRONMENTAL ENGINEERING	2022
Nina Casey	Nina Casey	un-declared	2022
Quincy Barb	Quincy Barb	Accounting	2019
Jack Hammond	Jack Hammond	Fish + Wild	2021
Henny Herman	Henny Herman	LANDSCAPE ARCH.	2030
JAMES DUFFLEY	JAMES DUFFLEY	Ecology	2019
Shawn Reddington	Shawn Reddington	Geology	2020
Caere Dahl	Caere Dahl	marketing	2020
Naomi Battanley	Naomi Battanley	Film + Production	2021
Daine Meissner	Daine Meissner	Snow Science	2020
Haley Cox	Haley Cox	CBN + BCH / CHMY	2019

Stand for the Future of Cell Biology and Neuroscience









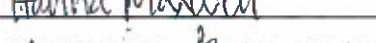
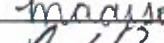



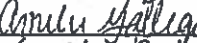


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Keifer Clark		CBN	2020
Jolyn Balkam		English	2022
Chuyenne O'Donnell		Photography	2021
Jacob Jensen		Econ	2019
Ashley Tveder		Psychology	2019
Emma Daleske		Psychology	2022
Madison Edwards		Psychology	2020
Hanna Maxwell		CBN	2021
Madison Shennum		Microbiology	2022
Augusta Vindlyke		Pre-Med	2022
Helen Barnett		Psychology	2021
Charlie Skakel		US	2022
Ameie Gallegos		Exercise Sci	2022
Emily Roth		Sociology	2021
Olivia Genteman		Psych & Sociology	2022
Ben Nygaard		Exercise Sci	2020

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Mendall Woodruff	Mendall Woodruff	Microbiology	2022
Emily Angus	Emily Angus	Microbiology	2021
Makaila Brull	Makaila Brull	Psychology	2019
Mallory Smith	Mallory Smith	Psychology	2021
Brett Thompson	Brett Thompson	NA Graduate	2017
William Green	William Green	Graduate	2018
HARON COHEN	Haron Cohen	Bus. Mgmt	2019
Jason Blair	Jason Blair	Psych	2020
Deidre Leslie	Deidre Leslie	Psych / Human Dev.	2021
Haley Orin	Haley Orin	ECDICS	2020
Anna Espeland	Anna Espeland	Psychology	2021
Damy Markersstacht	Damy Markersstacht	Psychology - Gerontology	2019
Grace Jacquet	Grace Jacquet	Exercise Science	2020
Nicole Harris	Nicole Harris	Psychology	2021
Alexa Greene	Alexa Greene	Psychology	2022
Devin Hallstrom	Devin Hallstrom	Exercise Science	2020

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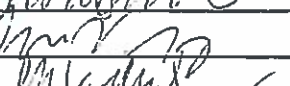
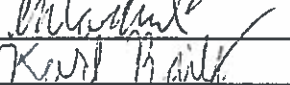
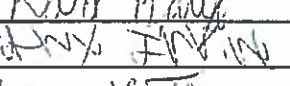
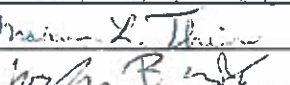
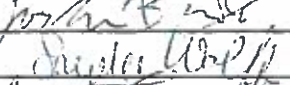
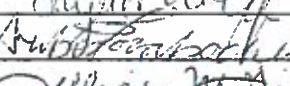
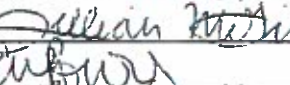
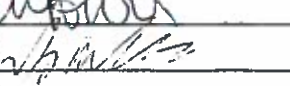
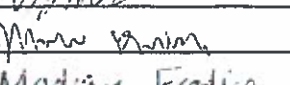
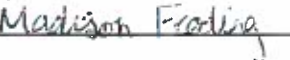


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Anthony Schmalz		Kinesiology	2019
Harry Wright		Soci	2021
Nora Stack		Nutrition Science	2020
Michael Vasquez		Business Finance/Econ	2021
Chloe Wesel		CBN	2020
Karl Butler		PSYX	2021
Alix Fivikar		Pol Sci + PSYC	2021
Madison Thies		Exercise Science	2021
Jordan Baxter		biological sciences	2021
Saydee Wolff		Exercise Science	2021
Amber Tarabochia		Sociology	2021
Lillian McGinn		HDFS	2019
Suelyn Power		SPBS & PolySci	2021
Sydney Archibald		PSYX	2021
Jenna Dunlap		SOC	2021
Madison Floding		EDEC	2019

Stand for the Future of Cell Biology and Neuroscience


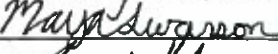

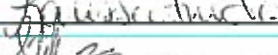
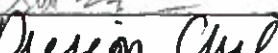
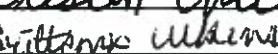
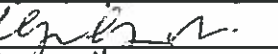




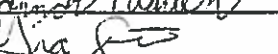
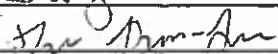
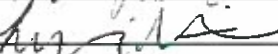
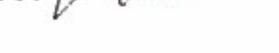

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Kortney McNeil		CBN	2020
Maya Swanson		CBN/Sociology	2021
Stee Hantz		Biology/CBN	2020
KERISA FISCHER		HHB	2019
Stile Wreaghtsmith		CBN	2021
PRESION CHILES		CBN	2021
Brittney Wilkinson		Biochem	2020
Maggie Nguyen		PreNursing	2019
Anthony Verhesselt		Gen-medicine	2019
Anne Parker		CBN/Biochem	2020
EMMA GIANNI		BIOCHEM	2019
Stori Smith		CBE	2019
CONNOR PADDEN		Ecology	2019
Gia Sorini		Nutritional Sciences	2020
TICHA PARJETTI-STEWART		Microbiology	2019
Lydia Picotte		Ecology	2019

Stand for the Future of Cell Biology and Neuroscience

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RJIKKA WEIS		Post bacc	2021
Alison Fitzpatrick		CBN	2022
Siyam Granda		CBN	2022
Manelle Smith		Microbiology	2022
Peter MacDill		Plant Pathol	2022
Rebecca Beeder		CBN	2022
Olivia Boyle		CBU	2022
Lucy Wilcox		Bio Chem	2022
Nathan Haeberler		CBN	2022
Andrea Crane		Microbio	2022
Anna Campbell		CBN	2022
Ashley Gramer		Nutrition	2020
Rachel Park		CBN	2019
Jenna Nagy		HHD	2019
Amanda Zurek		CBN	2020

Stand for the Future of Cell Biology and Neuroscience

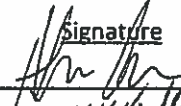
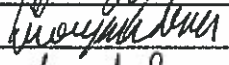







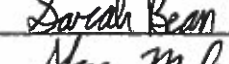


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Haylee Crowe		SEBS	2020
Morgan Anderson		Biological Sciences	2022
Anna Johnson		Education	2022
Jay Daniel H		History	2019
Julie Morgan		Biochemistry	2019
Jeremy Thornton		Hospitality	2020
Daniella Leizdanz		Culinary Arts	2020
Tyson Lynn		Hospitality Mgmt.	2020
Duncan Fletcher		Culinary Arts	2020
Tor Randolph		Culinary Arts	2021
Sarah Bean		Pre-Vet	2022
Shae Milne		" "	2021

Stand for the Future of Cell Biology and Neuroscience



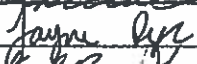
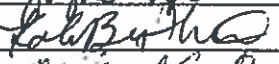
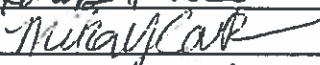







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Lori Lindgren		Community Health	2019
Rebecca Boylan		CBN	2019
Jayne Dye		Nutrition Science	2021
Kala Bertolino		Biological Engineering	2022
Mikaila Pitts		Community Health	2019
Holly Old Crow		Criminology	2020
Angela Bear Claw		Environmental Horticulture	2020
James Vallie		Chem Eng	2020
Nikki Lindgren		University Studies	2024
Katrick Hamm		Psych & Cell Biology & Neuroscience	2019
Eleni Constock		MET & Human Geography	2021
Colin King		CBN	2020

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Ethan Town		Psych	2020
Nina Johanson		Writing	2022
Darian D'Antonio		Secondary EDII	2022
Morgan Evans		Educational	2022
Janya Harold		Political Science	2020
Brooke Spivak		Environmental Studies	2021
Leah Marsh		Organismal bio.	2022
Josie Warren		Psych Soci	2021
Chad Shelton		Ecology Fish + Wildlife	2021
Sierra Thornton		Microbiology	2022
Austyn Traxler		Architecture	2019
Mikaela Trana		SOCI	2022
Kellen Johnson		Business	2020
INPEC NODIA		High School/BJP	2020
Grace Foster		Marketing	2020
Sylvia Johnson		English	2022
Spencer Wilson		C.E.T	2022
Nina Johanson		Writing	2022

OWEN WEAVER



Business

2022

~~Scott Anderson~~

~~Scott Anderson~~

Business-Advertising 2022

Jack Werner

Eva Geselle

Andrea Anderson

Janessa Kluttz

Elliot Towell/Himmler

GA

Andi Paul

Jan Kluttz

Elliot

Elementary Education 2022

Psych 2021

Pre-Vet/AnSci. 2022

Art 2021

Stand for the Future of Cell Biology and Neuroscience

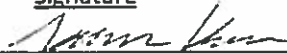
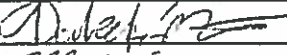



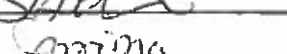
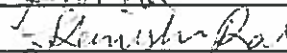



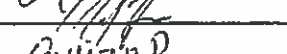
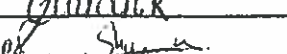
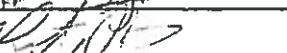
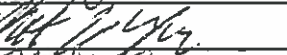



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Lauren Kern		Biochemistry	2021
Dakota Mutsen		Sociology	2021
Maddie Maxness		Civil Engineering	2019
Lucy Williams		Computer Science	2021
Brad McCoy		Computer Science	2021
Samuel Micka		Computer Science	2020
Anika Anzum		Computer Science	2019
Kavitha Rathan		Computer Science	2019
Avital Pekar		Psychology	2018
Henry Seale		Computer Science	2020
Jordan Schuybach		Statistics	2020
Mark Harris		Computer Science	2019
QUINN REYNOLDS		HP-CompSci, plant gen	2021
SIYAMAN JAYASUNDARA		Computer Science	2021
Peter Otson		Computer Science	2021
Kenneth Taylor		Computer Science	2023
Na'Shea Wiesner		Computer Science	2023

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Ausha Plikey		Conservation Bio & Eco	2022
Bronson Trillett		Conservation Eco	2020
Garett Roberts		Business-Finance	2020
Alexandria Nicholson		Conservation Bio & Eco	2022
Matt Gansch		Wildlife bio & Eco	2022
Katelin Hillen		Conservation Bio & Eco	2022
Dylan Flath		Business	2022
Jesse Franc		Ecology Fish & Wildlife	2022
Nick Underhiller		Business	2022
Matthew Hunter		Accounting	2021
Logan Anderson		Environment/Study	2021
Tucker Walter		Fish/wildlife ecology	2022
Jacob Mura		Business	2022
Deyle Burke		Fish/wildlife	2021
Christopher Austin		Conservation Bio & Eco	2022
Ariana Woods		Conservation Bio: Eco	2022
Isabella Goodman		Conservation Bio: Eco	2022
Luca Delis		Biotechnology	2022

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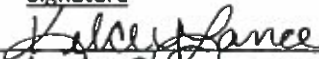
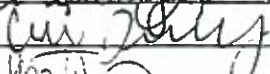
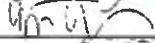

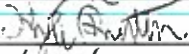
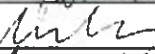
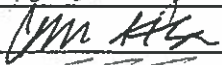



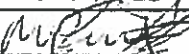


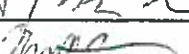
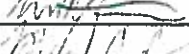
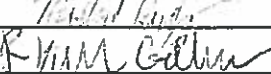
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Kelcey Lance		Elementary Ed.	2020
Carie Jernaway		Nursing	2021
Jessica Troviter		CBN	2020
Amy Feerlinck		Comp Sci	2023
Kyle Ruttin		Statistics	2021
Monika Kwapise		EMUSE	2020
Christopher Guenther		Chem. E.	2021
Marnie Manning		Computer Science	2021
Christine Denny		Environ. E.	2022
Kelsay Jensen		Microbiology	2021
Madeline Perout		Civil Engineering	2022
Garant Nelson		Comp Sci	2022
Tom Parrish		Comp Sci	2019
Kyle Ruttin		Comp Sci	2020
Michael Seber		Comp Sci	2021
Ryan Gallner		Applied Psyc	2021

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Allison Reyes	Allison Reyes	Kinesiology	2021
Jennison Big Day	Jennison Big Day	Environmental / Anthropology	2022
Brooklin E Hunt	Brooklin E Hunt	Microbiology	2022
Tiga Ward	Tiga Ward	IMSE	2022
SCOTT HANSEN	Scott Hansen	ORGANISMS & BFO	2019
Victoria Harbo	Victoria Harbo	Fish & Wildlife Ecology	2021
Ciera Pitts	Ciera Pitts	Fish & Wildlife	2021
Amy Humphrey	Amy Humphrey	Fish & Wildlife ecology	2022
Maya Meyers	Maya Meyers	Fish & wildlife ecology	2021
Max Robino	Max Robino	Ecology	2021
Devlin Dallas	Devlin Dallas	CBN	2021
Tiane Linus	Tiane Linus	CBN	2021
Jordan Lynch	Jordan Lynch	Liberal Studies	2021

Detailed chronology of interactions between CBN and MSU Administration.

2004

Gwen Jacobs told the BOR that in ~4 years, she expected the Neuroscience doctoral program to have 15-20 phd students and sustain at that level indefinitely. Nobody left here is/was aware of her statements. We first heard about this yesterday (1/9/2019).

2008

External review indicated that CBN was a high performing department with real potential, but growth was impeded by a crushing undergrad teaching load and recommended more TT hires to support the growing, successful undergrad major

2015-05-11

External review basically re-iterated the findings of the 2004 external review and added a recommendation that MSU hire at least 4 TT assistant professors, in addition to replacing losses due to departures and retirements. This was justified based on a crushing teaching load that was impeding the faculty's ability to recruit and train graduate students and provide sufficient graduate courses to attract more phd students.

2016-06-10

Martha Potvin wrote a 1pp "summary" of the 35pp 2015 external review saying the doctoral program was failing because there weren't enough students and that it should have 20 students enrolled within 4 years. She recommended a review in June 2019, and consideration of moratorium in June 2020 if improvements were not made. No additional hires were recommended, despite the external reviewers recommendation to hire in this area. Interestingly, Potvin dodged meetings with the reviewers and they complained about this in the review. Frances was chair at the time; she was given the letter and discussed with Martha why this was not feasible without addition hires. Martha did not respond, Frances thought the matter was closed. Susy Kohout, Steve Stowers and JM (and probably everyone except Frances) were completely unaware of this letter until November 2018.

2018-08

Dean Rae placed a CBN hire (Noudoost replacement) at the top of his priority list for hiring in the Fall of 2018. Startup funds were identified (~\$600K) set aside for the hire with VPRED support.

2018-09

Provost Mokwa ignored the recommendations of the Dean and killed the CBN hire, moving to the next department on list without explanation. He refused to meet with the CBN faculty to discuss the matter.

2018-11-29

Provost Mokwa, Ron Larsen and Kathy Jutila met with Roger Bradley. They told him about a UM of plan to recruit for a pre-med intake program to siphon students from MSU. The presented a plan for a new "School of Human Biology and Health Professions" to Roger and told him that CBN would be folded into the new school and lose it's independent identify. When asked about our research mission, they said we would be free to continue to do research in the areas of rural and trial medicine and community-based medicine since the new school would also include the existing COBRE and CTR centers focused on outreach. No neuroscience. They also informed him that the doctoral program would go into moratorium immediately and be taken off the books after 2 years of moratorium. They instructed him to return to the department and tell the faculty. He asked about other biomed/pre-med departments, like Micro & Chem/Biochem, and was told CBN-only. Not interested in bringing in the others – too complicated. After some argument, they told Roger he was welcome to present a "better" plan.

2018-12-4

CBN invited the Provost, Dean Rae, Bridget Kevane and David Cherry to meet with the department to discuss the plan. Provost refused and canceled the meeting. After some pressure, Rae, Kavan and Cherry met with CBN faculty for 2h to discuss. The short version of the meeting is that we were told it's all unfair, they agreed this was not best for the CBN majors, but it was non-negotiable. Take home from the meeting was:

1. Doctoral program is dead if we don't accept the new school
2. There is no acceptable plan to the Admin that has CBN intact as an independent entity or "Neuroscience" in the title.

2018-12-07

Roger Bradley and JM met with Cruzado, Mokwa, Rae and Abbie Richards to discuss an alternative plan, one involving all of the biomed programs on campus. The plan was modeled on the large umbrella biological science programs and many large universities (MCB at Berkeley, BBS at Yale, etc). The plan included streamlining the course catalog, providing a single entry point for all pre-med students, while still keep departmental research missions intact and autonomous. Cruzado said interesting, but only CBN. Cruzado re-iterated that this action was driven by her in response to UM's plan for attracting more pre-meds. She said UM was going to "eat our lunch" if we didn't act swiftly with the new school.

Then she told us the Neuroscience doctoral program was a failure in her opinion and was dead. No discussion. Moratorium effective immediately. Mokwa concurred. Dean Rea briefly argued in support of CBN, but quickly gave up. JM argued with them for a while and asked for proper evaluation and time to address their concerns about the doctoral program and was told no. Mokwa also told me that my CBN colleagues were useless and not interested in training phd students. He essentially said "while you care and are trying, the rest of your colleagues are not doing anything to support doctoral training and one person can not sustain a doctoral program". JM was then kicked out of the meeting.

The meeting continued with Roger alone and he was told that they had determined out 1/1 workload was insufficient and they were going to significantly increase our workload, presumably through the faculty senate. Note that our 1/1 workload is identical to other basic science departments like Micro, Chem/BioChem and Physics.

A couple hours after the meeting Mokwa emailed the dept (and current and former affiliates, staff and adjunct profs) that he would accept a plan for saving the doctoral program to be delivered by early-January and a plan for the CBN-version of the new school by mid-January. This public email was quickly known to the entire CBN community, including staff and students. This is when this officially became a public matter. That same email outlined the requirements of the school proposal they would accept – CBN-only, involvement of all biomed Centers on campus and a research mission focused on community medicine issues.

2018-12-17

Roger submitted a plan JM put together to save the doctoral program outlining reasonable performance metrics based on published data from peer Neuroscience doctoral US programs. These data are all readily available on-line from the Society for Neuroscience. The data were submitted with the plan. Most importantly, the data indicate that the national average for neuroscience programs is 0.45-0.84 students/PI, which is right where we are currently (0.85).

2018-12-19

Ron Larsen informed Dr. Bradley "[the Provost] he is sufficiently satisfied with the progress being made on the plan to grow the CBN doctoral program that he is no longer considering moratorium for the PhD degrees."

2018-12-20

Roger presented detailed version of the CBN plan for a new school to Ron Larsen and Kathy Jutila – Provost decline to participate in the meeting. This plan involved all biomed programs on campus and Roger had confirmed with Micro and Chem/Biochem an interest to discuss the new school and their participation. Larsen told Roger not to proceed any further because due to the involvement of other departments until the Provost approved the plan.

2018-12-23

After finals were over, in response to queries CBN was getting from students, we distributed a FAQ sheet explaining the situation and the Provost's proposal for the new school etc. We clearly indicated that CBN students were not in jeopardy of losing their major and that all current CBN students would be able to graduate.

2018-12-28

Cruzado started getting emails from CBN students expressing concern and supporting CBN. In response to these emails, the Provost send an email blast to the entire campus saying that Roger had initiated the entire thing, etc - CBN came to them with a plan for a new school with CBN at the center, not that the Provost had come to CBN with a plan to dissolve CBN into a teaching/service school.

2018-12-30

Roger tried to address the email blast with an email to all CLS DHs (for general circulation) explaining what had really happened.

2019-01-02

After not getting any response from the Admin about the CBN plan for ~12 days and concerned that things were happening behind closed doors again, he wrote the letter that appeared in the Chronicle.

2019-01-02

Immediately after the letter appeared, Roger was called to meet with the Provost - because he was out of the country, meeting was delayed until his return.

2019-01-04

Gail Schozler's first article appeared in the BDC. This is where Tracy Ellig became involved - he responded to Gail's queries with numerous inaccurate statements.

2019-01-04

Tracy appeared on KTHV 5:30 news and made numerous inaccurate, misleading and defamatory statements about CBN and CBN faculty. He claimed a few disgruntled, underperforming faculty members were waging a social media war against the Administration to save their jobs.

2019-01-07

JM met with Dean Rae and was repeatedly warned to keep quiet or else things were going worse. JM asked about whether or not they were going to remove Roger as DH and JM did not get an answer. He also told me that the doctoral program was not actually safe, but

rather he wasn't satisfied with the plan approved by the Provost and wanted changes and depending on our compliance making those changes, the program could go back in moratorium this spring. At this point the Dean started taking 1-on-1 meetings with CBN faculty, staff and select students.

2019-01-07

Susy Kohout met with Dean Rae. Received thinly veiled threat that her tenure decision was in jeopardy when Dean started meeting by stating the package was on his desk right now and blocked pending his letter.

2019-01-09

Roger Bradley was called to a meeting with Dean Rae and HR and removed as DH. David Cherry was appointed as administrative DH.

2019-01-10

Article appeared in BDC about Roger being silenced by the administration.

2019-01-10

JM is told by a student a fellow CBN major was told by the Provost this morning that CBN faculty are lazy and don't teach their fair share.

2019-01-10

Steve Eiger met with Dean Rae and Cherry. They indicate Provost and President are looking for a quick, peaceful resolution supporting CBN and Neuroscience. They want to meet with dept following week to hear what CBN needs to move forward and be successful.

2019-01-11 AM

Department invited to 1/14 meeting with Pres, Provost & Dean

2019-01-11 PM

Frances meets with Dean Rae and Cherry. They now contend that they don't know why the 1/14 meeting was called. They suggest that the reason all this is going on is because Neuroscience is just too expensive.

2019-01-11 PM

Cherry implies to Thom Hughes that our department is emotionally unstable and needs psychological help. He is concerned about us. Also concerned about how this will affect Frances' health.

2019-01-12

Roger Bradley informs department that Provost met 1-on-1 with all DHs on 1/11, it is believed this was to talk about current situation in CBN and what happened to Roger.

2019-01-14

CBN department meets with President Cruzado and administrators in Montana Hall (Provost, Deans, Abbie Richards and Eric Austin). When asked multiple times why this is happening, WC declined to give an answer. Highlights were her saying:

1. She claims this is all a misunderstanding arising because of Provost Mokwa poor communication skills and proceed to have Mokwa and Dean Rae apologize for not doing a better job communicating their goals with respect to the "School of Human Biology".
2. CBN will not be dissolved.
3. CBN major will not change.
4. Neuroscience doctoral program requires restructuring, potentially moratorium and closure.

She said her plan is to constitute a committee of 7 people from all over campus to fix the CBN situation. People will be selected by her, not necessarily STEM or researchers. They will investigate for 90d and then give her a report/solution. Importantly, at this meeting, Provost Mokwa (and President Cruzado) rescinded approval for the Neuroscience Doctoral Program Plan submitted 12/17/2018 and nominally approved (via Dean Larsen) on 12/19.

2019-01-16

Faculty senate met, Provost Mokwa addressed the Senate on the CBN situation and said (from BDC, 2019-01-17):

Mokwa said he absolutely respects shared governance. He said it takes a long time to develop a new school proposal and nothing leaves the campus to go to the Board of Regents for approval until the Faculty Senate has reviewed it.

Mokwa said the decision to remove Bradley as department head and replace him with an administrator from the College of Letters and Science was made by the college dean as a way to improve "communication." He blamed misunderstandings and miscommunication on the controversy appearing in the media.

2019-01-18

CBN faculty met with Dean Rae and David Cherry:

- CBN agreed to work on the “new plan” with NR and DC.
- Grad program is not in moratorium right now, no guarantee it will not go into moratorium in March if CBN/NR/DC can't come to agreement on the new plan - this is a big issue, because CBN will not commit to a plan with milestones we can't meet or actions we won't take (20 students, accepting unqualified students, switching to the GTA-model used in Chemistry, etc).
- Roger will **not** be reinstated. They will not consider instating a CBN member instead. DC will stay DH indefinitely until situation is “resolved”. NR refused to state that “resolution” would look like.
- Admin clearly stated: there will be **no new resources coming to CBN**. No hires, no additional funds, no increase in GTA levels. And we must add additional grad courses to our current catalog, further increasing our workload, without additional FTEs or resources.

2019-01-24

CBN submits CoBRE application for \$11M Interdisciplinary Neuroscience Center (Jamie Mazer, PI).

2019-01-31

Editorial from CBN faculty appeared in Helena IR. When someone asked for information from Clay Christian, he responded:

...

Thank you for reaching out to me. I am truly sorry for the confusion that has been created by the OpEd in the Helena IR. While I respect the authors' rights to share their opinions, that OpEd is misleading. We have no plans to abandon Neuroscience education and take the safety and well being of our students as our utmost priority.

...

His respect of their right to share opinions stands in stark contrast to WC's decision to punish Dr. Roger Bradley for doing the same thing in December.

2019-02-01

A professional facilitator, Betsy Johnston, is brought in by the faculty senate (Abbie Richards and Eric Austin). This is presented to CBN as a way to document the negotiation process and both CBN and the Administration's willingness to negotiate in good faith. AR & EA feel “CBN has nothing to lose” at this point. At this time, SE, FL, TH and CG all indicate that if there isn't some sort of resolution soon, they will all retire and the department and major will both be effectively gutted and dead.

CBN agrees to work with Betsy, stay quiet and work on developing a revised graduate plan and getting it approved by the Provost.

2019-01-11

Revised CBN Doctoral Plan (v2) submitted to Dean Rae for approval by the Provost.

2019-02-14

Doctoral program is returned – CBN faculty meet with NR to discuss required changes. Present are Dean Rae, Dean Larsen and David Cherry. Requested changes are minimal and revised document (v3) sent to Dean Rae that evening, receipt confirmed.

2019-02-15

Dean Larsen indicates to JM that plan is perfectly fine, but there are other factors in play that he's not fully aware of and suspects that the plan will be rejected by the upper administration for reasons not related to the plan. He further indicated that his continued involvement is not helpful since he not being given sufficient information from the upper administration to help resolve the situation.

2019-02-18

JM met with Dean Rae to work on revising the plan again (v5) to address **new** concerns raised by Provost Mokwa. Revised plan was completed at this meeting and NR indicated he would transmit to Provost Mokwa immediately. Provost is expecting the plan and turn around should be quick.

2019-02-20

1. RM approved and signed the Doctoral Plan (v5).
2. Betsy Johnson leaves Bozeman. The plan, agreed to by CBN, NR, EA and AR, was that when she returns in several weeks we will pick up where we left off – with graduate program squared away for next 5 years, we can now start talking about replacement hires for the 3 CBN departures since 2016 and addressing future retirements (Gray & Hughes).

2019-03-29

(2019-03-27) Betsy Johnson returns to Bozeman and new contract is finalized with faculty Senate. First phase-2 meeting with CBN-only is 3/29.

Thom Hughes announces official intent to take 2 year leave of absence and Charlie Gray confirms plans to retire this August (8/2019).

2019-04-09

CBN meets with Dean Rae (and: DC, BJ, EA, AR). Again, Hughes and Gray are confirmed to be retiring or taking leave. CBN is told by NR that even if we request CBN hire as part of the annual request for hires process, it's unlikely things will be any different than last year and

CBN will likely not get a hire. When asked why, NR said obviously because Provost Mokway is angry with CBN for making him look bad this past year.

2019-04-15

At the request of BJ, EA and AR, JM emailed Provost Mokwa and asked for a small meeting to discuss the current situation:

Dear Bob,

As I think you know, Susy, myself and the rest of CBN have been working closely the last few weeks with Nic, David, Abbie, Eric and Betsy trying to establish a plan or path for the future of CBN and the CBN major. I think it's become clear in the last week or so that forward progress and resolution of the current situation will involve solving some difficult problems. I've come to the conclusion that solving those problems, or even identifying the viable options, requires a better understanding of the Provost's office's long-term vision for CBN and Neuroscience at MSU. I was wondering if you'd be willing to discuss this with a couple of us - we could really use some guidance from you on this matter. We have discussed this with Nic and David and, while I don't want to put words in their mouths, I think they agree that input from you at this point could really help matters.

Susy and I were wondering if you'd be willing to sit down with just the two of us (and maybe some subset of the folks cc'd on this email, who have all been part of the discussions) to talk about the situation, the problems we've been trying to address and some ideas for moving forward.

Thanks,
Jamie

He confirmed receipt of the email 4/15, but no further communications. JM later learned that he had contacted the facilitator (BJ) and asked for advice about what to do. She recommended taking the meeting.

2019-04-23

Provost Mokwa emailed to say he would be willing to meet with JM, SK and DC sometime after commencement to discuss the situation. First available date was 5/13, for 30 mins, which we all agreed to. Note that 5/13 is almost a full month after my initial request for a meeting, which was made on 4/14.

2019-05-01

Article appears in Bozeman Daily Chronicle describing petition from 537 MSU students (CBN and non-CBN), demanding that MSU stop attacking CBN, involve students in the

discussion and basically fix the situation immediately. Admin does not respond to request for comment.

~25 CBN students appeared the faculty senate meeting to politely make a statement expressing their concerns and to hand deliver copies of the petition and cover letter to faculty senators. They were given 2 mins to speak. They did, and left.

Provost was present – he did not respond. Nor did Senate ask him to respond.

2019-05-02

Second article quoting President and Provost appears in BDC indicating that the 537 signatures are not representative and implying that the real concern students have is about the poor performance of CBN faculty.

Students complain directly to CBN faculty about how they're being treated by their administration.

2019-05-02

10am Provost requested immediate meeting with SK, JM, DC – apparently an opening on his calendar suddenly appeared (immediately after students appeared at faculty senate). Meeting was held: RM, SK, JM, DC in attendance. JM requested Eric Austin attend as well. RM said no.

RM indicated that he recognizes there's a problem with the large number of historical and impending departures, including acknowledgement that this could impact undergrad and graduate education. But over a 1 hr conversation he repeatedly indicated:

1. He doesn't have resources to hire more CBN faculty.
2. He is simply not interested/willing to discussing the situation with the students, involving them in the process, or addressing their concerns.

RM indicated that if CBN were to accelerate the scheduled 2 year rollout of the new Neuroscience Doctoral Program Curriculum and get it done immediately, he might look more favorably on allowing a CBN hire this Fall, since that would demonstrate CBN can be "a good citizen". But he also said that in no way should that be construed as a promise or commitment of any kind.

2019-05-08

Article appears in "Inside Higher Ed". Tracey Elig responds to questions with lies and misrepresentation of the situation (same lies he stated in December on the local TV news).

2019-05-11

New incoming graduate dean, Craig Ogilvie, contacted Thom Hughes to with questions the Inside Higher Ed article. Looks like nobody in the administration explained to him what's been going on here before he took the job or briefed him after he took the job.

Identifiers

WC: President Waded Cruzado

RM: Provost Robert Mokwa

RB: Dr. Roger Bradley (CBN, CBN Department Head)

JM: Dr. James Mazer (CBN)

SK: Dr. Susy Kohout (CBN)

SS: Dr. Steven Stowers (CBN)

FL: Dr. Frances Lefcort (CBN)

SE: Dr. Steve Eiger (CBN)

TH: Dr. Thom Hughes (CBN)

GC: Dr. Charles Gray (CBN)

RL: Dr. Ron Larsen (Dean, MSU Graduate School)

NR: Dr Nicol Rae (Dean, MSU College of Letters and Science)

DC: Dr. David Cherry (Assoc Dean, CLS; Interim CBN Dept Head)

AR: Dr. Abbie Richards (President, MSU Faculty Senate)

EA: Dr. Eric Austin (President-elect, MSU Faculty Senate)

BJ: Betsy Johnston (Facilitator/Mediator)



**MONTANA UNIVERSITY SYSTEM
Office of the Commissioner of Higher Education**

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MEMORANDUM

January 15, 2004

TO: Montana Board of Regents
FROM: Roger Barber, Interim Deputy Commissioner for Academic and Student Affairs
SUBJECT: Level II Submissions

Several new academic proposals have been submitted by the campuses of the Montana University System, under the Level II approval process. Those proposals will be reviewed by the academic officers, in January, and will move to the action agenda for the Montana Board of Regents at subsequent meetings. The new proposals include the following:

The University of Montana–Missoula:

➤ **Item No. 122-1009-R0104**

The University of Montana-Missoula requests permission to offer an interdisciplinary Minor in Nonprofit Administration. The new minor is proposed by the Department of Political Science, and includes coursework from several other departments including communication studies, psychology, recreation management, sociology and business. The minor program could complement several areas of study at The University of Montana-Missoula, and would help to prepare students for careers in the nonprofit sector. The minor will also build on the nonprofit certification program currently in place at the institution through American Humanics, Inc.

➤ **Item No. 122-1021-R0104**

The University of Montana-Missoula requests permission to offer an interdisciplinary Master of Arts degree in Intercultural Youth and Family Development. Perhaps the first of its kind anywhere, the proposed degree would prepare students for employment with international aid organizations, with special emphasis on the intercultural perspectives that are important in that kind of work. The degree would also include a one or two-year supervised field placement with such organizations as the Peace Corps or VISTA.

➤ **Item No. 122-1001-R0104**

The University of Montana-Missoula requests approval of a Doctorate of Philosophy degree in Anthropology, with specialization in Cultural Heritage Studies and Historical Anthropology. The Department of Anthropology plans to train doctoral students who focus on cultural heritage studies, with an emphasis on cultural resource management and historical anthropology. The program will include coursework on the greater Northwest and Native North America, and has the potential of attracting a broad spectrum of students, including Native American and ethnic minority students.

➤ **Item No. 122-1004-R0104**

The University of Montana-Missoula seeks permission to establish a new Doctorate of Philosophy degree in Biomolecular Structure and Dynamics. Interdisciplinary in nature, the proposed degree would utilize the faculty and course offerings of the Divisions of Biological Sciences, Chemistry and Pharmaceutical Sciences; and would emphasize the structural and functional aspects of biology at the molecular level. According to the program proposal, Biomolecular Structure and Dynamics is the intellectual meeting ground for students and faculty in the disciplines of chemistry, biology and biomedical science, and is an area of priority for federal research funding.

➤ **Item No. 122-1003-R0104**

The University of Montana-Missoula and Montana State University-Bozeman request approval to establish new Master of Science and Doctoral degree programs in Neuroscience. The programs will be a collaborative effort between the Department of Biomedical and Pharmaceutical Sciences of the School of Pharmacy and Allied Health Sciences at The University of Montana-Missoula and the Department of Cell Biology and Neuroscience at Montana State University-Bozeman. The programs are a natural result of the exponential growth in the area of neuroscience that has occurred on both campuses. The collaboration will enable the two campuses to create a nationally competitive graduate program in neuroscience, while taking advantage of innovative conferencing technology that will allow classes to be held simultaneously on both campuses.

➤ **Item No. 122-1005-R0104**

The University of Montana-Missoula requests approval to establish the Montana Avian Science Center within the Division of Biological Sciences. Building on The University's reputation in the field of avian biology, the Center would promote and conduct avian research, increase its bird monitoring partnerships with public and private agencies, develop collaborative efforts with other avian research and monitoring programs, enhance educational opportunities in bird research, and disseminate the results of those various activities.

➤ **Item No. 122-1008-R0104**

The University of Montana College of Technology-Missoula seeks approval to convert its currently approved Associate of Applied Science program in Practical Nursing to a Certificate program in Practical Nursing; and to offer an Associate of Science degree leading to licensure as a Registered Nurse. This proposal was on the submission agenda, for informational purposes only, at the November 2003 meeting of the Montana Board of Regents. Because of questions about the proposal from the Chief Academic Officers, the College of Technology agreed to carry the item over to the January 2004 submission agenda.

➤ **Item No. 122-1007-R0104**

The University of Montana College of Technology-Missoula requests permission to convert its option in Medical Assisting in the Associate of Applied Science degree in Medical Office Technology to an *Associate of Applied Science degree in Medical Assisting*. The degree program would also move from the Department of Business Technology to the Department of Health Professions. The purpose of the proposed conversion is to stimulate program growth through a greater degree of association and collaboration with the other allied health professional programs in the College of Technology. The program change will also hopefully provide students, faculty and the Missoula community with a more comprehensive allied healthcare education.

Montana State University-Bozeman:**➤ Item No. 122-2014-R0104**

Montana State University-Bozeman requests approval to offer a Minor in Military Studies. If approved, the minor will give the two Reserved Officers Training Corps programs at the institution more leverage in recruiting and retaining students. The minor program would not only prepare cadets for active military service, but would also provide them with the opportunity to study the United States military. MSU-Bozeman would become one of 46 universities in the United States that offer such a degree, if the program is approved.

➤ Item No. 122-2013-R0104

Montana State University-Bozeman and The University of Montana-Missoula request approval to establish new Master of Science and Doctoral degree programs in Neuroscience. (See Item No. 122-1003-R0104, under The University of Montana-Missoula, above, for more details about the collaborative proposal.)

Montana State University-Billings:**➤ Item No. 122-2703-R0104**

Montana State University-Billings wishes to implement a Minor in International Studies. The proposed minor will draw on existing coursework to create a program that provides a strong foundation in international studies, foreign languages, and intercultural communication. The minor will complement and enhance any academic major at MSU-Billings, and will prepare students for today's global economy.

ITEM 122-1003-R0104 Proposal**January 15-16, 2004**

- 1. Briefly describe the proposed new program. Please indicate if it is an expansion of an existing program; a new program; a cooperative effort with another institution, business, or industry; or an on-campus or off-campus program. Attach any formal agreements established for cooperative efforts.**

The new program proposed is a Masters (M.S.)/Doctoral (Ph.D.) degree program in Neuroscience. This program will be a collaborative graduate program between the Department of Biomedical and Pharmaceutical Sciences of the School of Pharmacy and Allied Health Sciences at The University of Montana and the Department of Cell Biology and Neuroscience at Montana State University. Neuroscience encompasses those scientific disciplines concerned with the development, structure, function, chemistry, pharmacology, physiology, clinical assessments, and pathology of the nervous system. Neuroscientists study the structure and the function of the nervous system in both the normal state and during disease and/or injury. The goal of many of these studies is to develop new therapeutic approaches for the treatment of central nervous system (CNS) diseases such as Alzheimer's as well as the development of new strategies for the treatment of CNS injuries. In addition, neuroscientists are striving to sort through the functional complexity of the nervous system and these studies are leading to advances in computational technologies.

This new program is a natural result of the exponential growth in the area of neuroscience that has occurred simultaneously on both campuses. At the University of Montana, the newly established COBRE Center in Structural and Functional Neuroscience (CSFN) funded by an NIH COBRE (Center for Biomedical Research Excellence) award of over 6 million dollars in direct costs has helped to add 8 new neuroscientists to the UM campus (for a total of 18 neuroscience faculty) and supports the research of neuroscientists at UM, MSU and the McLaughlin Research Institute. At MSU, the newly created Department of Cell Biology and Neuroscience (CBN) has 14 faculty members. CBN currently offers the M.S. and Ph.D. degrees in Biological Sciences, a shared program with the Department of Ecology that originated many years ago under the old Biology Department. This "umbrella" degree program no longer serves the needs of MSU graduate students in CBN. Establishment of a collaborative Neuroscience graduate program between MSU and UM will enable the two campuses to use their resources in synergy, creating a nationally competitive graduate program in neuroscience at minimal cost. The new program is highly innovative in that it will utilize the Access Grid Node to teach classes. This is an internet-based video conferencing technology that will allow classes to be held simultaneously on both the UM and MSU campus. The University of Montana is currently creating an Access Grid Node (AGN) classroom in the basement of the Honors College and MSU has an AGN classroom housed within the Department of Cell Biology and Neuroscience. This technology will allow faculty and students at both Universities to simultaneously participate in lectures and seminars and creates a seamless classroom between the two sites. The advantage for students is that all 25 neuroscience faculty at UM and MSU will participate in their graduate education.

Please see Appendix 1 for attached letters of agreement from MSU.

- 2. Summarize a needs assessment conducted to justify the proposal. Please indicate how the assessment plan was developed or executed and the data derived from this effort.**

No formal needs assessment has been conducted specifically for the proposed program. The Association of Neuroscience Departments and Programs (ANDP), a North American organization created in 1981 to promote training and research in neuroscience, published a summary report in May 2000 regarding the third annual ANDP survey. *The survey and its results are attached as Appendix II.* The survey indicates that as neuroscience has matured into a distinct discipline, there has been growth in the number of students applying and accepted into neuroscience programs. In 1986 there were an average of 24 applicants per program, by 1998, there were an average of 61 applicants per program. Graduates of neuroscience programs continue to find jobs at universities, research institutes, and pharmaceutical and biotechnology laboratories. The survey also suggested that the number of available jobs for neuroscientists is likely to increase due to the expansion of the biotechnology and pharmaceutical industries and the emergence of bioinformatics as well as targeted increases to the NIH budget projected over the next several years.

The Society for Neuroscience (SfN), the main professional society for neuroscientists, has determined that current and future research needs within the areas of neuroscience encompass the integration of research among all neuroscience-related disciplines, including fields beyond biology and medicine, such as the physical and social sciences, as well as the translation of neuroscience fundamental knowledge into strategies for the treatment of nervous system disorders (such as neurological, neurosensory, neurodevelopmental, psychiatric, addictive and other related illnesses). These needs have been incorporated into the SfN strategic plan (www.sfn.org/strategicplan) and reinforce the necessity for broad-based graduate training in the neurosciences.

Within the state of Montana, the emergence of neuroscience as a major growth area at The University of Montana has driven the development of this graduate program. Because of the interdisciplinary nature of

neuroscience, the merging of faculty expertise at both UM and MSU provides a unique opportunity for graduate training. We have capitalized on the fact that faculty expertise at the University of Montana focuses on neurochemistry, neuropharmacology, systems neuroscience, neurophysiology, neurotoxicology, and disease processes; while at Montana State University, faculty focus is on the cellular and molecular basis of neural development, neurophysiology, and computational biology of sensory systems, and response of the central nervous system to injury. Clearly the neuroscience strengths at each institution complement each other. The fact that many neuroscience faculty are already engaged in collaborative efforts across institutions emphasizes the cohesiveness of this group of faculty researchers. Neuroscience doctoral students will greatly enhance this cooperative effort and will provide an essential link between researchers at the two institutions. In addition, a strong doctoral program is critical for attracting outstanding faculty who can improve undergraduate education, graduate education, and research in the neurosciences.

3. Explain how the program relates to the Role and Scope of the institution as established by the Board of Regents.

The Mission Statement of The University of Montana states that:

The mission of The University of Montana-Missoula is the pursuit of academic excellence as indicated by the quality of curriculum and instruction, student performance, and faculty professional accomplishments. The University accomplishes this mission, in part, by providing unique educational experiences through the integration of the liberal arts, graduate study, and professional training with international and interdisciplinary emphases. Through its graduates, the University also seeks to educate competent and humane professionals and informed, ethical, and engaged citizens of local and global communities. Through its programs and the activities of faculty, staff, and students, The University of Montana-Missoula provides basic and applied research, technology transfer, cultural outreach, and service benefiting the local community, region, State, nation, and world. (Approved by Board of Regents, March 2001.)

The University of Montana is a doctoral level University, committed to a diversity of programs that balance liberal learning and professional preparation. The University continues to respond to the needs of the citizens of Montana and provides excellence in undergraduate and graduate education. The proposed Masters and Doctoral Program in Neuroscience is consistent with the mission of the University. This new program will create a unique learning environment for graduate students through the use of the access grid node and promote new knowledge through research and other creative activities, which will ultimately contribute to the economic development of Montana.

Undergraduate students will have the opportunity for employment and research training experiences because of external grants and contracts generated by the faculty. This interactive environment will facilitate the involvement of undergraduates in the research enterprise and will encourage interactions of undergraduate students with faculty, postdoctoral fellows, and graduate students in the laboratory setting. In addition, professional pharmacy students will also have the opportunity to participate in on-going research and potentially expand their training to include a Ph.D.

4. Please state what effect, if any, the proposed program will have on the administrative structure of the institution. Also indicate the potential involvement of other departments, divisions, colleges or schools.

The proposed program will not affect the present administrative structure. The graduate program will be housed within the School of Pharmacy and Allied Health Sciences in the Department of Biomedical and Pharmaceutical Sciences. A Director of the Graduate Program in Neurosciences will be appointed by the Chair of the Department of Pharmaceutical Science in consultation with the Director for The Center for Structural and Functional Neuroscience. Dr. Diana Lurie is currently Acting Director and Dr. Michael Kavanaugh is currently Acting Assistant Director for the program. The Director will serve as principal liaison with the Dean of the Graduate School and the Chair of Pharmaceutical Sciences on all matters relevant to graduate applications and student progress through the program. The offering of new graduate courses will allow graduate students from other departments such as the Division of Biological Sciences, Chemistry, and psychology at UM to expand their elective course portfolio and encourage interdisciplinary interaction. Members of other departments, schools and colleges have been contacted regarding this new program and are actively encouraged to participate in this program.

5. Describe the extent to which similar programs are offered in Montana, the Pacific Northwest, and the states bordering Montana. How similar are these programs to the one herein proposed?

Montana: No formal Ph.D. training programs in Neuroscience are available for students

North Dakota: No formal Ph.D. training in Neuroscience is available.

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South Dakota: No formal Ph.D. training in Neuroscience is in place.

Idaho: No formal Ph.D. training in Neuroscience is available at the *University of Idaho* or at *Idaho State University*.

Washington: The *University of Washington* houses the graduate Program in Neurobiology and Behavior. This interdisciplinary program encompasses over 80 faculty from 15 different departments within the College of Arts and Sciences and the School of Medicine. Education and research provide a broad background ranging from molecular, to developmental, cellular, systems, and behavioral neuroscience. *Washington State University* offers a Ph.D. degree in Neuroscience that is an interdisciplinary program. The program is administered through the Department of Veterinary and Comparative Anatomy, Pharmacology and Physiology (VCAPP) in the College of Veterinary Medicine.

Oregon: The *University of Oregon* houses an interdisciplinary Institute of Neuroscience. *Oregon Health Sciences University* provides the multidisciplinary Neuroscience Graduate Program to prepare students for research areas ranging from molecular to behavioral neurobiology.

Utah: The *University of Utah* offers an interdepartmental graduate program in neuroscience. Training and research foci include electrophysiology, molecular biology, genetics, and behavior and cognitive neuroscience.

Colorado: An interdisciplinary graduate program is offered at *Colorado State University*. The program emphasizes cellular, molecular and integrative aspects of nervous system function and systems neuroscience. The *University of Colorado Health Science Center* (UCHSC) provides a multidisciplinary Training Program in Neuroscience. The *University of Colorado Boulder* houses a Center of Neuroscience and offers an interdisciplinary graduate training program in neuroscience.

Wyoming: The Departments of Psychology, Zoology and Physiology, and Molecular Biology together with the College of Pharmacy provide an interdisciplinary graduate program in neuroscience.

SUMMARY

Formal training programs for graduate students to pursue a Ph.D. in Neuroscience are currently available in Washington State, Oregon, Utah, and Colorado. The existing programs in Washington State and Oregon are broad-based both in education and research opportunities. At present, neither Montana nor its neighboring states provide a comprehensive Ph.D. program in neuroscience. The University of North Dakota and the University of Idaho are in the process of trying to implement a formal Ph.D. training program but the limiting factor to a comprehensive Ph.D. program in neuroscience is the inherent broad spectrum of neuroscience.

A collaborative Ph.D. program between the University of Montana and Montana State University would combine expertise and resources in education, research, and technology to generate a comprehensive and truly interdisciplinary Ph.D. training program in neuroscience. The strength of the University of Montana in molecular and cellular neuroscience complements the strength of Montana State University in systems and computational neuroscience to cover the entire spectrum of neuroscience. Additional strength is gained through the Montana Neuroscience Institute Foundation, which encompasses a collaborative venture between the University of Montana and St. Patrick Hospital and Health Sciences Center and integrates clinical neuroscience with academic neuroscience. The proposed Ph.D. program in neuroscience would provide a unique and exceptional training opportunity for students that meets national and regional needs.

6. Please name any accrediting agency(ies) or learned society(ies) that would be concerned with the particular program herein proposed. How has this program been developed in accordance with the criteria developed by said accrediting body(ies) or learned society(ies)?

No existing accrediting agencies or learned societies can be identified that have been or would be concerned with the program herein proposed. The primary learned society dealing with the field of Neuroscience is the Society for Neuroscience, and this society does not publish guidelines relating to graduate training. Because of the interdisciplinary nature of the field of Neuroscience, no formal training guidelines have been published, although the ANDP holds annual spring meetings that are coordinated with the Society for Neuroscience to discuss graduate education and research in the neurosciences. Most faculty members and students who will be involved in the proposed program are members of the Society for Neuroscience and will be kept apprised of new developments in graduate training in the neurosciences through the Society.

7. Prepare an outline of the proposed curriculum showing course titles and credits. Please include any plans for expansion of the program during its first three years.

Students will enroll on their home campus. Program requirements at UM and MSU may differ in order to accommodate campus standards.

Core Curriculum (UM Campus)

PHIL 595#@

Research Ethics

1 cr.

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PHAR 545	Research Lab Rotations(3 cr. for Ph.D; 2 credit for MS)	
PHAR 593	Current Research Literature	1 cr.
PHAR 594	Seminar	2 cr.
PHAR 600 [^]	Adv. Cellular Biochemistry	4 cr.
PHAR 609@	Biomedical Statistics	3 cr.
PHAR 661#@	Neurosciences I	4 cr.
PHAR 662#@	Neurosciences II	4 cr.

[^] Cross-listed as BIOC 600

New course, under development

@ offered by Access Grid Node

Students will take at least **three (Ph.D.)** or **two (M.S.)** of the following courses:

BIOC 583	Lipids and Membranes	3 cr.	
PHAR 610@	Neuropharmacology		3 cr.
PHAR 646#@	Neurotoxicology	2 cr.	
PHAR 66x#@	Advanced Neurophysiology		3 cr.
PHAR 66y#@	Neurobiology of Disease		3 cr.
PHAR 66z#@	Structural Neurobiology	3 cr.	
PHAR 660#@/Biol 510-(MSU)	Topics in Neurobiology I	3 cr.	
PHAR 660#@/Biol 510 (MSU)	Topics in Neurobiology II		3 cr.
PHAR 660#@/Biol 510 (MSU)	Topics in Neurobiology III		3 cr.

new course under development

The following are examples of *additional* elective courses available to meet student interests.

PHAR 615	Molecular Pharmacology		3 cr.
PHAR 621	Advanced Medicinal Chemistry	3 cr.	
PHAR 626	Research Meth Bioc Pharmacol	3 cr.	
PHAR 630	Pharmacogenetics		3 cr.
PHAR 641	Toxicology I		4 cr.
PHAR 642	Toxicology II		4 cr.
PHAR 643	Cellular and Molecular Toxicology		4 cr.
PHAR 644	Immunotoxicology		3 cr.
BIOC 581	Physical Biochemistry	3 cr.	
BIOC 582	Proteins and Enzymes		4 cr.
BIOC 586	Advanced Molecular Genetics	3 cr.	

Research, Thesis, Dissertation

Phar 597/599 Research/ Thesis up to 10 credits for MS Degree

Phar 697/699 Research/Dissertation up to 30 credits for the Ph.D. Degree

Total Graduate Credit Requirements (UM)

At least 60 credits for the Ph.D., At least 30 credits for the M.S.

Individual students may be required to take additional courses beyond the minimum program requirements as determined by their department or Graduate Committee. Students will be strongly encouraged to rotate through laboratories at both campuses.

Faculty at UM and MSU will contribute equally to the lectures offered in the new Neurosciences I and II core course (Phar 661,662) that will be offered simultaneously at both MSU and UM via the Access Grid Node. It is anticipated that existing and new faculty on both campuses will develop additional new courses. These courses would be optional courses. Finally, a weeklong yearly workshop will be developed that brings together faculty and students from both the UM and MSU campus in order to facilitate interactions between the two campuses. This workshop will provide an opportunity to organize joint activities for the coming year including a shared seminar series, multi-campus rotations, and collaborative research projects.

FACULTY AND STAFF REQUIREMENTS

1. Please indicate, by name and rank, current Faculty who will be involved with the program proposed herein.

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The University of Montana (Dept. of Biomedical and Pharmaceutical Sciences)

*Steve Black, Associate Professor
 *Fernando Cardoza-Peleaz, Assistant Professor
 C. Sean Esslinger, Research Assistant Professor
 *David J. Poulsen, Research Assistant Professor
 *Thomas B. Kuhn, Assistant Professor
 Craig A. Johnston, Associate Professor
 *Michael P. Kavanaugh, Associate Professor
(Division of Biological Sciences)
 *Mark L. Grimes, Associate Professor
 *recent hires

Diana I. Lurie, Associate Professor
 Keith K. Parker, Associate Professor
 Richard J. Bridges, Professor
 Charles L. Eyer, Professor
 Charles M. Thompson, Professor

(Chemistry Dept.)

*John M. Gerdes, Associate Professor
 *Sandy Ross, Professor

Clinical Faculty Affiliates (Dept. of Biomedical and Pharmaceutical Sciences)

Dr. H. Nick Chandler, Neurosurgery
 Dr. Peter Von Doersten, Ear, Nose, and Throat
 Dr. Brian Sippy, Ophthalmology

Montana State University (Dept. of Cell Biology and Neuroscience)

Roger Bradley, Assistant Professor
 Alex Dimitrov, Research Assistant Professor
 Steven Eiger, Associate Professor
 Susan Gibson, Lecturer
 Charles Gray, Professor
 Thomas Hughes, Associate Professor
 Gwen Jacobs, Professor

Frances Lefcort, Associate Professor
 Jim McMillan, Professor
 Christa Merzdorf, Assistant Professor
 John Miller, Professor
 Charles Paden, Professor
 Dwight Phillips, Professor
 Anne Rusoff, Associate Professor

2. Please project the need for new faculty over the first five-year program. Include special qualifications or training. If present faculty are to conduct the new program, please explain how they will be relieved from present duties.

A total of eight new faculty in the area of Neuroscience have recently been hired at the University of Montana for a total of 18 participating faculty. There are 14 CBN faculty at MSU who can contribute to the graduate program through teaching, supervising graduate research, or both. No additional resources are requested for faculty hires at either institution.

In total 32 Neuroscience faculty at the two institutions are projected to participate in the new graduate program. The number and breadth of the faculty at both institutions set this Neuroscience Graduate program apart from the majority of other programs.

3. Please explain the need and cost for support personnel or other personnel expenditures.

a. Systems Administrator:

UM:	0.4 FTE	Salary:	\$24,000
		Fringe Benefits:	<u>\$ 5,280</u>
			\$29,280

The University of Montana has obtained grant funding of \$80,000 to establish the Access Grid Node (AGN) classroom needed for distance teaching at the MSU site. For the collaborative program with MSU we will need a systems administrator.

b. Administrative Support:

UM: 0.25 FTE Salary: \$6,000 Fringe Benefits: \$1,320

Additional administrative support will be required to coordinate the program. The UM Department of Biomedical and Pharmaceutical Sciences will have 3 Ph.D. and 3 M.S. programs and currently has only a department secretary that helps to coordinate graduate activities. This is insufficient at present and will only be magnified by adding a new program. A 0.25 FTE is requested for staff administrative support to act as Graduate Coordinator.

c. Graduate Teaching Assistants:

UM: 5 @ \$15,000 = \$75,000 (plus fringe benefits @ \$7,500)

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These could be phased in at 2 per year for FY 05, two for FY 06, and one for FY 07. It is anticipated that these stipends would support half of the enrolled students and that grant funds would support the other half. On the UM campus, approximately \$300,000 has been committed to the neuroscience Ph.D. program by the submitted and pending 2004-2007 NSF-Epscor Grant. Please note this grant expires December 31 2006. Please see Appendix 1 for NSF-Epscor letter of support.

CAPITAL OUTLAY, OPERATING EXPENDITURES, AND PHYSICAL FACILITIES**1. Please summarize operating expenditure needs.**

	FY 05 FIRST YEAR FTE		FY 06 SECOND YEAR FTE		FY 07 THIRD YEAR FTE	
I. PLANNED STUDENT ENROLLMENT						
A. New Enrollment	2		6		9	
B. Shifting Enrollment	2		1		1	
GRAND TOTAL PLANNED STUDENT ENROLLMENT	4		7		10	
	FIRST YEAR FTE COST		SECOND YEAR FTE COST		THIRD YEAR FTE COST	
II. EXPENDITURES						
A. Personnel Cost						
AGN System Administrator	0.4	24,000	0.4	24,720	0.4	25,462
Fringe Benefits	0.4	5,280	0.4	5,438	0.4	5,602
Administrative Support	0.25	6,000	0.25	6,180	0.25	6,365
Fringe Benefits	0.25	<u>1,320</u>	0.25	<u>1,360</u>	0.25	<u>1,400</u>
		36,600		37,698		38,829
Graduate/Instruc Assistants	4	60,000	7	105,000	10	150,000
Fringe Benefits	4	6,000	7	10,500	10	15,000
Other (tuition/fees)	4	36,000	7	63,000	10	90,000
Total Personnel FTE and Cost		<u>138,600</u>		<u>216,198</u>		<u>293,829</u>
		FIRST YEAR COST		SECOND YEAR COST		THIRD YEAR COST
B. Operating Expenditures						
Travel (seminar/recruitment)		10,000		15,000		20,000
Total Operating Expenditures		10,000		15,000		20,000
GRAND TOTAL EXPENDITURES		<u>148,600</u>		<u>231,198</u>		<u>313,829</u>
III. REVENUES						
A. Source of Funds						
Appropriated Fund Reallocation		24,000		24,000		24,000
New Tuition		10,632		36,606		62,580
Federal Funds		113,968		170,592		227,249
Total Source of Funds		<u>148,600</u>		<u>231,198</u>		<u>313,829</u>
B. Nature of Funds						

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Recurring	69,600	103,698	121,329
Non-Recurring	79,000	127,500	192,500
GRAND TOTAL REVENUES	<u>\$148,600</u>	<u>\$231,198</u>	<u>\$313,829</u>

2. Please evaluate library resources. Are they adequate for operation of the proposed program? If not, how will the library need to be strengthened during the next three years?

Neuroscience is an interdisciplinary science and as such, the library needs for this discipline are extremely diverse. The libraries at both The University of Montana and Montana State University are committed to providing electronic access to the majority of journals relevant to the field of neuroscience. The advent of e-journal access provided by scientific publishing houses ensures that a wide-range of journals are available on both campuses. At The University of Montana, such electronic packages include Science Direct, The American Chemical Society, Annual Reviews, OVID, Blackwell-Synergy, Wiley Interscience, and Science.

The MSU-Bozeman library has substantially expanded the availability of electronic publications in recent years, and now offers e-journal suites from Academic Press, Elsevier, Kluwer, JSTOR, and Nature in addition to those listed in the body of this proposal. MSU also subscribes to the powerful Web of Science database offered by Science Citation Index, enabling full citation searching for virtually any neuroscience article. Although neuroscience faculty will continue to work with the library staff in identifying areas where expanded access would be beneficial, no specific additions are required with respect to this proposal. The commitment of our libraries to provide e-journal access has had a profound impact in the area of neuroscience on both campuses and its effect should not be underestimated, particularly in the area of graduate education. Neuroscience faculty will continue to work with the libraries to identify additional needs and assist in the acquisition of funding to expand our electronic access.

3. Please indicate special clinical, laboratory, and/or computer equipment that will be needed. List those pieces of equipment or computer hardware presently available within the department.

Most computing needs are addressed through the program at The University of Montana to replace outdated computers on a three-year cycle. Additional needs for graduate students on both campuses will be addressed through departmental and external sources.

The scientific instrumentation available on both the UM and MSU is extensive and comparable to most medical school departments. A number of state-of-the art core facilities are also available to both faculty and students in the UM campus and include tissue culture, molecular modeling, molecular histology, confocal and light microscopy and imaging, and a genetics core facility located within the Skaggs building. Laboratories and offices of CBN faculty are located on the 5th floor of Leon Johnson Hall and in the Center for Computational Biology in the basement of Lewis Hall. Shared research facilities include cell culture, confocal and electron microscopy, image analysis, and computational capabilities. These include a Leitz confocal microscope equipped for two-photon excitation, an optical recording workstation, an Origin 2000 minisupercomputer, a 32 processor/16 GB Beowulf cluster, and a high bandwidth Access Grid Node connected directly to MSUs Internet 2 backbone. A more detailed description of this equipment can be found on the Department of Biomedical and Pharmaceutical Sciences website (www.umt.edu/pharmsci/) and the Dept. of Cell Biology and Neuroscience website (neuron.montana.edu/). These facilities provide outstanding support for graduate students at both the M.S. and Ph.D. levels, and no additional facilities or space is required to establish a graduate program in Neuroscience.

4. Please describe facilities and space required for the proposed program. Are current facilities adequate for the program? If not, how does the institution propose to provide new facilities?

Currently, space on both campuses is available for faculty, including new hires and space is available for graduate studies. At the University of Montana, plans are already underway for expansion of research space in the School of Pharmacy & Allied Health Sciences utilizing federal dollars and private donations to increase the available research space by approximately 10,000 sq. ft. This will provide adequate space for program growth. Facilities at MSU are adequate to support the program.

EVALUATION OF PROPOSED PROGRAM

1. Please name faculty committees or councils that have reviewed and approved the program herein proposed.

Graduate Standards Committee	Department of Biomedical and Pharmaceutical Sciences (UM)
Faculty	Department of Biomedical and Pharmaceutical Sciences (UM)
Faculty	Department of Cell Biology and Neuroscience (MSU)
Faculty	School of Pharmacy & Allied Health Sciences (UM)

2. If outside consultants have been employed, please list the names of these consultants, their current positions, and titles. Append copies of their written reports (this is required of new doctoral programs).

Please see Appendix 1

Edwin Rubel, Ph.D.
Professor of Otolaryngology
Founding Director, Bloedel Hearing Research Center
The University of Washington

Carl Cotman, Ph.D.
Professor of Psychobiology and Neurology
Director, UC Center on Aging and Alzheimers
The University of California, Irvine

Appendix I **Letters of Support**

Gwen A. Jacobs Ph.D.
Head, Department of Cell Biology and Neuroscience
College of Letters and Science
513 Leon Johnson Hall
P.O. Box 173148
Montana State University
Bozeman, MT 59717-3148
Telephone 406-994-7334
Fax: 406-994-7438
e-mail: gwen@cns.montana.edu
URL: cns.Montana.edu

Diana Lurie, PhD.
Acting Director, The Neuroscience Graduate Program
Associate Professor of Neuropharmacology
Dept. of Pharmaceutical Sciences
Skaggs Bldg. Rm 304
University of Montana
Missoula, MT 59812

Dear Diana,

I am delighted to offer my strong support for the development and implementation of The Neuroscience Graduate Program; a collaborative effort between The University of Montana and Montana State University. The faculty in the Department of Cell Biology and Neuroscience at MSU are very enthusiastic about this program and are excited about how this effort will attract top quality graduate students to our research Laboratories. Based on the many years of productive interactions between neuroscientists at UM and MSU, I believe this program will be very successful.

We are committed to implementing the first year curriculum in collaboration with faculty at the University of Montana through joint presentations of graduate curriculum via the Access Grid Node. We have encouraged all of our current graduate students to take these courses and will recruit students from our incoming class to participate as well.

I believe that the development of this new graduate program will position us well to compete successfully for graduate training grants from both federal and private funding sources. In addition this program will strengthen existing ties between faculty at our two institutions and foster new collaborative efforts beneficial to all of us.

On behalf of the neuroscience faculty at MSU, I support this effort with no reservations. We look forward to working with you and our colleagues at UM to implement this exciting program.

Best wishes,

Gwen A. Jacobs

**VIRGINIA MERRILL BLOEDEL
HEARING RESEARCH CENTER**

University of Washington, Box 357923
Seattle, Washington 98195-7923
206-685-2962 FAX: 206-616-1828
bloedel@u.washington.edu
<http://depts.washington.edu/hearing/>

Edwin W Rubel, Ph.D.

Phone: (206) 543-8360
Email: rubel@u.washington.edu

May 28, 2003

Diana I. Lurie, Ph.D.
Associate Professor of Neuropharmacology
Department of Pharmaceutical Sciences
Skaggs Bldg., Rm. 304
University of Montana
Missoula, MT 59812

Dear Dr. Lurie,

I am very pleased to write this letter in support of the proposed Ph.D. program in Neuroscience that will be offered jointly by The University of Montana and Montana State University. In my capacity as a member of the external advisory board for the Center for Structural and Functional Neuroscience (UM), as a WAMI faculty member, and as a neuroscientist, I have visited and interacted with neuroscience faculty at both campuses for many years. I have been tremendously impressed with the rapid and successful development of neuroscience research at each institution and with the commitment of both Universities toward building strong teaching and research faculties in the neurosciences. A major strength that has contributed to this success has been the collaborative nature of the interactions between the neuroscience faculties at UM and MSU. This is exemplified by the NIH Cobre grant which was submitted by UM but also supports faculty at MSU and the McLaughlin Research Institute. Because the field of neuroscience is by nature interdisciplinary, it is common for several research groups to work collaboratively on a single research question and the neuroscientists at UM and MSU already have a number of ongoing collaborative studies. That is, at both the organizational level and with respect to individual research programs, these groups have already shown the ability to work very well together toward common goals. This lays an ideal foundation for a successful Ph.D. program and ensures the best possible experience for graduate students.

A major strength of the proposed program is that the major areas of expertise of the faculty at each institution are different and complementary. For example, neuropharmacology is a particular strength at UM while computational and developmental neuroscience are particular strengths at MSU. I am also delighted to see that the proposed curriculum is very broad-based and interdisciplinary and will give graduate students an outstanding knowledge of the entire field of neuroscience. Another unique aspect to this program is the use of the Access Grid Node to teach courses simultaneously at both campuses. The Department of Pharmaceutical Sciences at UM is to be commended for raising the majority of the funds and spearheading the creation of an AGN classroom at UM. This new technology will revolutionize classroom delivery of information and the neuroscience program will be one of the first in the country to utilize this technology on a routine basis. Again, this adds strength to the program as faculty and students from both campuses will be interacting with each other almost daily. Given the fact that this program will be interactive and delivered to two campuses, the proposed budget is quite modest. I also find it somewhat troubling that the majority of funding for the

program will come from external funds. With the outstanding faculty that have been recruited, their excellent track record and the opportunity to build a leading program in what is generally considered the most exciting area of science, it is surprising that the level of state commitment is not much higher. With more commitment from the institutions you would be competitive to attract the very best graduate students from around the nation. This is a program well worth supporting; it will serve as a benchmark for building increasingly strong research oriented graduate programs at both institutions, and will enhance the visibility of the state within the scientific community.

In summary, this is an innovative and creative program that has been carefully crafted and well-researched. The faculty are outstanding and have already shown the ability to work seamlessly together. Major strength lies in the collaboration between UM and MSU and the use of modern technologies to form unique teaching and research collaborations. I have no doubt it will be an outstanding research and training program and attract excellent students. I am proud to be affiliated with the program and look forward to continuing to work together.

Sincerely,

Edwin W Rubel, Ph.D.
Virginia Merrill Bloedel Professor of Hearing Science

UNIVERSITY OF CAUFORNIA, IRVINE

CARL W. COTMAN, PH.D.
DIRECTOR
INSTITUTE FOR DRAIN AGING AND DEMENTIA
EMAIL: CWCOTMAN@UCI.EDU

1113 GILLESPIE NELTROSCIENCE FACILITY
IRVINE, CA 926974540
TEL: 949-824-5847
FAX: 949-824-2071

June 17, 2003

Dr. Diana Lurie
Department of Pharmaceutical Sciences
University of Montana
Missoula, MT 59812

Dear Dr. Lurie:

I am writing in support of your proposal to establish a new Ph.D. program in the Neurosciences at the University of Montana. As a scientific advisor to both the COBRE Center for Structural and Functional Neuroscience and the Montana Neuroscience Institute, I have watched your research and training capacity increase dramatically over the past few years. For the University's research and educational endeavors in the neurosciences to really achieve a nationally recognition, in terms of both science and finding, it is critical that graduate, postdoctoral, and faculty programs continue to grow in a balanced manner. In my estimation, the program has evolved to the point where its further development will require a strong Ph.D. program. I have read your proposal to the Montana Board of Regents and would make the following comments and recommendations:

- Your decision to develop the program collaboratively with Montana State University is a wise one. The focus areas on the two campuses are quite complementary and there is no question that pooling resources makes your program considerably more competitive. This will increase opportunities for students and should be stressed in your recruitment efforts.

- The multi-disciplinary (cross departmental) design of the program is also a strong asset. Efforts must continue to keep the program "seamless" when faculty are participating from academic units outside of the School of Pharmacy.

- To establish such a program will absolutely require an infusion of resources, particularly as related to graduate student stipends and tuition waivers. I would suggest that your request as it now stands is on the conservative side and should be considered a minimum. If it is envisioned that the majority of the costs will be borne by research faculty through their grants, it would be wise to remind administrators that the cost of supporting a postdoc is often less expensive than a student when the P1 must pay for both a stipend and tuition!

- Following up on the point raised above, your proposal does not include a request for additional faculty positions. I am aware that the establishment of the COBRE Centers resulted in the recruitment a talented group of young neuroscientists. While it will be possible to initiate the
Dr. Diana Lurie

June 17, 2003

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proposed program with existing faculty, I caution you that that its continued survival will require a very active research program that will most likely need additional faculty to remain competitive. In this respect, the existing faculty should be considered a minimum and it should be widely recognized that growth in neuroscience faculty must continue, particularly in the other participating units, such as Biology and Chemistry.

Finally, I would emphasize that a mechanism should be established for regular gatherings, such as a high level colloquium series that meets on a regular basis. This would promote "grass roots" interactions by bringing new information to the program and stimulating collaborations among colleagues. There needs to be sufficient funds to host such a series. Each year, at least at the start, I would also recommend having an external advisory committee to review the progress and make recommendations.

I hope these comments are of some value. I wish you luck with your proposal and look forward to seeing it start enrolling students. Please let me know if I can provide any additional information.

Sincerely,

Carl W. Cotman, Ph.D.
Director, Institute for Brain Aging and Dementia
Professor, Neurology and Neurobiology and Behavior

Neuroscience training at the turn of the century: a summary report of the third annual ANDP survey

R. Ranney Mize, Barbara R. Talamo, Ronald I. Schoenfeld, Lesly K. Huffman and Robert B. Fellows

The claim that there are too many life sciences graduate students has generated much debate, including a recent editorial in *Nature Neuroscience*. A 1998 survey suggests that these concerns are misplaced, and that career prospects for neuroscience graduates remain bright.

Neuroscience as a discipline has grown enormously during the past 25 years, and associated with this growth there has been a substantial expansion of neuroscience graduate education. The Association of Neuroscience Departments and Programs (ANDP), a North American organization created in 1981 to promote training and research in neuroscience, now has a membership of over 250 graduate and undergraduate departments and programs.

This growth reflects a broad trend within the life sciences, and whether such growth can and should continue has recently been hotly debated by national policy groups and in the press. There has been increasing concern that the United States is training more students than it can employ, and that the increase in numbers of students is producing strains on the system. Similar concerns have been raised in the United Kingdom, where it has been suggested that declining career prospects have led to a fall in the quality of students. Much of this debate has been captured in a 1998 report from the U.S. National Research Council (NRC), which documented some alarming trends in graduate education in the life sciences, increasing more than a threefold,

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(367%) increase in the number of Ph.D. degrees awarded annually during the years 1963-1996, an increase in the length of time required to complete both the Ph.D. degree and postdoctoral training, and a decline in the fraction of graduates obtaining tenure-track faculty appointments.

Based on these data, the NRC report recommended restraint of the rate of growth in the number of graduate students, dissemination of accurate information on career prospects, and enhancement of opportunities for independence of postdoctoral fellows, including the ability to obtain independent grant support. The NRC also recommended that funding of graduate students in the life sciences be shifted away from individual R01 grants from the National Institutes of Health (NIH), and toward institutional training grants and individual fellowships that might promote closer monitoring of the quality of the applicant and the training environment.

In this commentary we discuss these issues as they relate to the field of neuroscience. Our viewpoint represents that of the leadership of the ANDP and is

derived from data collected by the ANDP through questionnaires sent to its members. Three such surveys have been conducted, in 1986, 1991 (ref. 9) and 1998 (data available on the ANDP web site, <http://www.andp.org>). The 1998 questionnaire was sent to 189 directors or chairs of programs and departments of neuroscience throughout the United States. We received 90 responses, corresponding to about 48% of the estimated number of graduate degree-granting programs. The survey questions focused on characteristics of the student population, the nature of the training program, the numbers and rank of faculty, and post-doctoral trainees. Our findings confirm several aspects of the NRC report but differ in others, and the ANDP leadership disagrees with some of the NRC recommendations, as well as the positions expressed in a recent editorial in *Nature Neuroscience*.

Growth of neuroscience training

Growth of neuroscience as a Ph.D.-awarding discipline. In recent years, neuroscience has emerged as a distinct discipline, and this has been reflected in the labeling of Ph.D. degrees. In the past, graduate training in neuroscience typically led to a Ph.D. in anatomy, cell biology, physiology, pharmacology or psychology. In recent years, however, the trend has been toward dedicated programs in neuroscience. Figure 1 shows the percentage of doctoral programs in

neuroscience that grant neuroscience degrees versus neuroscience-related degrees awarded in other disciplines, as documented by ANDP surveys in 1986, 1991 (ref. 9) and 1998. There has been a threefold increase in the fraction of Ph.D. degrees granted specifically in the field of neuroscience between 1986 and 1998 (not 1996 and 1998, as noted in ref. 6, see correction, ref 10). This indicates that neuroscience has matured as an identifiable discipline, and that the majority of our training is now conducted in programs or departments of neuroscience rather than in other basic science departments.

Increase in size of neuroscience degree programs and Ph.D.s awarded. Interest in neuroscience training has also increased, as indicated by growth in the number of students applying and accepted per neuroscience program. In 1986, there were on average 24 applicants per program, but this increased to 42 in 1991 and to 61 by 1998.

The number of students enrolled also increased over the same period, from an average of 3.6 to 5.2 per program. We cannot determine the total numbers of neuroscience graduate students or Ph.D.s granted from our survey, but the Survey of Earned Doctorates (which collects data by an annual census of new recipients of research doctorates from US institutions) shows that the number of Ph.D.s awarded to those identifying themselves as neuroscientists is currently about 400 per year. This number has more than doubled between 1988 and 1998 (the most recent year for which numbers are available), although this may be due in part to an increased tendency to identify neuroscience as a specific discipline. There has been almost no change over the last three years (1996-1998). Thus, the growth of research in neuroscience has been reflected in the increase in earned doctorates, but the numbers now seem to have reached a plateau.

Quality of neuroscience Ph.D. students. Anecdotal observations that were quoted in the recent *Nature Neuroscience* editorial sug-

gest that the quality of Ph.D. applicants and graduate students in the UK has declined⁵. Although student quality is difficult to evaluate, the quantitative measures that are available do not suggest that the quality of students entering neuroscience has declined in the U.S. Data from the ANDP survey show that average GRE scores and grade point averages of applicants and students in neuroscience training programs are little changed from 1986 to 1998.

Number of years to degree. One concern expressed by critics of the current system is that there has been an increase in the length of time spent in obtaining the degree. The NRC report claimed that the time to degree now averages 8 years for the life sciences as a whole, and 7.5 years for neuroscience. The ANDP survey generated somewhat different figures; although the time taken to obtain the Ph.D. degree in neuroscience lengthened between 1986 and 1998 (as indicated in the NRC report), the average in 1998 was only 5.5 years, which is within the 5-6 year duration recommended by the NRC. We do not know the reason for this discrepancy, but we note that similar inconsistencies with NRC data have been reported by the American Society of Cell Biology (5.6 years) and the American Physiological Society (5.2 years) for their disciplines.

Demographics of students in neuroscience. World immigration patterns have dramatically changed the demographic composition of graduate students in the life sciences in the U.S., potentially adding to the pool of applicants for jobs. The number of Ph.D. degrees awarded annually in life sciences to U.S. citizens in the United States remained nearly constant from 1970 until 1996, whereas the number awarded to non-citizens almost tripled in the past decade. This trend is much less obvious in time field of neuroscience, where our survey results show that the percentage of foreign students in neuroscience Ph.D. programs remained at 19-20% from 1991-1998. There has been some increase in the fraction of non-

citizens among postdoctoral trainees, up from 40% in 1991 to nearly 50% in 1998. The effect of this pool on job placement is uncertain because there are no data on whether these trainees remain in the U.S. or return to their home countries. However, of the neuroscience faculty positions reported (2025) in the 1998 ANDP survey, fewer than 3% were held by citizens of countries other than the U.S. and Canada.

Sources of support for students. The NRC suggested that numbers of graduate students be constrained by decreasing support through research, grants. However, any discussion of changes in student funding should consider how our trainees are currently supported. Almost all (97%) neuroscience graduate students receive stipend support; for entering students, this is derived primarily from teaching assistant-ships and other university funds (67%), but after their first year graduate students receive only 40% of their support from these sources, and many of them instead receive support from research grants (37%). This dependence on research grant support is up from 33% in 1991 and 24% in 1986. During the same period, support from training grants and individual fellowships has declined for this group, such that these sources now only account for 12% of the total support funds, down from 18% in 1986. These data indicate that training grant and fellowship funds have only a modest role in supporting education of neuroscience trainees, consistent with the NRC report. The possible impact of restrictions in support through R01 grants should therefore be carefully considered, because about one third of all graduate students are paid from these grants. Extension of training grants and individual predoctoral research training fellowships to more programs would be helpful, but eliminating the R01 mute of support would be devastating to many students and programs.

Employment prospects
Trends in postdoctoral training. Are the increased numbers of neuroscience graduates finding jobs? The answer is yes, but the jobs

they find are increasingly diverse. Consistent with the NRC report, our data show that very few graduates move directly to a faculty job after getting a Ph.D. degree. More than two-thirds of recent graduates with neuroscience Ph.D. degrees held at least one postdoctoral position, according to data from our 1998 survey, and this percentage has increased little from 1991. The average length of each postdoctoral experience is 2.3 years, a figure that is consistent with a 1995 survey by the Society for Neuroscience (<http://www.nsf.org/membdata>). However the percentage of postdoctoral trainees who take another postdoctoral position has increased. Of those postdocs who moved to a new position in 1991, 21% went to another postdoctoral position, whereas by 1998 this figure had risen to 30% (Fig.2).

Availability of jobs for neurosciences. The 1998 survey data indicate that neuroscience postdocs continue to find jobs, although—in contrast to earlier years—many of these jobs are no longer academic positions. The survey captured only postdoctoral fellows leaving programs in a single academic year (1997-1998, $n = 83$), but it suggests a trend away from faculty positions and jobs in research institutes, and toward additional postdoctoral time or positions in other environments such as pharmaceutical and biotechnology research laboratories. Of those postdocs who moved to a new position in 1991, nearly 45% moved to a faculty position, whereas 14%

took research institute jobs and 13% other positions in science (Fig. 2). By contrast, of those who moved in 1998, only 28% moved to a faculty position, whereas 4% took jobs in research institutes and 29% took other positions requiring professional scientific training. In addition, as noted above, 30% took an additional postdoctoral position. Thus, an increasing percentage of postdocs may be finding alternative employment in areas other than the traditional academic disciplines.

Conclusions

Neuroscience is a thriving discipline. According to our survey; the number of neuroscience departments and programs has increased substantially in the past 12 years, and the number of Ph.D. degrees awarded specifically in the field of neuroscience has also increased. At issue is whether we are producing Ph.D. graduates who are not finding desirable jobs. The increase in numbers of Ph.D.s awarded in neuroscience seems to be less than in the life sciences as a whole and may have leveled off. Although more Ph.D. students are doing multiple postdocs, and the percentage obtaining faculty positions has decreased, their placement in employment outside of science-related fields remains very low, and alternative science-related careers, such as pharmaceutical and biotechnology companies, are absorbing many neuroscience graduates. The perception that we are 'stockpiling' Ph.D.s or that they are in a 'holding pattern' waiting to land, implies that there is only one

landing field and one desirable job—in academia. In fact, there are a variety of landings in appropriate and desirable jobs; consequently, training programs must continue to provide information about these opportunities.

The ANDP leadership takes the position that it is premature to either decrease or cap the numbers of students admitted into neuroscience training. The time required to obtain the Ph.D. in neuroscience is appropriate, and graduates are identifying opportunities related to their training. Although the period of graduate and postdoctoral training has increased in recent years, this may be warranted by the increased specialization and multidisciplinary skills required for contemporary neuroscience research. Finally, the number of available jobs for neuroscientists seems likely to increase, for at least two reasons. First, the expansion of the biotechnology and pharmaceutical industries promises to provide increased employment opportunities for neuroscientist outside academia. Second, the effort to double the NIH budget in five years remains on target, and some universities are now projecting a need for substantial additional faculty who will compete for these expanding funds.

Note: Results from the ANDP survey that pertain to this commentary can be found on the Nature Neuroscience web site (http://www.nature.com/neuro/web_specials).

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Montana University System New Academic Program Proposal Summary**Campus: MSU-Bozeman (in collaboration with UM)****Program Title: Neuroscience M.S./Ph.D.****1. How does this program advance the campus' academic mission and fit priorities?**

The creation of the department of Cell Biology and Neuroscience (CBN) within the College of Letters and Science in July of 2000 has opened new opportunities for our faculty to fulfill the MSU Mission "to provide a challenging and richly diverse learning environment...that promotes the exploration, discovery, and dissemination of new knowledge" at both the undergraduate and graduate levels. With over 400 undergraduate majors and \$4,700,000 in research grant expenditures in FY'02, CBN is already promoting both learning and discovery within a substantial community of students and scholars. Our goal in graduate education is to train a new generation of biological scientists equipped to exploit advanced experimental and computational approaches to develop a comprehensive understanding of nervous system function. Creation of a collaborative M.S./Ph.D. program in Neuroscience will enhance the ability of both MSU and UM to compete nationally in attracting the very best graduate students, students who will enrich the university community. These graduate students will play essential roles both in providing high quality undergraduate instruction as Teaching Assistants and in discovering new knowledge while pursuing their research projects in our funded laboratories.

2. How does this program fit the Board of Regents' goals and objectives?

The objectives of the new program in Neuroscience are complementary to the goals and objectives of the BOR. The program goals are: (1) to attract the best possible graduate students in neuroscience to Montana; (2) to provide comprehensive multidisciplinary training and research opportunities to the students enrolled in the program; (3) to enrich undergraduate education in CBN by providing well trained and highly motivated graduate teaching assistants; (4) to provide highly trained and versatile scientists to meet the needs of the growing biotechnology sector in Montana; and (5) to gain national recognition for the Montana University System through the future accomplishments of our graduates in the field of neuroscience. Thus, this program will further the Regents' goals of "providing a stimulating, responsive, and effective environment for student learning...and academic achievement".

In addition, the new program is highly innovative in that it will utilize the Access Grid Node (AGN) to teach shared classes. The AGN is an internet-based video conferencing technology that will allow selected classes to be held simultaneously on both the MSU and UM campuses. CBN faculty and staff have been instrumental in establishing AGN technology at MSU, where the AGN classroom is housed in the Center for Computational Biology affiliated with CBN. The University of Montana has a new AGN classroom in the Honors College. This technology will allow faculty and students at both Universities to simultaneously participate in lectures and seminars, in essence creating a single classroom between the two sites. The advantage for students is that all 32 neuroscience faculty at MSU and UM will have the opportunity to participate in providing graduate education to the students. Thus this program furthers the Regents' goal "to deliver higher education services in a manner that is efficient, coordinated, and highly accessible".

Finally, the future success of the program in providing highly trained and versatile scientists for the biotechnology sector in Montana and in gaining national recognition for the Montana University System through the accomplishments of our graduates will address the Regents' goals of being "responsive to market, employment, and economic development needs of the State and the nation" and of "improving the support for and understanding of the Montana University System as a leading contributor to the State's economic success and social and political well-being".

3. How does this program support or advance Montana's needs and interests?

Montana has a continued need for growth in biotechnology and health-related industries to bolster its economy. Such businesses require the support of state educational institutions that will provide highly trained scientists. The new graduate program in Neuroscience is supported by a strong group of research-active faculty with national reputations and proven records of extracurricular funding in a broad range of disciplines. The expertise and research interests of the faculty on the two campuses complement each other, and taken together provide an opportunity to create a comprehensive graduate training program in Neuroscience. Research foci in CBN include the cellular and molecular basis of neural development, neurophysiology and computational biology of sensory systems, and response of the central nervous system to injury. Faculty interests at the University of Montana are focused in neurochemistry, neuropharmacology, systems neuroscience, neurophysiology, neurotoxicology, and disease processes. In addition, many of the faculty are involved in translation of neuroscience fundamental knowledge into strategies for the treatment of nervous system disorders, such as neurological, neurosensory, neurodevelopmental, psychiatric, addictive and other related illnesses. The enthusiasm for research and graduate education among this diverse group of faculty provides outstanding opportunities for graduate students seeking a top-level science education.

4. How will this program contribute to economic development in Montana? (Note projected annual economic impact both regionally and statewide.)

The neuroscience faculty at both MSU and UM already contribute substantial grant revenues to the MUS. For example, CBN had \$4,700,000 in research grant expenditures in FY'02, while the recently established COBRE Center in Structural and Functional Neuroscience at UM is supported by a multi-year award of over 6 million dollars from the National Institutes of Health. These funds support campus infrastructure, and indirectly support the surrounding community and state through salary support of graduate students, faculty and staff. Establishment of a new graduate program in Neuroscience that will attract highly capable and motivated students is an essential component in expanding research productivity and funding to even higher levels. The impact that will ultimately be made by future graduates of the program as they launch their own careers is more difficult to gauge, and will likely require some 10-15 years to accurately assess.

5. What is the Program's planned capacity? (At MSU) 15-20 Ph.D. students; 5 M.S. students

Break-even point? 12 students

Enrollments/year? 10 students will transfer from the existing Biological Sciences Ph.D. program during the first year. We anticipate enrollment of 2-3 new students per year in the Ph.D. program thereafter, and 1 student per year in the M.S. program.

Graduates/year? 3-4 Ph.D. students and 1 M.S. student per year at full enrollment.

MT jobs/year? We expect that most of our students will remain in the state or region after graduation. Graduates of neuroscience programs continue to find jobs at universities, research institutes, and pharmaceutical and biotechnology laboratories. The Society for Neuroscience has concluded that the number of available jobs for neuroscientists is likely to increase due to the expansion of the biotechnology and pharmaceutical industries and the emergence of bioinformatics. Although long term projections from new graduate programs are hard to make, we are training our students to become leaders who will generate jobs and income for the state and region throughout their careers.

6. Resource Allocation

Total program budget Year 1: 228,420 Year 2: 282,917 Year 3: 337,429

Faculty FTE none (Dr. Charles Paden, the Acting Graduate Coordinator for CBN, will continue in that capacity)

Staff FTE 0.4 (0.2 secretarial and 0.2 network support)

Does this program require new resources? Amount?

No new resources are required for this program and no additional faculty or staff hires are needed to implement the proposed program. Team teaching and rotation of assignments among the total of 32 faculty involved at the two institutions (14 at MSU-Bozeman and 18 at UM) will make it possible to offer the new courses required for the program with no net reduction in faculty contributions to other undergraduate and graduate programs. Staff who

currently support the graduate program in Biological Sciences within CBN will be reassigned to the new Neuroscience program. These include approximately 0.2 secretarial FTE and 0.2 technical network support FTE.

How will the campus fund the program?

CBN currently has 3 M.S. and 9 Ph.D. students enrolled in the Biological Sciences graduate degree program. All of these students would be offered the opportunity to switch to the new Neuroscience degree program (except for any students that may graduate before its inception). Teaching assistantships currently assigned to CBN students enrolled in the Biological Sciences doctoral program will be made available to students in the new Neuroscience program. Financial support is also available to CBN students from faculty research grants, departmental indirect cost returns, and on a competitive basis through the NSF funded graduate program in Complex Biological Systems and the EPSCoR Program. The substantial number of faculty who will participate in both mentoring and teaching provide a breadth of expertise that will allow the MSU-UM collaborative M.S./Ph.D. program to immediately establish itself as one of the premier neuroscience programs in the Northwest, and our ability to offer a true multidisciplinary graduate program in Neuroscience will enable MSU (and UM) to compete more effectively for additional graduate training grants in the future.

If internal reallocation is necessary, name the sources.

The only internal reallocation will be in graduate teaching assistantships and fee waivers as described above.

ITEM 122-2013-R0104**Neuroscience M.S./Ph.D. Program Proposal****A Collaborative Proposal**

**Between the Department of Cell Biology and Neuroscience, MSU-Bozeman
and the Department of Biomedical and Pharmaceutical Sciences, UM**

PROGRAM DESCRIPTION**Overview**

The proposed new program is a Master's and Doctoral (M.S./Ph.D.) degree program in Neuroscience. This program will be a collaborative graduate program between the Department of Cell Biology and Neuroscience at Montana State University - Bozeman and the Department of Pharmaceutical Sciences at The University of Montana. Neuroscience encompasses a wide variety of scientific disciplines concerned with all aspects of the structure and function of the nervous system both in the normal state and during disease and/or injury. The proposed new graduate program is a natural result of the rapid growth in neuroscience that has occurred simultaneously on both campuses. At MSU, the recently created Department of Cell Biology and Neuroscience (CBN, created in July of 2000) now includes 14 faculty members. CBN currently offers the M.S. and Ph.D. degrees in Biological Sciences, a shared graduate program with the Dept. of Ecology that originated many years ago under the old Biology Dept. This "umbrella" degree program no longer serves the needs of the faculty and graduate students in CBN. At the University of Montana, the newly established COBRE Center in Structural and Functional Neuroscience (CSFN) has helped to bring 6 new neuroscientists to the UM campus (for a total of 14 neuroscience faculty). Establishment of a collaborative Neuroscience graduate program between MSU and UM will enable the two campuses to use their resources in synergy, creating a nationally competitive graduate program in neuroscience at minimal cost. The objectives of the new program are: (1) to attract the best possible graduate students in neuroscience to Montana; (2) to provide comprehensive multidisciplinary training and research opportunities to the students enrolled in the program; (3) to enrich undergraduate education in CBN by providing well trained and highly motivated graduate teaching assistants; (4) to provide highly trained and versatile scientists to meet the needs of the growing biotechnology sector in Montana; and (5) to gain national recognition for the Montana University System through the future accomplishments of our graduates in the field of neuroscience.

The new program is highly innovative in that it will utilize the Access Grid Node (AGN) to teach shared classes. The AGN is an internet-based video conferencing technology that will allow selected classes to be held simultaneously on both the MSU and UM campuses. CBN faculty and staff have been instrumental in establishing AGN technology at MSU, where the AGN classroom is housed in the Center for Computational Biology affiliated with CBN. The University of Montana has a new AGN classroom in the Honors College. This technology will allow faculty and students at both Universities to simultaneously participate in lectures and seminars, in essence creating

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a single classroom between the two sites. The advantage for students is that all 28 neuroscience faculty at MSU and UM will have the opportunity to participate in providing graduate education to the students.

Needs Assessment

The Association of Neuroscience Departments and Programs (ANDP), a North American organization created in 1981 to promote training and research in neuroscience, published a summary report of the third annual ANDP national survey in May 2000. The survey indicates that as neuroscience has matured into a distinct discipline, there has been growth in the number of students applying and accepted into neuroscience programs. In 1986 there were an average of 24 applicants per program, whereas by 1998 there were an average of 61 applicants per program. Graduates of neuroscience programs continue to find jobs at universities, research institutes, and pharmaceutical and biotechnology laboratories. The survey also suggested that the number of available jobs for neuroscientists is likely to increase due to the expansion of the biotechnology and pharmaceutical industries and the emergence of bioinformatics.

The Society for Neuroscience (SFN), the main professional society for neuroscientists, has determined that current and future research needs within the areas of neuroscience encompass the integration of research among all neuroscience-related disciplines, including fields beyond biology and medicine such as the physical and social sciences, as well as the translation of neuroscience fundamental knowledge into strategies for the treatment of nervous system disorders, such as neurological, neurosensory, neurodevelopmental, psychiatric, addictive and other related illnesses. These needs have been incorporated into the SFN strategic plan (www.sfn.org/strategicplan) and reinforce the necessity for broad-based graduate training in the neurosciences.

Relation to the Role and Scope of Montana State University and the Dept. of Cell Biology and Neuroscience

The Mission of Montana State University is:

To provide a challenging and richly diverse learning environment in which the entire university community is fully engaged in supporting student success. To provide an environment that promotes the exploration, discovery, and dissemination of new knowledge. To provide a collegial environment for faculty and students in which discovery and learning are closely integrated and highly valued. To serve the people and communities of Montana by sharing our expertise and collaborating with others to improve the lives and prosperity of Montanans.

The creation of the department of Cell Biology and Neuroscience (CBN) within the College of Letters and Science in July of 2000 has opened new opportunities for our faculty to fulfill the MSU Mission at both the undergraduate and graduate levels. With over 400 undergraduate majors and \$4,700,000 in research grant expenditures in FY=02, CBN is already promoting both learning and discovery within a substantial community of students and scholars. Our goal in graduate education is to train a new

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generation of biological scientists equipped to exploit advanced experimental and computational approaches to develop a comprehensive understanding of nervous system function. Creation of a collaborative M.S./Ph.D. program in Neuroscience will enhance the ability of both MSU and UM to compete nationally in attracting the very best graduate students, students who will enrich the university community. These graduate students will play essential roles both in providing high quality undergraduate instruction as Teaching Assistants and in discovering new knowledge while pursuing their research projects in our funded laboratories.

Relation to the Administrative Structure of MSU

The proposed program will not affect the present administrative structure of Montana State University-Bozeman. The graduate program will be part of the College of Graduate Studies and will be housed within in the Department of Cell Biology and Neuroscience in the College of Letters and Science. A Graduate Coordinator for the Program in Neurosciences will be appointed by the departmental chair. Dr. Charles Paden is currently the acting Graduate Coordinator for the department. The Coordinator will serve as principle liaison with the Dean of the Graduate School on all matters relevant to graduate applications and student progress through the program.

Involvement of Other Departments and Campuses

New courses offered through the Program will be available to enrich the educational opportunities for interested graduate students from other departments and colleges at MSU-Bozeman. Similarly, courses currently offered by the departments of Chemistry & Biochemistry, Veterinary Molecular Biology, Math, Computer Science, and Microbiology are available as electives to broaden the opportunities available to doctoral students in Neuroscience.

The rapid growth in the neuroscience faculty and their funded research programs at both Montana State University-Bozeman and The University of Montana has driven the development of this graduate program. The expertise and research interests of the faculty on the two campuses complement each other, and taken together provide an opportunity to create a comprehensive graduate training program in Neuroscience. Research foci in CBN include the cellular and molecular basis of neural development, neurophysiology and computational biology of sensory systems, and response of the central nervous system to injury. Faculty interests at the University of Montana are focused in neurochemistry, neuropharmacology, neurotoxicology, and disease processes. Clearly the research strengths at each institution complement each other. The fact that many neuroscience faculty at MSU and UM are already engaged in collaborative efforts emphasizes the cohesiveness of this group of faculty researchers. Neuroscience doctoral students participating in the collaborative program will greatly enhance this cooperative effort and will provide an essential link between research at the two institutions. In addition, a strong doctoral program is essential for attracting outstanding faculty who can enhance undergraduate education, graduate education,

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and research in the neurosciences at both campuses.

Relation to Other Neuroscience Graduate Programs in the Region

At present, neither Montana, North Dakota, South Dakota, or Idaho provide a comprehensive Ph.D. program in neuroscience. The University of North Dakota and the University of Idaho are in the process of trying to implement doctoral programs in neuroscience but are limited by the very broad spectrum of faculty expertise required to provide a comprehensive Ph.D. program. Formal training programs for graduate students to pursue a Ph.D. in Neuroscience are currently available in Washington State, Wyoming, Oregon, Utah, and Colorado.

A collaborative M.S./Ph.D. program between Montana State University-Bozeman and the University of Montana would combine faculty expertise and resources in education, research, and technology to generate a comprehensive graduate training program in neuroscience. The strength of the University of Montana in neuropharmacology and neurochemistry complements the strength of Montana State University in developmental, systems and computational neuroscience to create a truly outstanding interdisciplinary neuroscience master's and doctoral program that would provide a unique and exceptional training opportunity for students that meets national and regional needs.

Summary of programs in the region

Montana: No formal Ph.D. training programs in Neuroscience are available for students

North Dakota: No formal Ph.D. training in Neuroscience is available.

South Dakota: No formal Ph.D. training in Neuroscience is in place.

Idaho: No formal Ph.D. training in Neuroscience is available at the University of Idaho or at Idaho State University.

Washington: The University of Washington houses the graduate Program in Neurobiology and Behavior.

This interdisciplinary program encompasses over 80 faculty from 15 different departments within the College of Arts and Sciences and the School of Medicine. Education and research provide a broad background ranging from molecular, to developmental, cellular, systems, and behavioral neuroscience. Washington State University offers a Ph.D. degree in Neuroscience that is an interdisciplinary program. The program is administered through the Department of Veterinary and Comparative Anatomy, Pharmacology and Physiology (VCAPP) in the College of Veterinary Medicine.

Oregon: The University of Oregon houses an interdisciplinary Institute of Neuroscience.

Oregon Health Sciences University provides the multidisciplinary Neuroscience Graduate Program to prepare students for research areas ranging from molecular to behavioral neurobiology.

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Utah: The University of Utah offers an interdepartmental graduate program in neuroscience. Training and research foci include electrophysiology, molecular biology, genetics, and behavior and cognitive neuroscience.

Colorado: An interdisciplinary graduate program is offered at Colorado State University. The program emphasizes cellular, molecular and integrative aspects of nervous system function and systems neuroscience. The University of Colorado Health Science Center (UCHSC) provides a multidisciplinary Training Program in Neuroscience. The University of Colorado Boulder houses a Center of Neuroscience and offers an interdisciplinary graduate training program in neuroscience.

Wyoming: The Departments of Psychology, Zoology and Physiology, and Molecular Biology together with the College of Pharmacy provide an interdisciplinary graduate program in neuroscience.

Proposed Curriculum for Master's and Doctoral Students Enrolled at MSU-Bozeman.

Minimum credit requirements for Doctoral students:

Required core courses (4)	12 credits
Elective courses (5)	15 (or more) credits
Dissertation credits (Biol 690).	18 credits
Minimum Total	45 credits

Minimum credit requirements for Master's students:

Required core courses (4)	12 credits
Elective courses (3)	8 (or more) credits
Dissertation credits (Biol 590).	10 credits
Minimum Total	30 credits

I. Required core courses

Biol 6xx	Neurosciences I*	3 cr.
Biol 6xx	Neurosciences II*	3 cr.
VTMB 424	Ethical Practice of Science	3 cr.
Stat 524	Biostatistics	3 cr

*Neurosciences I and II will be team-taught by faculty from MSU-Bozeman and the University of Montana and will be offered simultaneously on both campuses using Access Grid-Node technology. This two semester sequence will be taken during the first year of graduate school and will provide a comprehensive introduction to all areas of neuroscience.

II. Elective courses.

Students will take a minimum of 3 to 5 additional elective courses in order to tailor their graduate program to their specific areas of research interest.

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Individual students may be required to take additional courses beyond the minimum program requirements as determined by their department or Graduate Committee. Students will be able to choose electives from a wide variety of courses offered by faculty from CBN, other MSU departments, and UM.

Courses taught by CBN faculty

Biol 510	Topics in Neurobiology*	3 cr
Biol 5xx	Systems Neuroscience	3 cr
Biol 5xx	Molecular Neuroscience	3 cr
Biol 5xx	Advanced Neurophysiology	3 cr
Meds 512	Mechanisms in Cellular Physiology	4 cr
Meds 532	Nervous System	6 cr

* This course rotates between different faculty who choose the specific topic to be covered. Examples of recent topics are Injury and Repair of the Mammalian Brain, Axonal Sprouting, Neuroethology, and Neurophysiology of Vision.

Courses taught by other departments at MSU (all are 3 credits)

BChm 544	Molecular Biology
BChm 541	Lipids and Membranes
BChm 543	Proteins
BChm 550	X-Ray Crystallography
CS 432	Computational Biology
Math 455	Intro to Dynamical Systems
Math 551	Complex Analysis
MB 525	Advanced Immunology
MB 528	Advanced Genetics
MB 538	Cell and Molecular Biology
VTMB 505	Eukaryotic Gene Regulation

Courses taught by UM faculty*

Phar 610	Neuropharmacology	3 cr
Phar 646	Neurotoxicology	2 cr
Phar 66y	Neurobiology of Disease	3 cr
Phar 66z	Structural Neurobiology	3 cr
Phar 615	Molecular Pharmacology	3 cr
Phar 621	Advanced Medicinal Chemistry	3 cr
Phar 626	Research Meth Bioc Pharmacol	3 cr
Phar 630	Pharmacogenetics	3 cr
Phar 641	Toxicology I	4 cr
Phar 642	Toxicology II	4 cr
Phar 643	Cellular and Molecular Toxicology	4 cr
Phar 644	Immunotoxicology	3 cr

* These courses would be made available to MSU students via the Access Grid-Node

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on an "on demand" basis. Alternatively, an MSU student whose research required advanced training in neuropharmacology or neurotoxicology could arrange to spend a semester or more in residence at UM. Similarly, UM students who wish to pursue more extensive training in computational neuroscience, for example, would have the opportunity to spend one or more semesters in residence at MSU.

III. Additional requirements

- A. All doctoral students will complete 3 research lab rotations of approximately 8 weeks each during their first year in the program. Students will be strongly encouraged to rotate through laboratories at both campuses.
- B. All students will be required to serve as a Teaching Assistant for a minimum of 2 semesters.
- C. All students will be required to participate in a Current Research Literature seminar at least one semester each year.

FACULTY AND STAFF REQUIREMENTS**Faculty**

There are currently 14 MSU faculty in the Dept. of Cell Biology and Neuroscience who will be involved in the graduate program in Neuroscience (below).

Roger Bradley, Ph.D., Assistant Professor
 Alex Dimitrov, Ph.D., Assistant Professor
 Steven Eiger, Ph.D., Associate Professor
 Susan Gibson, M.S., Lecturer
 Charles Gray, Ph.D., Professor
 Thomas Hughes, Ph.D., Associate Professor
 Gwen Jacobs, Ph.D., Associate Professor and Head
 Frances Lefcort, Ph.D., Associate Professor
 Jim McMillan, Ph.D., Professor
 Christa Merzdorf, Ph.D., Assistant Professor
 John Miller, Ph.D., Professor
 Charles Paden, Ph.D., Professor
 Dwight Phillips, Ph.D., Professor
 Anne Rusoff, Ph.D., Associate Professor

In addition, the following 14 faculty at UM will participate in the collaborative program.

Steven Black, Associate Professor
 Richard J. Bridges, Professor
 Fernando Cardoza-Peleaz, Assistant Professor
 C. Sean Esslinger, Research Assistant Professor
 Charles L. Eyer, Professor
 John M. Gerdes, Associate Professor
 Mark L. Grimes, Associate Professor

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Craig A. Johnston, Associate Professor
Michael P. Kavanaugh, Associate Professor
Thomas B. Kuhn, Assistant Professor
Diana I. Lurie, Associate Professor
Keith K. Parker, Associate Professor
David J. Poulsen, Research Assistant Professor
Charles M. Thompson, Professor

No additional faculty hires are needed to implement the proposed program. Team teaching and rotation of assignments among the total of 28 faculty involved at the two institutions will make it possible to offer the new courses required for the program with no net reduction in faculty contributions to other undergraduate and graduate programs.

The 15-20 students anticipated to be enrolled in the graduate program at MSU will be mentored by 10 faculty with funded research programs. The substantial number of faculty who will participate in both mentoring and teaching provide a breadth of expertise that will allow the MSU-UM collaborative M.S./Ph.D. program to immediately establish itself as one of the premier neuroscience programs in the Northwest.

Staff

Staff who currently support the graduate program in Biological Sciences within CBN will be reassigned to the new Neuroscience program. These include approximately 0.2 secretarial FTE and 0.2 technical network support FTE. No additional staff are required to implement the Neuroscience graduate program.

FISCAL IMPACT**Enrollment and Student Support**

CBN currently has 3 M.S. and 9 Ph.D. students enrolled in the Biological Sciences graduate degree program. All of these students would be offered the opportunity to switch to the new Neuroscience degree program (except for any students that may graduate before its inception). Enrollment of an additional 2 or 3 Ph.D. students per year for the first 4 years of the new program is a realistic goal, and it is anticipated that between 15 and 20 Ph.D. students would be enrolled in the program at MSU from then on. Our intention is to offer an annual stipend of \$18,000 to all doctoral students enrolled in the program. Once the new program is established, CBN will offer the M.S. and Ph.D. degrees in Biological Sciences only in special cases. Teaching assistantships currently assigned to CBN students enrolled in the Biological Sciences doctoral program will be made available to students in the new Neuroscience program. Financial support is also available to CBN students from faculty research grants, departmental indirect cost returns, and on a competitive basis through the NSF funded graduate program in Complex Biological Systems and the EPSCoR Program. The ability to offer a true multidisciplinary graduate program in Neuroscience will enable MSU (and UM) to compete more effectively for additional graduate training grants in the future.

ITEM 122-2013-R0104**Costs and Revenues**

	2004 -2005	2005 -2006	2006 -2007
<i>Anticipated enrollment</i>			
From Biological Sciences	10		
New	2	3	3
TOTAL	12	15	18

Total enrollment is anticipated to vary between 15 and 20 students from 2007 on.

Expenditures

Student support (@18,000/FTE)			
GTA=s (10@9000/0.5FTE)	90,000	90,000	90,000
GRA=s	126,000	180,000	234,000
Staff (0.40 FTE), salary + benefits	9,920	10,317	10,729
Library support	2,500	2,600	2,700
GRAND TOTAL	228,420	282,917	337,429

Revenues

Shifted GTA's	90,000	90,000	90,000
Faculty Research grants, training grants, and departmental IDC's	138,420	192,917	247,429
GRAND TOTAL	228,420	282,917	337,429

RESOURCES AND PHYSICAL FACILITIES**Library Resources**

Neuroscience is an interdisciplinary science and as such, the library needs for this discipline are extremely diverse. The libraries at both MSU-Bozeman and UM are committed to providing electronic access to the majority of journals relevant to the field of neuroscience, and the advent of e-journal access provided by scientific publishing houses ensures that a wide-range of journals are available on both campuses. At MSU and UM these packages include Science Direct, The American Chemical Society, Annual Reviews, OVID, Blackwell-Synergy, Wiley Interscience, and Science. In addition, the MSU library has substantially expanded the availability of electronic publications in recent years, and now offers e-journal suites from Academic Press, Elsevier, Kluwer, JSTOR, and Nature. MSU also subscribes to the powerful Web of Science database offered by Science Citation Index, enabling full citation searching for virtually any neuroscience article. While neuroscience faculty will continue to work with the library staff in identifying areas where expanded access would be beneficial, no

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specific additions are required with respect to this proposal.

Laboratory, Equipment and Computer Resources

The scientific instrumentation available on both the MSU-Bozeman and UM campuses is extensive and comparable to most medical school departments. Laboratories and offices of CBN faculty are located on the 5th floor of Leon Johnson Hall and in the Center for Computational Biology in the basement of Lewis Hall. Shared research facilities include cell culture, confocal and electron microscopy, image analysis, and computational capabilities. These include a Leitz confocal microscope equipped for two-photon excitation, an optical recording workstation, an Origin 2000 minisupercomputer, a 32 processor/16 GB Beowulf cluster, and a high bandwidth Access Grid Node connected directly to the high speed MSU Internet 2 backbone. Much additional advanced instrumentation in the life sciences including mass spectroscopy and gene chip facilities are available on the MSU campus. These facilities provide outstanding support for graduate students at both the M.S. and Ph.D. levels, and no additional facilities or space are required at either campus to establish a graduate program in Neuroscience. A number of state-of-the art core facilities are also available to both faculty and students in the UM campus and include tissue culture, molecular modeling, histology, confocal microscopy and imaging, and both molecular genetics and proteomics core facilities located in the Skaggs building.

Montana Board of Regents of Higher Education

Minutes Regular Meeting

March 24-26, 2004

The University of Montana-Western
710 S. Atlantic
Dillon, MT 59725

These Minutes were approved unanimously by the Board of Regents at the May 19-21, 2004 meeting in Havre, MT

Academic Affairs Items

Administrative/Budget Items

Student Affairs Items

Consent Agenda

WEDNESDAY, MARCH 24, 2004

10:00 a.m. – 12:45 Budget Committee Meeting – Swysgood Technology Center Great Room

1:00 – 4:00 Shared Leadership for Economic Development: Joint meeting of the Board of Regents and Post-secondary Education Policy and Budget subcommittee – Swysgood Technology Center Great Room

THURSDAY, MARCH 25, 2004

The full Board convened at 7:30 a.m.

ROLL CALL

Roll Call indicated a quorum present.

Regents Present: Lynn Morrison-Hamilton, Vice Chair Christian Hur, Chairman John Mercer, Richard Roehm, Mark Semmens, Lila Taylor, Governor Judy Martz ex officio, and Superintendent of Public Instruction Linda McCulloch ex officio. Also present was Commissioner Sheila Stearns
Regents Absent: None

APPROVAL OF MINUTES

- Regent Roehm MOVED for APPROVAL of the Minutes of the January 15-16, 2004 Regular Meeting in Helena, MT.
- ✎ The Minutes were APPROVED unanimously as amended on a 7-0 vote.

Governor Judy Martz formally introduced the newest Regent, Mike Foster. She indicated he has been a teacher, legislator, commissioner of Labor and Industry, and her chief policy advisor. He currently works as the Director of Advocacy for St. Vincent's Hospital in Billings. She knows him to be a capable and very wise man.

Governor Martz thanked John Mercer and Sheila Stearns for their leadership roles in the Shared Leadership for Economic Development process, indicating that economic development has consistently been her top priority. She believes the Montana University System is a critical player in growing the economy and creating more good paying jobs. The system has incredible resources that should be leveraged in this effort. The Governor said she is excited that her office, the Legislature, the Board of Regents, Commissioner Stearns, and key leaders in the university system

have teamed up to move the economy ahead. She also thanked Senator Barkus for his leadership and support as the Chair of the Postsecondary Education Policy and Budget Subcommittee, which in partnership with the Board of Regents works to enhance the Montana economy.

Governor Martz commended the Board of Regents and Commissioner Stearns for appointing an independent panel to examine the problems with athletic budgets. She indicated students should not be asked to cover the deficit, and she hopes creative and innovative solutions come from this situation. The Governor also commended the efforts of the P-20 Committee to create a seamless transition through the entire educational system, and indicated her office would offer any needed help.

ACADEMIC AFFAIRS ITEMS

a. Report on Nursing Coordinating Group – Regent Roehm Agenda 2/26/04 Minutes 2/26/04

Regent Roehm reported on the efforts of the Nursing Coordinating Group, indicating that the Hospital Association is doing a survey across the state to identify the types and numbers of nurses. He expects to be able to give a report on the survey at the May meeting. He noted that Angie Grove from the Legislative Audit Committee will do a performance audit of the Montana University System, and will be targeting transfer issues. The Board welcomes her help. Her report will be submitted to the Legislative Audit Committee in the fall. The major choke point in the nursing programs is the clinical capacity. The large hospitals are saturated, and only a few have the broad variety of experience needed. Regent Hamilton thanked Regent Foster for participating and coordinating a conference call meeting with Shelby before he was officially a Regent. She also noted that beside the clinical capacity shortage, they are looking at the quality of the nursing programs. Deputy Commissioner Roger Barber indicated there is a concern that the LPNs want to upgrade their skills to make more money, but there is a great need for LPNs in health care. There is also a question of what makes a good clinical setting. Many graduates end up in rural health settings, and the State Board of Nursing did a study in Helena and will have a completed report by the end of March. It will help in determining what are good clinical settings. Another issue being worked out is a coordinated approval process of nursing programs. A draft process has been developed which will require the approval of both the State Board of Nursing and the Board of Regents. Historically, the State Board process has taken two years to approve new programs. With adoption of the new process, it could be done as quickly as in three to six months. Regent Semmens indicated he hoped the Nursing Coordinating group would not disband after presenting their recommendations. He believes this group needs to stay on top of the various issues that regularly come before the industry. Regent Roehm indicated he felt that no member of the group wanted to stop what they are doing. He thanked Roger Barber for getting in the middle of an issue that had been studied for years with no action being taken. Regent Foster noted the boom of technology that is happening in health care, and said it doesn't end with nursing. He emphasized the importance of the private sector and the Montana University System working together in the field of nursing, as they are in the area of economic development. He believes there will probably be more clinical settings made available and they will be quality. Regent Foster noted that there is a valid concern about the instructors in the nursing programs. He wants to pursue with the nursing group how the private sector can help with this issue. Roger Barber clarified that the survey being conducted focuses on many medical careers aside from doctors and pharmacists. A second group will identify a facilitator to help develop core programs for the LPN and RN programs. Regent Mercer said this is a classic example of shared leadership in action, and how the Board of Regents can make a difference. He stated it could expand to almost all the problems across the state. He requested that in future Agendas of the Board meetings, the items be identified with short lay titles for the benefit of the Board.

b. ITEM 122-1007-R0104 - Approval of Proposal to convert the option in Medical Assisting in the Associate of Applied Science degree in Medical Office Technology to an Associate of Applied Science degree in Medical Assisting in the Department of Health Professions; The University of Montana—Missoula (College of Technology) Summary

Regent Mercer asked for a recommendation on Item b. Regent Roehm expressed concern that it doesn't give specifics for the Regents to make quality decisions on resource allocations. He requested the exact costs and efforts that will go into these programs. Further, the efforts of the MUS should be committed to undergraduates.

Regent Hamilton MOVED for APPROVAL of Item b.

Regent Semmens recommended the Budget Committee work on a better format for presentation of resource allocations on all proposals from the campuses. He would like to see a logical flow of information, with revenues being shown first, and then expenditures. He noted that no tuition revenues were shown in this proposal, and there is no way to understand exactly what dollars are

coming in, and there should be a clear explanation of where funds are being reallocated from.

Roger Barber was able to obtain examples from other states of formats they use. He indicated he, Rod Sundsted and Laurie Neils would try to come up with a recommendation. The campuses also want guidance on exactly what information the Board wants. Roger Barber explained that some program costs are very difficult to segregate from other programs when there is a combination of existing programs already available. Regent Semmens asked if there was a tracking mechanism in OCHE that could look at the forecast and compare it to the actual outcome. Roger Barber indicated there is not, but programs are reviewed every five years for low enrollment or graduation rates. Regent Hamilton indicated she had looked at this proposal as an effort to update existing programs to make them more topical and attractive, and to better serve students needs. She reminded the Board they need to be clear on their intent, because that kind of management of programs needs to be done at a level other than the Board. Regent Mercer called for the question.

MOTION approved unanimously on 7-0 vote

Regent Mercer indicated that this presentation issue should also be applied to Administrative/Budget items.

- c. **ITEM 122-1008-R0104** - Proposal to Convert the Associate of Applied Science Program in Practical Nursing to a Certificate Program in Practical Nursing and to Offer an Associate of Science Degree Leading to Licensure as a Registered Nurse; The University of Montana-Missoula, College of Technology Summary

Regent Hamilton MOVED to TABLE Item c. pending completion of the Hospital Association survey and State Board of Nursing Clinical Capacity Study.

- d. **ITEM 122-1001-R0104** – Approval of Proposal to Offer a Doctorate of Philosophy degree in Anthropology, with specialization in Cultural Heritage Studies and Historical Anthropology in the Department of Anthropology; The University of Montana-Missoula Summary

Regent Roehm MOVED for APPROVAL of Item d. with comments

Regent Roehm asked how the system could take resources for a Ph.D program when there is a great need in the state for two-year education, work force development and a quality four-year education.

President Dennison explained the proposal was to establish a doctorate in cultural heritage, a niche program that fits the needs of the state. They had an independent reviewer from UN-Reno review the proposal and his report indicates that it takes advantage of the strengths of the department, and he fully supports it since it would provide opportunities for students who take the course. What is proposed will cost more for stipends for graduate assistants, with one being an allocation from the Provost's office, and the department will generate external funds for others. He noted this is also an opportunity to contribute to economic development in the state as shown in the letters of support. Regent Roehm indicated that every time he reads the AGB documents, they ask how many Ph.Ds are really needed. He believes the system is spending too much on doctorates when it should be focusing on work force development. He talked about documents being handed out at the meeting instead of being included with the Agenda and that it is impossible to assimilate the information in that brief time. He advised the campuses process their items early enough to have them included with the packets. President Dennison indicated they look at these issues every time they prepare a program proposal, and the faculty in these programs will also be teaching undergraduate courses. Regent Hur inquired about the \$75,000 in federal funds as to whether it was new for this proposal or was somehow tapped from another program. If it was tapped, he asked where it came from, why, and what detriment was caused by it. President Dennison indicated that external funds have designated goals. The proposals bring in the dollars that are used to implement them. He explained the only state allocation was the stipend from the Provost's office. Regent Hamilton asked if this proposal helps meet the Indian Education for All requirement, and if the move of a tenure faculty to an administrative role means he will be replaced with a teaching assistant at the undergraduate level. President Dennison indicated this proposal is related to what they are trying to do with Indian Education for All. It also assists in collaboration with the other departments on campus. Regent Semmens noted that the proposal indicates there are four positions available in Montana. After those are filled, he asked what sorts of things these graduates would be doing in this state. Dean Gerald Fetz indicated the Native American nations are controlling their own resources, one of those being cultural. Under NPS they can develop programs and they already have done so at the Blackfeet, Rocky Boy, Crow and Cheyenne. UM is intimately involved in training the individuals who will take over those programs. There are also many federal and state lands requiring historical preservation, and many of the federal land managers indicate their jobs are becoming more and

more complex, and they need to hire people with doctorates because that is what the 21st century requires.

MOTION approved UNANIMOUSLY on 7-0 vote

- e. ITEM 122-1003-R0104 - Approval of Proposal to Establish new Master of Science and Doctoral Degree programs in Neuroscience in the Department of Biomedical and Pharmaceutical Sciences of the School of Pharmacy and Allied Health Sciences in Collaboration with Montana State University-Bozeman; The University of Montana-Missoula (See Item 122-2013-R0104) Summary.

f. ITEM 122-2013-R0104 - Approval of Proposal to Establish new Master of Science and Doctoral degree programs in Neuroscience in Collaboration with the University of Montana; Montana State University-Bozeman (See ITEM 122-1003-R0104) Proposal Summary

● Regent Roehm MOVED APPROVAL of Items e. and f.

There was discussion on the funding, collaboration and accreditation of these items.

MOTION approved UNANIMOUSLY on 7-0 vote

- g. ITEM 122-1004-R0104 - Approval of Proposal to Offer a new Doctorate of Philosophy degree in Biomolecular Structure and Dynamics within the College of Arts and Sciences; The University of Montana-Missoula Summary.

● Regent Hamilton MOVED APPROVAL of Item g.

There was discussion on the funding of this item. Regent Mercer indicated this is the way to bring outside dollars into Montana through federal grants. Regent Hamilton sees this as an opportunity for Montana to grow its own by buying graduate students with federal dollars, and a number of those will convert to teaching faculty and have a direct impact on the quality of the program. Regent Mercer said this type of funding puts Montana in the position to outsmart the world, with both natural resources and brainpower, which is a clean industry.

MOTION approved UNANIMOUSLY on 7-0 vote

- h. ITEM 122-1009-R0104 - Approval of Proposal to offer an interdisciplinary Minor in Nonprofit Administration in the Department of Political Science; The University of Montana-Missoula Summary.

● Regent Roehm MOVED APPROVAL of Item h.

MOTION approved UNANIMOUSLY on 7-0 vote

- i. ITEM 122-1021-R0104 - Approval of Proposal to offer an interdisciplinary Master of Arts degree in Intercultural Youth and Family Development in the College of Arts and Sciences; The University of Montana-Missoula Summary.

● Regent Hamilton MOVED APPROVAL of Item i.

MOTION approved UNANIMOUSLY on 7-0 vote

- j. ITEM 122-2014-R0104 - Authorization to Establish a Minor in Military Studies; Montana State University-Bozeman Proposal Summary.

● Regent Roehm MOVED to DEFER Item j. to the May 20-21, 2004 meeting

- k. ITEM 122-2703-R0104 - Approval of Proposal to offer a Minor in International Studies in the College of Arts and Sciences; Montana State University-Billings Budget Summary.

● Regent Semmens MOVED APPROVAL of Item k.

MOTION approved UNANIMOUSLY on 7-0 vote

The meeting recessed for a 15 minute break and reconvened at 10:20 a.m.

- l. ITEM 122-1005-R0104 - Approval of Proposal to Establish the Montana Avian Science Center within the Division of Biological Sciences; The University of Montana-Missoula Summary.

● Regent Hamilton MOVED APPROVAL of Item l.

MOTION approved UNANIMOUSLY on 7-0 vote

- m. Proposal and motion to establish an Academic/Student Affairs Committee – Regent Roehm

● Regent Roehm MOVED to reestablish the Academic and Student Affairs Committee as a standing committee.

Roger Barber has been gathering information from other states on how they handle this issue. It was agreed that there are many big picture items relating to the Board meetings that need the same consideration, and it will take some time with the limited staff in the Commissioner's office to bring forth suggested solutions. The Academic/Student Affairs issue will be addressed first.

Regent Roehm AMENDED his motion to remove "as a standing committee", and requested the committee mirror the Budget Committee in overview activities, with the opportunity to make changes to the outlined description of the committee at the May, 2004 meeting

Regent Mercer stated he wanted the budget forms for both the Academic and Budget items solidified in the near future.

MOTION approved UNANIMOUSLY on 7-0 vote

n. Transfer Student Surveys - Roger Barber MSU MSU-B MSU-N MT Tech UM UM-W

Although the present survey report was not presented consistently throughout the system, the next round will contain common information with the option to supplement with additional information if the campuses are so inclined. The two-year colleges will also be included at that time. Roger Barber explained the two most common problems are how the information is used when the student arrives on campus, and if there is no credit for transfer from other campuses. The Legislative Audit Committee has authorized a transfer audit, and Angie Grove will be doing the audit of the campuses. The focus will be on system-wide policy and procedures, with nursing, engineering and business being included. A draft report is anticipated this fall. This is a good opportunity to delve deeper into these issues. Recommendations will not be made to the individual campuses, but she may be able to develop a list of best practices from the campuses.

END ACADEMIC AFFAIRS ITEMS

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CONSENT AGENDA

Staff Items:

- a. ITEM 122-100-R0304 – Staff; Office Commissioner of Higher Education
- b. ITEM 122-1000-R0304 - Staff; The University of Montana-Missoula
- c. ITEM 122-1009-R0304 - Authorization to Confer the Title of Professor Emeritus of Journalism upon Greg MacDonald; The University of Montana-Missoula
- d. ITEM 122-1500-R0304 - Staff; Montana Tech of The University of Montana
- e. ITEM 122-1500A-R0304 - Staff; Montana Bureau of Mines & Geology
- f. ITEM 122-1600-R0304 - Staff; The University of Montana-Western
- g. ITEM 122-1900-R0304 - Staff; The University of Montana-Helena College of Technology
- h. ITEM 122-2000-R0304 - Staff; Montana State University-Bozeman
- i. ITEM 122-2001-R0304 - Authorization to Confer the Title of Research Professor Emeritus of Microbiology upon Keith Cooksey; Montana State University-Bozeman
- j. ITEM 122-2002-R0304 - Authorization to Confer the Title of Professor Emeritus of Extension upon David Streufert; Montana State University-Bozeman
- k. ITEM 122-2003-R0304 - Authorization to Confer the Title of Professor Emeritus of Microbiology upon Clifford W. Bond; Montana State University-Bozeman
- l. ITEM 122-2300-R0304 - Staff; Agricultural Experiment Station
- m. ITEM 122-2400-R0304 - Staff; Cooperative Extension Service
- n. ITEM 122-2700-R0304 - Staff; Montana State University-Billings
- o. ITEM 122-2701-R0304 - Authorization to Confer the Title of Professor Emeritus of Communication and Theatre upon Professor Victoria Tait Coffman; Montana State University-Billings
- p. ITEM 122-2702-R0304 - Authorization to Confer the Title of Professor Emeritus of Educational Theory and Practice upon Professor Marlene LaCounte; Montana State University-Billings
- q. ITEM 122-2703-R0304 - Authorization to Confer the Title of Professor Emeritus of Philosophy upon Professor George A. Benedict; Montana State University-Billings
- r. ITEM 122-2800-R0304 - Staff; Montana State University-Northern

● Regent Hamilton MOVED APPROVAL of Items a. through r.

☑ MOTION approved UNANIMOUSLY on 7-0 vote

Labor Agreements/Other:

- a. ITEM 122-105-R0304 - Approval of collective bargaining agreement with AFSCME, Local 2235, Montana State University-Northern Memo Agreement
- b. ITEM 122-106-R0304 - Approval of collective bargaining agreement with Vocational-Technical Educators of Montana Memo Agreement
- c. ITEM 122-107-R0304 - Approval of memorandum of understanding with Montana University System Maintenance Painters Union Memo Agreement
- d. ITEM 122-108-R0304 - Approval of memorandum of understanding with Print, Publishing & Media Sector of the Communications Workers of America, Local 14740, & Graphic Communications International Union, Local 242-C Memo Agreement

● Regent Semmens MOVED APPROVAL of Items a. through d.

☑ MOTION approved UNANIMOUSLY on 7-0 vote

Academic Items:

- a. ITEM 122-102-R0304 – Perkins Quarterly Report – Arlene Parisot - Information Item Attachment
- b. Level I Memo

● No action was needed on Items a. and b.

Administrative / Budget Items:

- a. ITEM 122-101-R0304 – Revise Montana University System Honor Scholarship Program Memo
- b. ITEM 122-104-R0304 - Improving Efficiency by Streamlining Reporting Requirements Attachment 1 Attachment 2 Attachment 3 Attachment 4 Attachment 5 Attachment 6
- c. ITEM 122-301-R0304 - Budget Amendment – Fiscal Year 2004; Flathead Valley Community College
- d. ITEM 122-2705-R0304 - Authorization to Expend Student Computer Fee Allocation; Montana State University-Billings
- e. ITEM 122-1501-R0304 - Authorization to Replace Windows, Tuck-Point Brick Windowsills, and Repair/Refurbish Exterior Concrete Fenestrations and Roof Parapet Cap to the Petroleum Building; Montana Tech of the University of Montana Attachment
- f. ITEM 122-2706-R0304 - Authorization to Renovate Portions of Alterowitz Gymnasium; Montana State University-Billings Attachment

● Regent Semmens MOVED APPROVAL of Items a. through f.

☑ MOTION approved UNANIMOUSLY on 7-0 vote

The meeting recessed at 11:30 and the Board went directly into Executive Session.

The Board met for Lunch with Student Representatives at noon, followed by a meeting with Classified Staff

The full Board reconvened at 2:05 p.m.

Linda McCulloch arrived for the balance of the meeting. Representative Debbie Barrett was also present.

ADMINISTRATIVE/BUDGET ITEM

- a. The University of Montana Athletic Deficit Chronology.

Regent Mercer advised that a qualified panel had been assembled and they will gather facts regarding the UM Athletic deficit and present recommendations that will be implemented across the system. He cautioned not to undermine the work of the panel during the discussion today. President Dennison indicated the Question and Answer sheet in the Agenda had also been presented to the Panel. He gave a brief chronology of the events in the deficit, and the plan to eliminate it. He noted there is no fee or tuition increase related to the deficit elimination. He indicated they would try to find ways to reduce expenditures, and increase revenues. There may be

an increase in season tickets. President Dennison explained he did not make an announcement of the deficit at an earlier date because he did not have all the facts, and experience has shown him that what can be originally reported as a possible problem, may be no problem at all. Regent Semmens referred to the Question and Answer sheet, and noted several items were on controls, and it appears the controls were inadequate. He expects to see a strong focus on accounting and budget controls, and hopes that this is not used as a sweeping indictment of The University of Montana or the system. The test is not for infallibility but to deal with problems when they are found. President Dennison indicated they have already found some problems that will be changed. However, there were new problems that had never happened before, and issues that should have been addressed differently. There will be a different reporting hierarchy of the fiscal officer for some time. He indicated that there was no blame on the Foundation and its donors, since there was a separation between the two in regards to accounting. This made the situation more complex, and as already mentioned, there will be some changes made. Regent Mercer expressed his gratitude to the GSA for the help they give, and indicated they have a member on the panel. He asked President Dennison how often the revenues and expenditures are reviewed as they change almost daily.

President Dennison responded "weekly." He also noted that if any cost centers on campus that achieve savings want to allocate those savings to the deficit, his office would be glad to help them. He will have an outline of the specifics in the deficit reduction plan at either the May or July Board meeting, and it will include a cushion for any contingency. It will also include an outline of the monitoring process. Regent Mercer stated people are troubled by the wasteful spending issues, and he appreciates that will be taken care of. There is tremendous support for the athletic program, and he does not believe this issue has eroded that support as long as the System continues solving it in the current manner. The MUS has taken an extra step in asking others in the state to help solve the problem since the system may not be able to do it alone. He thanked President Dennison for the additional information he will provide, and for being fully open with the Panel.

b. Montana State University Athletic Deficit

President Gamble said that when he came forward with their deficits at previous meetings, he was going to try to establish a stable base budget. They are still working on their plan. He reported a \$300,000 one-time expenditure on the scoreboard, but there is a second part which is the persistent operating deficit of \$140,000 that may exist in athletics. This relates to what should be the stable base. They may have set the bar too low, and as they go into 2004 there are increases from injuries, insurance, etc. over what was projected. There are increased travel costs, fuel and accommodations causing some worsening of the operating deficit. Further, they hired a full time athletic director rather than an interim, and one full time person to work on budgets. Due to accreditation issues, it was also necessary to bring in a men's sport for gender equity, and those costs have caught up with them. Athletics is now required to meet monthly with the Vice President of Finance and Administration to go through the budget in detail. However, in the short run, it will be on a weekly basis.

Memo regarding Mandatory Fees

c. ITEM 122-1014-R0304 - Approval of Fee Increases/Decreases for AY 2004-2005 The University of Montana-Missoula Inventory of Fees

Regent Mercer indicated that all of the fees would be acted on at the May meeting, rather than this one. He asked what things the Board wanted flagged, and indicated the fees should be presented every two years with the tuition requests, rather than every year. Commissioner Stearns said she may have misled the CEOs because she told them they would have to be approved at this meeting. She asked if anyone knew if any of these fees did need to have action at this meeting. Rod Sundsted indicated he had expected the fees to be acted on at this meeting, so they could bring a full budget package back to the Board in May. The fees presented today are the more significant ones, and he hoped they could work them out at this meeting. Regent Roehm indicated he wanted to comment on the whole budget at one time. Regent Mercer indicated they would listen to proposals and comment, and then act in May. Regent Roehm indicated that some of the fees presented did not conform to the guidelines established by the Board in 2000. Some are up 8 to 11 percent. He asked either the Tuition Committee or the campuses to report at the May meeting on the impact of these fees. Some increases were held off for up to ten years due to the increases in the overall tuition costs. They now reach to 150% increase which is shocking to the Board and students. It was recommended that in the future, fees be brought forward every two years, with incremental increases, rather than being held back for a number of years. It was also suggested that a certification process be implemented on the campuses, with all units doing incremental increases that will be scrutinized on a regular basis. Regent Mercer recommended the Board provide global guidelines to the campuses for future increases.

The Board took a break at 3:30.
The Board reconvened at 4:00 p.m.

- d. ITEM 122-1502-R0304 - Authorization to Increase or Implement Fees; Montana Tech of The University of Montana Inventory of Fees

Chancellor Gilmore indicated the increases were submitted to the Student Senate and they gave unanimous approval, however when the vote went to the student body, they were all soundly defeated except for one. Also included was a fee of \$150.00 for LPNs in the clinical setting since they need to maintain a teaching ratio of 10:1. Regent Semmens indicated the nursing proposal had come before the Board relatively recently, and the Board had requested revenues and expenditures for the program, but he did not remember this \$150 requirement being brought to their attention. Susan Patton explained it was an error on her part, since there should have been a more accurate valuation of clinical costs. She made a calculation error. Chancellor Gilmore indicated he didn't believe this fee had been presented to the nursing students. The current students will not be affected, as they graduate in the summer. The students entering in Fall of 2004 will be affected.

- e. ITEM 122-1602-R0304 - Authorization to Increase Mandatory Fees, Miscellaneous and Course Fees for FY05; The University of Montana-Western Inventory of Fees

Interim Chancellor Karl Ulrich indicated all their proposed fees were reviewed and approved by the Student Senate.

- f. ITEM 122-1901-R0304 - Approval of Fee Increases/Decreases for AY 2004-2005 The University of Montana-Helena College of Technology Inventory of Fees

Dean Hoyle indicated they had no dissensions from the students or the Student Senate on their proposed fees.

- g. ITEM 122-2006-R0304 - Authorization to Increase Mandatory Fees, Miscellaneous and Course Fees, and Auxilliary Fees for FY05; Montana State University-Bozeman

President Gamble indicated the fees are first reviewed at the department level, followed by the Student Senate, and there were negotiations that changed or eliminated some. They were then presented to his office. Provost Dooley noted that two groups of fees had been flagged by OCHE. One was in technical education, where the students were consulted and supportive for equipment replacement and upgrades. There was also the necessary upgrade of the G.P.S. software which much be done every year, and is very costly.

- h. ITEM 122-2709-R0304 - Authorization to Increase Mandatory Fees, Miscellaneous and Course Fees, and Auxilliary Fees for FY05; Montana State University-Billings

Chancellor Sexton stated that the proposals are developed at the department level, taken to leadership, then the senate, followed by the student body. He pointed to two increases the Board should know about, one being the late registration fee, and the other the transcript fee.

- i. ITEM 122-2802-R0304 - Authorization to Increase Mandatory Fees, Miscellaneous and Course Fees, and Auxilliary Fees for FY05; Montana State University-Northern Inventory of Fees

Chancellor Capdeville noted they present all of their fees to the Student Senate. They are all straightforward, but he wanted to remove Metals 148 and 149 from their inventory.

- j. ITEM 122-2851-R0304 - Authorization to Increase Mandatory Fees, Miscellaneous and Course Fees for FY05; Montana State University-Great Falls Inventory of Fees Student Letter

Dean Moe said they have no huge increases, but they need accessibility in Great Falls. The students on the Tech Committee made the decision on the e-mail fee, then it was approved by the leadership team, and finally Student Senate approved it. There is a mistake in their letter of approval. Where it shows 13% increase, it should be 12%. Regent Mercer asked if the Board wanted to set broad boundaries at that time, or take it up on Friday. Since Robert Durringer had bonding people present on their bond item, it was agreed to take that item up next, and to return to the fees on Friday after Student Affairs. Regent Mercer requested that anyone with ideas for the fees address the CHE staff.

- l. ITEM 122-1015-R0304 – Authorization to Proceed to issue Series I 2004 Bonds for Refunding and New Money Issue; The University of Montana-Missoula Attachment 1 Attachment 2 Attachment 3 Attachment 4 Attachment 5 Attachment 6 Attachment 7

Regent Hur MOVED APPROVAL of Item l.

Regent Semmens recused himself from the vote on this item due to conflict of interest. Craig Jones, D.A. Davidson staff member, answered questions on the advisability of this item. There will be large savings accorded to the campus through the favorable interest rate at this time, and the improvement to the building will also generate many more dollars from research grants. Robert Durringer handed out a list of deferred maintenance items that will be addressed, how the appropriations are going and what the future shows. O&M will not be requested from the State, since research should be paying for itself through the grants.

 MOTION approved UNANIMOUSLY on 6-0 vote with Regent Semmens abstaining

The meeting recessed at 5:25 p.m.

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FRIDAY, MARCH 26, 2004

The Board reconvened at 8:25 a.m.

STUDENT AFFAIRS ITEMS

a. Student Reports (30 Minutes)

Please see attached Reports and Student Resolutions

b. ITEM 122-110-R0304 – Amend Policy 940.24 MontPirg – Regent Hamilton

 Regent Hamilton MOVED for APPROVAL of Item b.

Regent Hamilton noted that the students had done a marvelous job of reaching a compromise on this item as requested by the Board. She pointed out it permits UM to continue with MontPirg, and the other campuses can do what they want. MontPIRG has many programs it is working on such as solid waste and recycling, privacy, tenant-landlord issues, broad conservation issues, clean affordable energy, as well as many others. The opportunities offered students are endless and exciting. She said the PIRGS have been lightning rods for years, especially when their issues are not represented by moneyed groups. She believes there should be permissive guidelines for student groups for consistency and accountability. Because of the long tradition of MontPIRG at UM, she encouraged the Board to support the compromise. Matt Singer, sophomore at UM indicated the students have spoken clearly, and they endorse this policy. The group helps create strong citizens. The Supreme Court has recognized these groups as independent student, non-partisan groups. Internships which are available only through MontPIRG have been used this year to earn 105 credits at UM. Last November they gave two proposals to the Board, one system-wide, and the other UM only. At that meeting, the Board requested a better proposal. The new proposal gives ASUM authority, limits it to UM, and maintains a neutral viewpoint, choice, equality, and local control. Following the controversy over this policy, 1100 more students have joined MontPIRG in the last few weeks.


The following students spoke in support of the compromise proposal:

Vincent Pavlish Student Senator	Aaron Flint President ASUM
Casey Morton Junior	Cody James Pope
Gail Price Vice President ASUM	Jace Christianson Junior
Alex Roberts Sophomore	Kimberly Kappas Student Senator
Denver Henderson Sophomore	Math Singer Senior
Chris Cisneros Junior, Student Senator	

The following students spoke against adoption of the compromise proposal:

Dustin Cross former Senator	Jack Eaton
Will Hulz Student Senator	Dustin Frost
Emily Jones Student Senator	

Regent Semmens thanked the students, indicating he supports the policy but proposed one amendment. He indicated there are clear benefits from the experience gained through these opportunities, which are distinct from funded student activities, and the system is founded on a combination of mandatory and voluntary levels of fees. This has worked for more than 20 years, and there are many supporters for this compromise and for MontPIRG. This is a good faith issue, since the Board asked the student leaders to go back and develop a compromise and they have done that.

 Regent Semmens MOVED to AMEND Item 1 from "Montana University System" students to read "The University of Montana-Missoula" students

 Regent Hamilton accepted the amendment.

 Item b. was APPROVED as amended on a 6-1 vote with Regent Roehm dissenting.

The Board took a ten-minute break.

The Board reconvened at 10:40 a.m.

c. ITEM 122-103-R0304 – Repeal of Policy 940.24 – Collection and Remittance of Fees for

Student, Non-profit and Non-partisan organization; The University of Montana-Missoula --
Regent Roehm Letter from Students

Regent Roehm MOVED to RESCIND Policy 940.24 as just amended.

Jake Eaton supported the motion stating it is a fee policy, not a MontPIRG policy. Matt Singer told the Board they had made a good decision on item b., stating they had turned in a lemon for a new car. He didn't know why they would consider trading that new car in for nothing. Gail Price stated the processes in the policy were not detailed in order to prevent wrangling over them when circumstances change. It is overseen by President Dennison, and is not left altogether in the hands of students. Aaron Flint requested the Board to please keep the policy they had just passed. Vincent Pavlish believed it would be difficult for a small faction to take over, but this sounds like a charge to reconsider. Emily Jones on behalf of Forward Montana urged the Board to adopt this item. Matt Singer indicated he was disappointed that Forward Montana now supports the repeal, since they wanted the student government to work hard to open the policy up to more groups. He believes they lived up to their half of the bargain, while Forward Montana walked away from the table.

Item c. was APPROVED on a 5-2 vote with Regents Hamilton and Semmens dissenting.

d. Draft Letter to Congressional Delegation – Discussion Item – Student Regent Hur
Regent Roehm requested the students be sure the details listed in their letter were accurate. Further, he requested they work with Commissioner Stearns to edit the letter. Regent Hur indicated the students should bring the corrected letter back to the May 20-21, 2004 meeting.

Open Forum for Public Input on MONTANA UNIVERSITY SYSTEM ISSUES

MCA 2-3-103. Public participation ...The agenda for a meeting, as defined in 2-3-202, must include an item allowing public comment on any public matter that is not on the agenda of the meeting and that is within the jurisdiction of the agency conducting the meeting. However, the agency may not take action on any matter discussed unless specific notice of that matter is included on an agenda and public comment has been allowed on that matter...

Senator Butcher spoke about the lack of full transfer of credits between units of the MUS.

Regent Mercer indicated he had received a call from a mother whose daughter had been raped, and she asked him to bring a public letter to the Board. He would not read the letter publicly, but publicly handed it to the Board with all names blacked out. President Dennison indicated he would be writing a response to the Commissioner which he would make available to the mother and the Board.

Regent Mercer asked the Commissioner and Chief Legal Counsel for help in determining the role of the Board in connection with problems raised about community colleges.

ADMINISTRATIVE/BUDGET ITEM continued

Memo regarding Mandatory Fees

- c. ITEM 122-1014-R0304 - Approval of Fee Increases/Decreases for AY 2004-2005 The University of Montana-Missoula Inventory of Fees
- d. ITEM 122-1502-R0304 - Authorization to Increase or Implement Fees; Montana Tech of The University of Montana Inventory of Fees
- e. ITEM 122-1602-R0304 - Authorization to Increase Mandatory Fees, Miscellaneous and Course Fees for FY05; The University of Montana-Western Inventory of Fees
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- g. ITEM 122-2006-R0304 - Authorization to Increase Mandatory Fees, Miscellaneous and Course Fees, and Auxillary Fees for FY05; Montana State University-Bozeman
- h. ITEM 122-2709-R0304 - Authorization to Increase Mandatory Fees, Miscellaneous and Course Fees, and Auxillary Fees for FY05; Montana State University-Billings
- i. ITEM 122-2802-R0304 - Authorization to Increase Mandatory Fees, Miscellaneous and Course Fees, and Auxillary Fees for FY05; Montana State University-Northern Inventory of Fees
- j. ITEM 122-2851-R0304 - Authorization to Increase Mandatory Fees, Miscellaneous and Course Fees for FY05; Montana State University-Great Falls Inventory of Fees Student Letter

Regent Mercer stated that no action would be taken on the above items at this meeting, but at the

May meeting. Further, he recommended looking at mandatory fees every two years with the tuition instead of every year, unless there are new fees. Rod Sundsted referred to the Task Force on Fees report in which one recommendation was for an internal audit every two years, giving the balance, and structure for student input. This is the first year for the report. He is hopeful it will provide some guidance, and stated the CHE staff don't have the time to go out and look at each fee and fund balance. Mr. Sundsted expressed concern over the nursing fee of \$150, and said it should be removed. He noted also the fees set by policy need to be removed, those being the fees for transcripts and late registration. The software replacement fee at Billings has increased dramatically in three years, and he stated the benefits accrue to business and the community, as well as students. The most difficult for him was the graduation fee at Bozeman. Mr. Sundsted recommended capping building fees at 4.25 percent. Regent Mercer also wanted to see the building fee capped at 4.25%. Regent Semmens addressed the process of student input for fees in particular classes. He asked if the \$150 LPN fee was really necessary, and stated he wanted to hear from the students on that fee. He noted the campuses are indicating these fees are truing up the costs. He wants them to come to the May meeting with detailed information on fees that actually match the cost, and those that don't match the cost (and the reason, i.e., no change in many years, inflation, etc.) so the Board will be able to understand where the fees were and why, when they are increased the next time. Regent Roehm encouraged bringing the fees forward every two years with the tuition, and also advised a gradual increase. Regent Mercer asked if the campuses should present these items in May as they have proposed them today, subject to amendment; or as outlined by the Board and Rod Sundsted today, to rein in the increases and present amendments to increase more that could be considered. Regent Semmens indicated they should use the existing fees as the base. They need to do an internal scrutiny to see if they are true to costs, and urge they work with Rod Sundsted to come up with a joint proposal. Regent Foster requested Rod Sundsted provide the Board with his memo outlining his recommendations of today.

- k. ITEM 122-109-R0304 – Amend Policy 901.9 Campus Affiliated Foundations

Item k. was deferred to the May 20-21, 2004 meeting.

- m. ITEM 122-1010-R0304 - Planning for New Futures Park; The University of Montana-Missoula

Regent Hur MOVED for APPROVAL of Item m.

Item m. was APPROVED unanimously on 7-0 vote.

- n. ITEM 122-2004-R0304 - Authorization to Enter into a Time-limited Access License with Dick Clotfelter, Stephan Forte, and Casey Tolliver for use of the Museum of the Rockies Entry Drive; Montana State University-Bozeman Attachment 1 Attachment 2

Regent Semmens MOVED for APPROVAL of Item n.

Item n. was APPROVED unanimously on 7-0 vote.

- o. ITEM 122-2005-R0304 - Authorization to Construct a New Chemistry/Biochemistry Research Laboratory Facility through a Sale of Bonds, to Which Federal Grant & Contracts F&A Revenues will be Pledged; Montana State University-Bozeman Attachment

Regent Mercer indicated the Governor's Office had some problems with this item. He requested the campus to work with the Governor's Office before the Board takes action. President Gamble noted it does require the Governor's approval to move ahead. The initial concern of the Governor's Office was for O&M on this project. Provost Dooley reported this has been on their highest priority list since the 1980s, and has been number one since 2001. This department is the most productive on campus, second only to the math department in credit hours taught. They have obtained grants and contracts this year of \$193,000,000. MSU is at risk of losing their best faculty, but with the planned improvements those faculty would be retained, and others would come that would bring millions of dollars more in grants and contracts. This department has an enormous impact on economic development, with patents, start-ups, and helping the local technology and biotech industry. Regent Mercer recommended they put together all of this information to fit on one page, front and back to present to the Governor and to the Board.

- p. ~~ITEM 122-2704-R0304 - Authorization to Purchase Real Property (68 Mountain View); Montana State University-Billings~~

Item p. was pulled from the Agenda by the campus.

- q. ITEM 122-1503-R0304 - Authorization to Sell 12.694 Acres of Land in Butte Industrial Park; Montana Tech of The University of Montana Attachment

Regent Hur MOVED for APPROVAL of Item q.

Item q. was APPROVED unanimously on 7-0 vote.

- r. Addition of 1 FTE position to handle Communications / Marketing / Public Affairs in OCHE.

Draft Position Description will be available at the meeting.

The Board requested this item be held over to the May 20-21, 2004 meeting to allow the Commissioner to do a complete study of the staffing needs in her office.

s. Update on University Land Grant Administrative Assessments – LeRoy Schramm
Chief Legal Counsel LeRoy Schramm gave an update to the Board on these assessments, indicating that DNRC skims \$500,000 a year from the income. The Constitution states that these funds are inviolate. There are political downsides to pursuing this, but the MUS has legal standing. Last year the Board requested OCHE obtain a second opinion to bolster the arguments, and the Commissioner sent a letter to the Legislative leadership requesting they ask their legal counsel to weigh in on this issue. With no response, Counsel Schramm called Greg Petesch to ask when he thought he would have it ready. Mr. Petesch indicated he had never been asked to do it. It now appears the opinion will be available for the May meeting. However, LeRoy Schramm indicated this would not end the issue, but rather give insight and a possible strategy. He advised the Board that in May they will have before them a range of options, and they should be prepared for an extended discussion. Over the years, more than \$6,000,000 has been taken from the funds.

t. Progress report on the Employee's Salary Survey – Rod Sundsted / Regent Roehm

Regent Semmens indicated the Budget Committee has endorsed a structure that will provide good information. The timing is unclear, but they expect to have something for the Board by the July or September meeting.

COMMISSIONER'S REPORT

DISCUSSION WITH CAMPUS CEOs

Please See Attached Reports

Regent Mercer indicated that since the meeting had run so long, there would be no discussion with the Commissioner and CEOs. However, this portion of the meeting will be put at the top of the Agenda at the May 20-21, 2004 meeting. He commended the Board for granting so much time to the students for their testimony. He advised the Board that Bob Anez of the Associated Press had requested a press conference with the entire Board immediately following the meeting. President Dennison announced he had just been informed that Lauren Caldwell, a junior at The University of Montana-Missoula had been named a 2004 Truman Scholar.

With no further business to come before the Board, the meeting adjourned at 12:25 p.m.

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Montana State University**ACADEMIC REVIEW****Departments**

Microbiology
Cell Biology and Neuroscience (CBN)
Veterinary Molecular Biology (VMB)—2nd team only

ReviewersTeam 1

Dr. James Patrick (Retired)
Senior Vice President & Dean of Research
Baylor College of Medicine

Dr. Stan Falkow
Professor of Microbiology & Immunology
Geographic Medicine, Infectious Diseases
Stanford University School of Medicine

Team 2

Dr. Richard Goodman
Director Vollum Institute
Oregon Health & Science University

Dr. Samuel I. Miller
Professor of Medicine and Microbiology
University of Washington

Process

The review was conducted in a series of two visits. The first team (Falkow and Patrick) visited campus April 28 and 29. The focus of this interview was on the Department of Microbiology and the Department of Cell Biology and Neuroscience. The reviewers were provided with self study documents prepared by both departments. During the visit, the team met with faculty, staff and students representing these departments, plus other aligned centers and departments, to listen to their opinions and concerns. The reviewers also met with administration officials. The self studies and interviews covered experimental research, graduate education, undergraduate education, and administrative issues as well as some institutional issues. One of the issues raised by the first visit was the significant role of the Department of Veterinary Molecular Biology in conducting research closely aligned with that being conducted

in the Department of Microbiology. The team therefore recommended of that VMB be included on the itinerary for the second team. The head of VMB was asked to prepare a brief self study for the reviewers. The second team (Goodman and Miller) visited the campus on August 25 and 26 and met with all three departments plus other related constituencies. The following report represents a consensus report by the full team.

Department of Microbiology

Introduction

The first team's review of the Department of Microbiology included two faculty members with joint appointments whose primary interest was biofilm research. They also met with two faculty members from the Department of Veterinary Molecular Biology (VMB). As stated above, they recognized that by not meeting with the full faculty from VMB, their view lacked a firsthand assessment of a substantial portion of the microbiology expertise on the campus. The second team met directly with the VMB faculty in addition to the other constituencies. Both teams were presented with data about the broader opportunities in medical microbiology represented by VMB including their WWAMI activities, graduate program and research funding. Similarly, we learned that a significant amount of research and graduate education takes place in laboratories located in other Colleges of the University who focus on bacterial biofilms and bacterial extremophiles. It was apparent to us that these additional activities represent a substantial portion of the total microbiology presence on the campus and are a real and major asset to the institution.

It was clear from our review that there was little communication between administration, department chairs, and faculty of different departments. This has led to a situation in which few direct facts are communicated, rumors are rampant, and the ability to work cooperatively is hampered. This may have led to the general atmosphere of anger, mistrust, and discouragement that the reviewers experienced from the various departments. In some cases, with feedback from the reviewers, the various departments became more optimistic and positive. Greater communication between the various units in encouraged during this period of instability and uncertainty surrounding the status of the microbiology department.

Conclusions

The Department of Microbiology currently lacks a permanent Chair and there is a decided lack of vision at all levels of the institution about how to proceed to restructure and rejuvenate this Department. Overall, the faculty appear discouraged, angry, and bitter. The senior faculty appears tired and discouraged; and while nominally funded are not recently productive. The junior faculty are poorly funded and rightly concerned about their prospects for tenure and their academic futures. They received little career guidance. The research faculty is currently unproductive and curiously appears unaware of this fact. The teaching staff are highly dedicated individuals who appear to be hardworking and deeply committed to their teaching but are in need of programmatic leadership beyond that found on the American Society for Microbiology website. Microbiology is an important engine of discovery for important research programs in medical and environmental microbiology but none are based in the department.

The graduate students seem to have little cohesion probably because while they are in the Department of Microbiology they work in the labs of faculty located in other departments. Sadly, with a few notable exceptions, they did not appear excited by their projects and revealed to us that they often chose labs and were often given projects solely on the basis of advisor funding.

The undergraduates we met were extraordinary. They were vocal, engaged and enthusiastic, but unchallenged. Upon our questioning they said they rarely found their courses to require much effort and as a group they requested more demanding upper and lower division courses, more focus on the current literature and better access to a research experience. **Our meeting with the undergraduates included both Microbiology and Department of Cell Biology and Neurobiology majors and was the highlight of our visit!**

The research staff appear to work diligently and are genuinely dedicated to provide the best and most modern technologies to scientists across the university. They are a wonderful university resource but they need help. They have no institutional organization or infra-structure that permits them to operate and maintain the facilities from user fees and the availability of cores seems to be haphazardly spread by word of mouth.

Recommendations

The first team was deeply concerned that The Department of Microbiology planned to proceed with the recruitment of new faculty even

as the Chair was packing to depart. They immediately recommended that this recruiting activity be stopped.

It is critical that a new chair be recruited to Microbiology who can provide a clear vision of how to both shape the academic direction of the department into the future and to spearhead the selection of new young microbiology faculty to fulfill this vision. However, it may be difficult without large resources to recruit a chair to the department in its current state.

There are no training grants in the department, nor program project or center grants and little evidence of productive interaction between or among the large cadre of microbiologists on the MSU campus. The diversity of research interests, the reach of microbiology across disciplines, the geographical location of MSU in a particularly 'microbe rich' part of the USA, as well as the current emphasis at the NIH on multidisciplinary interactions provides your university with a marvelous opportunity to build a world class Microbiology enterprise.

The thermophile group and the biofilm group appear well embedded in their academic units in different university colleges. However, there are members of the Department of Veterinary Molecular Biology who stated they wanted a better association with the Department of Microbiology. Moreover, VBM has nearly as many graduate students as the Department of Microbiology. We embrace the view that it important to retain a Department of Microbiology at MSU because of its potential for greatness. We suggest that one immediate step might be to reform the Department of Microbiology to include the current VMB faculty members. This Department should be housed in a single research space, and would be responsible for WWAMI teaching responsibilities and would also, be responsible for and coordinate the upper and lower division undergraduate education, and should provide the academic and physical home for graduate students. This newly formed Department should be charged with acquisition of NIH training grants and multi-investigator grants to provide both research opportunities and the funds to build the research infrastructure. The search for a new Chair would of necessity focus on this new strength which could be broadly construed as pathogen-host interactions. Yet, this focus still permits the inclusion of microbiologists across the campus.

We view this fusion to form a new Department as an opportunity to reestablish the presence of microbiology on the MSU campus and to begin to realize the tremendous value of the current microbiology diaspora. It is a critical time for the survival of Microbiology as a discipline on the MSU campus. There is likely only a relatively small window of time to secure

success. If the survival of Microbiology is seen by the institution as a priority as we do, it will require forceful university action that will undoubtedly require an investment of resources.

Department of Cell Biology and Neuroscience

Introduction

The department of Cell Biology and Neuroscience currently is highly functioning and successful with a research focus and a major successful undergraduate teaching program funded through HHMI. The department is small and its ranks are thin for its important teaching mission.

The Department of Cell Biology and Neuroscience (CBN) was recently split off from a larger department that included ecology. The division of resources was not equitable. The current CBN chair has had the job for a short time. He is burdened with the responsibility for both a massive undergraduate teaching responsibility and the great majority of the teaching in the WWAMI program. The situation is both inequitable and unstable. It is totally inconsistent with the role biology, and particularly neuroscience, will play in the coming decades. Biology and the medical sciences are changing very quickly and any institution that intends to teach and compete in this arena in the coming years must build the foundation today.

Conclusions

The department is fortunate to have a cadre of excellent faculty many of whom are outstanding scientists and appear to be excellent teachers. The senior faculty are in general well established with reasonable funding. There are not many junior faculty in the department; this is a weakness. Moreover, there appears to be little mentoring available for these individuals. The few graduate students and postdoctoral scholars we met with appeared satisfied with their research and education experiences. Yet, we did not sense in them the level of enthusiasm or commitment seen in other comparable academic departments.

Recommendations

The department seems to be unique in that it has a very large number of declared majors, a substantial portion of the WWAMI teaching

responsibilities but no corresponding infrastructure. We saw no department office space, no department meeting or seminar rooms and in general no physical focus for the academic life of the faculty staff and students. Every effort should be made to bring faculty into contiguous space. This will be cost effective because it is the proximity that drives interactions, collaborations and multi-investigator grants. It is also the case that in most institutions collaborations are heavily driven by graduate students. At MSU, the graduate student population is dispersed. Indeed, some students met each other for the first time during our interview. It is unfortunate that we found little indication that the current Department of Cell Biology and Neuroscience graduate and postdoctoral students work in their labs beyond a normal work day. This is an ethic that evolves from groups of students and it does not happen when they never see one another. It is also a reflection of the expectations of the faculty that mentors these students.

The departmental teaching responsibilities are huge and in some cases not well justified. For example, there appears to be no good rationale for teaching human gross anatomy to undergraduates prior to instruction in more fundamental areas of developmental biology and genetics. Yet, we note the success rate for admission to medical school of the pre-professional school undergraduate majors is outstanding and a real tribute to the quality of education that they receive. This is less true of the non-professional school majors who aspire to careers in discovery science. There are only three neuroscience courses in the department and no honors courses. The pre-professional students should have a separate track with dedicated teachers and mentors leaving other faculty free to provide challenging honors courses and a real research experience.

We fear that the faculty are burdened beyond reason. The recruitment of the new anatomy teacher is crucial and must be brought to a successful conclusion. On the other hand, we are concerned that the department has initiated other recruiting activities that are opportunistic and might provide a short-term solution by attracting senior, currently well funded individuals to the faculty. In our judgment, this may not be in the best long term interest of the department. In our view, unless a truly outstanding opportunity arises, recruitment at the Professor level is not strategic and should be discouraged. Rather, we believe the department needs the resources to recruit at least three additional junior level faculty as well as funds to replace faculty who may leave or retire. The funds and other resources must be adequate to provide startup packages that offer new faculty some hope of success. These new faculty must be brought into a department that has a physical focus, a place for the kinds of academic interactions with colleagues and students that make science and

education successful. The current faculty need to have the time and make the effort to mentor these new faculty. The current faculty is split between two locations which makes these interactions difficult and adds to the staffing problem.

There is great opportunity across the University for Interactions among biologists that could result in training grants and the kind of multi-investigator grants that provide funding for infrastructure and core facilities but this requires time. We note that the entire faculty and particularly the Chair are overloaded with teaching and other responsibilities. Recruitment of junior faculty would distribute some of the load and release time to acquire funding.

The MSU administration should realize that, as is the case for Microbiology, there is a huge opportunity for additional funding centered in the Department of Cell Biology and Neuroscience. The NIH is dedicated to interdisciplinary grants with multiple investigators. These grants provide not just research support but administrative and core support as well as overhead and are a real asset to an institution. Collaborations between institutions are also favored. However, these kinds of applications require effort to build bridges, create compelling programs, and prepare what are usually more complex applications. An investment in faculty to free time for these efforts could provide an excellent return, particularly given the strength of the neuroscience faculty at MSU. Likewise, funds for a seminar program that focused on scientists from outside MSU would be a powerful means of keeping the faculty informed and provide a mechanism to foster interactions among faculty at MSU.

The department has requested a name change, but the reviewers favored a name change to biology or molecular biology over a change to medical sciences as this does not really describe the departmental mission or focus.

Department of Veterinary Molecular Biology (2nd team only)

Overview

The department of Veterinary Molecular Biology is an energetic department with high standards and a strong research base with significant funding. The faculty are engaged, cooperative, and successful. The department is largely a medical microbiology department despite its name and is largely an infectious diseases and immunology department. Its mission is research and it is succeeding. The faculty benefit from the hard money that allows 90% salary funding but complements this with successful grant writing.

Institutional Issues

During our meetings with groups and individuals several more general institutional issue were revealed.

Effort and Salary

Many faculty described themselves as having a specified allocation of effort to research, education and service and many said they did not have to budget salary for effort on grants. Both these are important issues. Allocation of effort for research in the absence of salary support from grants constitutes cost sharing and the total expense becomes part of the denominator when the indirect cost rate is calculated. There should be no salary expense dedicated to research without external support. Failure to include salary support on grants simply forgoes a source of money as well as contributing to cost sharing. No grant should be submitted without salary commensurate with effort.

Core Facilities

We re-iterate that there are several core facilities across the university for which we saw no policy for fees, operating costs, or equipment replacement. The core facilities should be centralized in the research office and budgets established that will allow the cores to support themselves and replenish supplies and equipment. A published set of fees allows investigators to include the fees on their grants and a published set of core descriptions allows investigators to include the cores on their grants as technologies they do not have to establish or duplicate themselves.

Graduate Students

Graduate students appear to choose laboratory training based on funding rather than creative interest. Institutional training grants would go far to helping students find the most appropriate fit and would likely improve both the quantity and quality of research and graduate education. The institution, probably in the Division of Graduate Education represents the foundation for preparing training grants including the necessary institutional information about number of applicants and their fates, the minority recruitment efforts, university and departmental descriptions and letters of support. Based on data we saw, the number of graduate student applicants and their success rate is adequate for training grants. However, a concerted institutional effort is needed to provide tried and tested 'boilerplate' to secure successful training grant funding...

Institutional Identification

In all our discussions we failed to detect a sense of institutional loyalty. This is disturbing. Faculty and students tended to describe themselves as occupants of a building or members of a department or laboratory but not as Montana State University colleagues. There may be several reasons for this but the separation of departments into multiple locations fragmentary faculty interactions and most importantly the attendant fragmentation of graduate students markedly detracts from the academic experience and environment. All of these factors make it difficult for faculty and their students to participate collectively and productively to learn and to create new knowledge together. A major institutional effort to discontinue legacy space allocations and try to bring about logical faculty associations would provide a very important benefit especially to the postgraduate students and junior faculty.

**External Review
Department of Cell Biology and Neuroscience
Montana State University, Bozeman, Montana
May 11-12, 2015**

Overview

We begin with a brief summary of the strengths of the Department of Cell Biology and Neuroscience (CBN), its major achievements and “roadbumps” since the last review (2008), and challenges that present threats and several key opportunities for the future.

CBN has dedicated, productive, accomplished faculty who are impressively dedicated to the education and research missions of Montana State University (MSU). Since the time of the last review (2008) CBN faculty have raised ~\$39M in extramural grant funding. This is excellent productivity, and borders on outstanding, given the highly competitive and tightening funding climate during this entire period. The faculty have also published important, high-quality and high-impact reports during this period. However, total numbers of publications is modest (~69). The CBN faculty do not have adequate time or support to devote an appropriate effort to their research and capitalize on their creativity, excellence and success in securing grant funds. Further, CBN operates with a bare-bones staff and that fact imposes challenges that negatively impact faculty, students and staff. Another sign of the cracks in the current situation is the faltering graduate program. Many of the current “cracks” were noted in the previous review, but not addressed and have consequently grown and are likely to become irreparable unless their effective address becomes a high, immediate priority for MSU leadership.

CBN has benefited from its own devoted leadership, and the faculty who have generously served as Chairs. The current Chair, Dr. Frances Lefcort has done an exemplary job of leading the faculty in strategic planning of their undergrad curricula. Hard choices were made, prioritizing the undergrad education mission, but sadly at the cost of their graduate program. While we understand and support the choices made given the limited resources, we are nonetheless concerned about the trend that the lack of support is triggering. Dr. Lefcort also has visionary instincts and has made critical contributions that have led to the establishment of the Mental Health Research Initiative. It is also clear that she sets standards for interaction amongst faculty, staff and students that lead to a functional, productive, upbeat environment despite the numerous budgetary and staffing challenges encountered day-to-day.

The CBN budget has several pragmatic and logical disconnects. Two major examples are: (1) CBN majors have increased significantly with the increased MSU student body. However, the CBN budget has not grown in the face of the higher teaching load and concomitant increase in administrative and staff work. (2) Resource allocation should be tied to metrics that accurately reflect the teaching load. The current situation, using premed intake majors as an important metric, is problematic. The recent introduction of the University studies “premed undeclared” has led to an apparent decrease in the number of undergrads who start off in CBN. However, the actual number of CBN majors who graduate has increased. Since the number of graduates is a better reflection of the teaching load, this seems to be a better metric to use for assessing the resources and financial support that should be provided.

The entire MSU undergrad bioscience curriculum merits review and requires better integration across Departments within a school as well as across schools. Such integration could identify and resolve gaps and redundancies in the undergrad bioscience curricula and allow for a fair distribution of work load across Departments and schools. This would also clearly be of great benefit to students, and potentially mitigate the worrisome increase in the time to graduation metric.

Finally, the poor transparency in MSU leadership policies and practices hampers students and faculty in all schools. The IDC distribution scheme is a key example. The current scheme appears to be largely based on decade-old or older MOUs to certain individual PIs, but not others, and thus results in a highly unfair and uneven system. This issue roots a larger issue for Departments who, like CBN, have little to no budgetary flexibility. The University budget models merit a strong revamping that leads to fair and transparent distribution of funds that provide Departments some ability to invest in program building (seminar series, etc.) as well as to bridge graduate students and faculty research during temporary funding lapses.

1. Members (2) of Review Committee:

Jac Nickoloff, Ph.D., Professor and Head, Department of Environmental and Radiological Health Sciences, Colorado State University, Fort Collins, Colorado.

Angeles B. Ribera, Ph.D., Professor and Chair, Department of Physiology and Biophysics, University of Colorado School of Medicine (Anschutz Medical Campus), Aurora, Colorado.

2. Process

A) The review of the Department of Cell Biology and Neuroscience (CBN) occurred on site at the Bozeman Campus of Montana State University (MSU) on May 11-12, 2015. The external reviewers received a self-study report and a document describing the MSU Guidelines for Program Reviews ~ two months in advance of the site visit.

B) The two days had been organized in advance as a series of meetings with:

- Administration leaders (~~Provost Potvin~~ (see * below), Assistant Provost Larsen, College of Letters & Science Dean Nicol Rae, Graduate School Dean Karlene Hoo, Vice President of Research and Economic Development Renee Reijo Pera [also CBN Faculty]),
- Faculty Senate Chair Michael Reidy,
- CBN Department Head Frances Lefcort,
- CBN Faculty (Bradley, Eiger, Hughes, Kohout, Noudoost, Stowers), CBN Adjunct Faculty (McColley, Mergy, Taylor),
- CBN postdoctoral fellows, graduate students and undergraduate majors, and
- CBN Staff (Dunkel, Huttinga, Musgrave).
- WWAMI Director, Martin Teintze

The number of individuals at any one meeting totaled no more than six, including the external reviewers. *On the first day of the site visit, we were informed that Provost Potvin would not be attending the pre-scheduled meetings with the external review committee. The external reviewers were concerned that this might reflect lack of support for CBN on the part of the Provost and requested that Associate Provost

Ron Larsen inquire if there was any possibility of meeting with the Provost. She carved out 30 min for a meeting, and due to a 10 min overrun of the reviewers' previous meeting with Dean Rae of the College of Letters and Science, the meeting with Provost Potvin was only 20 mins.

C) The last external review of CBN occurred in 2008, in line with the University's requirement for such assessments every seven years. The review committee was provided with a copy of the 2008 review at the time of the on-site visit (May 11-12, 2015). Of note, despite the seven-year interim period, many of the conclusions and recommendations made here to the MSU Administration echo those made previously. During none of the meetings with Academic Administrative leaders was the 2008 review mentioned nor why its recommendations were not acted on. Associate Provost Larsen did indicate that the current Provost has a priority to pay external reviews their appropriate and merited attention. This is an additional reason why we had hoped to have a longer discussion with the Provost.

3. Scope of Review

A) For the period since the 2008 review, the external reviewers considered:

- a) the undergraduate teaching efforts, including those related to the CBN undergraduate program as well as "service teaching",
- b) CBN involvement in WWAMI,
- c) Non tenure track faculty involvement in teaching programs,
- d) undergraduate research opportunities provided by CBN,
- e) graduate training program,
- f) undergraduate and graduate students' assessment of their educational and training programs,
- g) research programs of CBN faculty,
- h) CBN administrative staff responsibilities and adequacy of staff number,
- i) support provided by Administration for CBN undergraduate and graduate teaching/training programs
- j) support provided to CBN to protect faculty research time and promote productivity,
- k) CBN's process of self-assessment
- l) overall faculty morale.

B) Major Points:

i – Current status of CBN: For the 2013-2014 year, CBN had 12.7 Full Time Equivalent (FTE) Faculty, of which 69% (8.7 FTE) were tenure track (TT; Table 1 – Self-study). Of these 8.7 TT FTE, one is retiring at the end of this year (Miller), and two other are highly involved in WWAMI (Cusick full-time, Eiger 50%) limiting their availability to CBN undergraduate and graduate curricula. The remainder of the TT Faculty have active research programs, as documented by the publications listed in the Faculty CVs. The publications demonstrate that faculty are highly productive in terms of quality and impact. In view of this, it is not surprising that there is a total of ten currently active extramural grants (e.g., NIH, NSF, Whitehall) supporting on-going CBN faculty research. Of special note regarding recent awards, Associate Professor Merzdorf

currently holds an NSF career award, and Professor Gray received a McKnight Cognitive Disorders Award in 2013 (Faculty CVs – Self-Study). Documents shared after the site visit revealed that in the period 2008-2015, the faculty raised \$39M in grant funds. This is excellent productivity, and borders on outstanding, given the highly competitive and tightening funding climate during this entire period. As noted above, the faculty have published important, high-impact reports during this period - quality is extremely high, yet the total numbers of publications is modest (total number = 69) meaning that each publication cost ~\$500K, a number that is several fold higher than “NIH average” which is ~\$100K per publication. Granted there are several factors that influence the cost/publication, including the inherent costs of the work (e.g., animal work, especially non-human primate work, is quite costly and the CBN research portfolio is strongly skewed to animal research). The CBN grant portfolio also includes large training grants which tend to yield fewer manuscripts per dollar than R01s or similar. It therefore appears that CBN faculty are highly talented with regard to grant preparation, but their relatively low efficiency in turning grant dollars into manuscripts is of concern. It further appears that this outcome (high grant dollars, moderate publication rate) can be traced to the heavy teaching in undergraduate curriculum which involves a large number of CBN majors (>300) and very large “service teaching” role as CBN classes are taken by a large fraction of non-majors as well. ***We believe this model is not easy to sustain because of the challenging academic environment, which limits their ability to attract and retain top faculty; and because of the extremely tight funding climate in which continued grant support depends to a great deal on publication productivity.***

ii – CBN education and research programs: Despite numerous challenges stemming from both internal (MSU) as well as national (e.g., NIH) changes in funding paradigms, the Department Faculty remain deeply committed to providing a first-rate education to their undergraduate CBN majors as well as other students in the large “service” courses for which CBN has primary responsibility. For example, CBN has taken the lead in adjusting courses and topics covered to prepare undergraduates for the revised version of the MCAT. Despite inviting other Departments to do so collaboratively, CBN seems to be the pioneer in such efforts. ***Of note in this regard, 83% of CBN undergraduate who apply to medical, dental or other vocational programs are successful in securing a spot. This rate is especially impressive given the national average is <50%.*** In this regard, CBN’s deep level of involvement in WWAMI is prescient and provides an informed perspective to develop relevant course work for the pre-med undergraduate majors.

On-going CBN faculty research is in the area of neuroscience but spans a broad range within this discipline, ranging from fundamental mechanisms underlying structure of neuronal proteins to development of the nervous system and fundamental mechanisms underlying cognition. Despite this wide range of research interests, the faculty publications demonstrate collaborations on on-going work as well as new questions (e.g., evolution). Further, the CBN faculty are exceptionally entrepreneurial. Several have been involved in development of companies or patents (Gray, Hughes) as well as obtaining substantial extramural support (HHMI) for educational initiatives that have benefitted enormously MSU students with majors in any bioscience field, not just CBN.

Another laudatory quality of CBN faculty is their exemplary dedication to excellence in teaching. The faculty consistently receive teaching awards, and their publication lists include numerous articles concerning innovative teaching approaches. The receipt of several substantial HHMI awards to fund these innovative approaches is a testimony to their

excellence and dedication. The challenges in delivering the complex CBN undergraduate curriculum are many: First, the courses cover vast material in cell and molecular biology, molecular genetics, neuroscience, and cancer biology - in many academic institutions each of these fields is covered by individual departments with 15-20 faculty; to cover them in a single department with a small faculty is a major challenge indeed. To an extent, this challenge can be mitigated by improving curriculum integration across the college and the university so as to not duplicate effort and thereby maximize teaching effectiveness with limited faculty resources. Second, the CBN curriculum is teaching lab-intensive, and the labs are typically run by adjunct faculty that are not supported by TAs, nor do these lab courses receive much prep/take-down support so the same faculty running the labs are also doing these tasks that are typically handled by TAs.

Needless to say, success in both research and teaching requires much time, and this has been a central challenge for CBN. They have thoughtfully considered several options regarding how they can serve their large number of undergraduate majors, as well as non-majors that enroll in CBN "service" courses, while maintaining active research programs, given the small number of faculty. Several strategies have served them well, but the current situation is untenable and unsustainable. The major reason that they have been successful is their unusually high level of dedication to teaching and research missions of MSU. Other factors have also helped such as the addition of non TT (NTT) FTE positions to their faculty to help with the teaching loads associated with their "service" courses, that is undergraduate biomedical courses that largely serve non-CBN majors. Another strategy, one that is particularly alarming, is that due to lack of faculty time and adequate number, their graduate program has been largely ignored and does not have a formal course of study. ***Clearly, for CBN to continue to accomplish their missions, to the level of excellence that we understood the MSU Administration seeks, they will need significant additional resources, including an expansion of faculty by at least four, beyond those required to fill positions that opened due to departure or retirement. In addition, a stable, predictable operating budget that allows CBN to have a regular seminar series and host other events required to sustain a graduate program are of critical importance. Moreover, as noted above, the NTT FTEs are critical for much of the teaching, and a stable funding line for the Adjunct NTT faculty is necessary to ensure their continued involvement.*** These points are addressed further in the final sections of this report.

iii – CBN undergraduates: CBN succeeds due to the excellence and dedication of their faculty to excellence in both sides of their academic mission. As such, they serve as great ambassadors and deliverers of MSU's product – student education. Moreover, their "clients" – MSU undergraduate and graduate students - acknowledge the efforts and recognize the superior education and training that they receive due to the valiant efforts of CBN faculty. This was reinforced several times during the small group meetings that we had with undergraduate and graduate students as well as CBN faculty. It is clear that the CBN faculty take their responsibility to serve their clients (students) very seriously, and it is critical for college and university leadership to similarly recognize *their* responsibility to serve *their* clients, namely the faculty. ***College and university leadership should build a culture in which service to the client bases is expressly understood and practiced.***

iv – CBN budget and resulting problems: CBN is stretched to the max, not having received the additional faculty justly recommended by the previous review. Moreover, in the past several years there has been a tremendous increase in the size of the undergraduate student body,

and the number of students enrolling in CBN courses (~20% growth). Yet, CBN has not received any new faculty or resources to accommodate the increased efforts required to serve responsibly the needs of their enlarged undergraduate student pool. The level of effort that is currently required by CBN Faculty and staff to manage their large teaching and research portfolio is not sustainable. If appropriate remedies are not implemented soon, there will be sacrifices that will critically affect the key teaching and/or research missions.

As mentioned, signs of the sacrifices that have already been made are evident in that CBN has had little time to devote to their graduate program. Obviously, this affects a prime MSU mission – student education. Moreover, it sets in place a dangerous downward spiral: due to insufficient faculty size and resources, CBN has not been able to give their graduate program the level of attention required for it to be a vibrant program; as a result, CBN has fewer graduate students; as a result, CBN faculty have a smaller pool of graduate students who can participate in their research programs; as a result, research productivity will falter; as a result, CBN faculty will be less successful in renewing grants or obtaining new ones. At this stage in this self-perpetuating spiral, the way back to success would be difficult. However, the immediate infusion of additional new faculty and new operating resources, could reverse this negative course and effectively allow CBN to reach and sustain its full potential as a nationally recognized faculty that delivers top graduate and undergraduate curricula and that drives nationally competitive research programs, furthering the success of CBN, the college, and MSU as a whole.

4. Assessments

a) Department Strategic Plan

After careful consideration of academic and research priorities, CBN developed a strategic plan that has six missions, five devoted to teaching and/or student training and one focused on faculty research (p. 9, Self-Study). While these missions make sense in terms of the demands placed on CBN faculty in terms of teaching, the large teaching load certainly skews their overall mission towards teaching at the expense of research. ***A more equal balance between the two would promote the most important mission of an academic institution – new knowledge. And it should not be forgotten that active research programs provide important experiential learning opportunities for undergraduate and graduate students alike. CBN faculty are clearly capable of serving MSU in this most important goal, but they require adequate time and resources to do so.***

CBN also presented a revised Strategic Plan to the University in January 2013, that is presented in the self-study as a spreadsheet (Appendix B, Self-Study) as well as a written summary of the departmental missions (pp. 9-10, Self-Study). In brief, the plan followed MSU guidelines and was organized into six sections, each with its own set of goals. The total number of goals is 27, and in less than two years, CBN has achieved 6. Please note, however, that ***the format for the assessment did not consider the small size of the CBN faculty, the large increase in the number of majors and non-majors taking CBN courses, or the funding provided to the Department.***

a) Academic Programs (quality, vigor, relevance)

CBN academic programs consist of their service courses, undergraduate major courses (that has a premed as well as a CBN track), significant involvement in WWAMI and their limited graduate program. The undergraduate major is clearly thriving, based on the 28% increase in undergraduate CBN majors since 2008. Involvement in WWAMI has clearly contributed to the success of the Bozeman campus's role in WWAMI, given the increase from 20 to 30 students in this program and its upcoming expansion to an 18, rather than 12, month program. The expanded program will continue to rely on CBN faculty involvement, but it was unclear how WWAMI (or other) resources will be supplied to CBN to meet the increased workload associated with these changes. As mentioned, the extensive involvement of CBN faculty in WWAMI also allows for more strategic design of courses taken largely by premed students. The integration of the CBN premed courses with other curricula at MSU is a very important goal given that a significant fraction of premed students major in CBN, and the remainder have their major in several other MSU departments. ***CBN and, cutting to the bottom line, MSU undergraduates would certainly benefit from college and/or university leadership taking an active role to better facilitate curriculum design across campus.***

With respect to the quality, vigor and relevance of their courses, the upper level CBN undergraduate courses are most impressive. During our meeting with students, it was clear that these upper level courses are effectively engaging students in the scientific method and successfully challenging them to think deeply and creatively about current biomedical research problems. It is unfortunate that these upper level courses are considered to be "hobby" courses by some in the Administration, as ***these courses are the epitome of the highest goals of academia and a scholarly approach to education.***

b) Department Productivity

CBN faculty raised \$39M in grant funds during the review period (2008-present). Given the relatively small number of faculty (~10-12), this indicates that each faculty member raised ~\$500,000 per year. This is excellent/outstanding grant productivity, especially since extramural funding has been extremely competitive during this entire period. CBN faculty have published important, high-impact reports during this period, but the total number (69) is modest, averaging only ~1 published report per year per faculty member. Several CBN faculty have been far more productive than this average, while others (principally those more engaged in teaching) have published fewer reports.

There appears to be a mismatch between grant funding, which is excellent, and publication productivity, which is modest. As NIH estimates each publication costs ~\$100K per publication, it would appear that CBN faculty publication rate is several fold lower than expected. This may reflect higher than normal costs of research in CBN, particularly if animal research is dominant as is generally true in neuroscience programs, and research with non-human primates is even more expensive. Animal research is also more time-consuming, which reduces the number of publications possible in animal-intensive disciplines. Another factor that influences grant funding/publication ratios is the amount of training grants. It would be useful to have the CBN grant portfolio broken out into lab-focused vs training focused activities.

CBN faculty are clearly very strong in grant preparation, and their modest publication rates very likely reflects their heavy teaching loads due to the large and growing number of CBN majors and service courses for a broad range of MSU students in the biomedical sciences.

While very productive in both undergraduate teaching and extramurally funded research, there is concern that the time pressures on faculty have forced them to eliminate graduate courses. This has had a very negative effect on PhD training activities, which can have undesirable downstream effects on research productivity.

c) Alignment with Core Themes and Institutional Priorities

The strong CBN teaching and research portfolio directly aligns with MSU priorities regarding undergraduate education and maintaining Carnegie I research status, although the lack of a strong graduate program puts the latter at risk.

d) Diversity of the department's faculty and student body

The Department Faculty currently comprise 7 males and 4 females, with 5 at the rank of Professor, 4 at the Associate level and 2 Assistant Professors. Notably, half of the female faculty have Full Professor rank.

The Department has 5 graduate students, of which 3 are female, and two post-doctoral fellows (one male and one female).

The self-study did not include data on diversity of faculty/students/staff with respect to underrepresented minorities or first-generation college students.

g) Department Learning Outcomes Assessment Program

In pp. 16-22 of the self-study, CBN provided detailed information concerning program learning outcomes and assessment processes. These appear appropriate and designed to get a realistic picture of what students are actually getting or not getting from the current CBN undergrad curriculum.

The self assessment of CBN programs identified strengths and weaknesses. As mentioned earlier, an unambiguous measure of success is that 83% of undergraduate majors who apply to medical, dental and other vocational schools are accepted (national average = 47%). This may in part be due to the curriculum development that has been spurred by the numerous education grants (e.g., three from HHMI, several NSF REU grants) that CBN secured.

While the undergrad program is thriving, CBN faculty recognize that this has been at the expense of their graduate program. With the small size of the current faculty, there is little that could be done to remedy this. Clearly, four additional faculty, besides those already planned for replacement of retiring/departing faculty are required to revive the graduate program without compromising the quality of the undergraduate program.

5. Strengths: As stated in more detail above, CBN has numerous strengths including

- Committed, dedicated faculty who are actively involved in both teaching and research
- High quality of the research conducted by TT faculty
- TT faculty have strong R01 or similar level funding
- Popularity of their undergrad major, reflecting the high interest in, relevance of, and high quality of the CBN undergrad curriculum.

6. Challenges. Challenges are numerous and not very different from those identified in 2008. Of most concern are:

- Small size of the TT faculty in CBN in view of its teaching and service load.
- High teaching expectations combined with high research expectations!!!
- Budget that is not tied in a realistic and effective way to the teaching and service provided by CBN.

7. Opportunities/Recommendations: We divide these into recommendations that are directed toward CBN and ones for MSU leadership.

For CBN:

- 1) Develop a strategic plan for future faculty recruits that build on current strengths and "team science" rather than hiring the "best" which can lead to isolated research programs that do not synergize with each other. The existing strengths in systems neuroscience using non-human primate models, is one potential area to build on. In view of the new Mental Health Research Initiative, faculty hires that align with its goals may be another avenue worthy of pursuit.
- 2) The upper level undergrad courses offered by CBN faculty are top notch and conducted at the level of graduate school courses. To help build a curriculum for their graduate program, these courses should be listed as grad school courses that are open to undergrads.

For MSU Overall:

- 1) Embracing collaborative team approach and diminish current administrative silos; foster cooperation among the different administrative units (Provost, VPR, Deans)
- 2) Increase transparency regarding finances and constructions of budgets. The Indirect Cost Return issue mentioned above, in particular, needs to be addressed.

Five year hiring plan
Department of Cell Biology and Neuroscience
February 15, 2016

We are a research-active department composed of ten tenure-track faculty, and four non-tenure track faculty with over 300 majors. Based on the KPI data from 2015, over the past ten years, our Student Credit Hours (SCH) have *increased* by 85%, our number of awarded Bachelors degrees has *increased* by 49% while during the same time period our TT faculty line numbers have decreased by 17%. Over the past five years, five of our TT faculty have been funded by NIH R01 awards, and three more have been funded by NSF awards. As attested to in our recent External review, we are an extremely well funded and highly-research productive department by national standards, in spite of the fact our teaching loads are significantly higher than our NIH grant-seeking competitors.

Our department has four major areas of teaching responsibilities:

- Pre-medical health profession students – the vast majority of MSU pre-med students major in our department, and several of the required courses for all pre-health profession students are taught by our department
- WWAMI medical students – we teach all the anatomy, physiology and neuroscience courses for the WWAMI Medical students
- Undergraduates intending to go on in biomedical sciences research.
- Graduate students including both Masters and Doctoral students, both in the classroom and in our laboratories.

Our mission:

To create and sustain a highly research-active interactive community of scholars and teachers that stimulate a passion for learning in our students including providing them with the opportunity to obtain a first rate hands-on research experience. To fulfill this mission requires that we provide an education that is of the highest standards nationally, which means delivering courses taught by scholars who can imbue in their students a life-long interest and curiosity for learning, with a particular expertise in the biomedical sciences. This mission is entirely in line with MSU's Strategic Plan and institutional goals.

Challenges:

- Increased undergraduate enrollment, coupled with inadequate resources to teach these students. In response to: (1) increased enrollment, (2) the MSU goal of decreasing time to graduation, and to (3) increase retention, we have realized that we need to offer all of our required large introductory courses twice a year, i.e. once/semester. When we did this with our Anatomy and Physiology series, our enrollment doubled. Recently we started doing the same with Bio 260, Introduction to Cell and Molecular biology, offering it once each semester and

saw the same dramatic response: the enrollment in this class has now gone up from 160 (in 2010) to 314 – virtually doubled in 5 years! This next year we will be teaching Bio 313, Neurophysiology, twice per year and would like to do the same for Genetics and Advanced Cell and Molecular Biology. *However, the only way we can increase our class offerings for these required courses and meet these serious teaching needs is with the addition of new tenure track faculty.* An added perk of increasing our TT faculty will be the coupled growth of our doctoral program: with more research-active TT faculty, we will have sufficient depth and breadth in the neurosciences to both teach a rigorous graduate program of courses for doctoral students and train them in our laboratories.

This problem is unlikely to be solved using NTT faculty. A common refrain we hear from visiting parents on MSU-Fridays is the concern that their children's courses not be taught by TAs or one time adjuncts, but by "real" scientists, i.e. faculty who are true scholars in their fields. Many Tier-1 universities such as Harvard and UC Berkeley have a tradition of putting their Nobel Laureates in their introductory courses. By providing freshmen and sophomores with scholars in their introductory courses, we argue, helps students grasp that we are all standing on the "shoulders of giants" and that they are embarking on a rich educational journey. We also know from numerous discussions with potential parents and students, that our ability to provide first rate research experiences for our students is a major draw in recruitment. *There is a consensus among our faculty that our recruitment of out-of-state undergraduates would decrease dramatically should our research activity and emphasis on high quality research diminish.*

- *Increasing doctoral degrees in CBN.* Our External Review report (Spring, 2015) was clear about the need for more TT faculty in our department. The report even questioned, without added TT faculty, the sustainability of our research mission due to over-extension of faculty in the undergraduate teaching mission. *A consequence of a diminished research effort would be an inability to train doctoral students.*

We are committed to increasing our graduate student training. As a faculty that all trained in the best Neuroscience and Cell Biology programs in the country, we know the elements that comprise a first rate doctoral education program. Indeed, one of our faculty sits on the NIH/NINDS study section that reviews all of the Neuroscience training programs in the country. To that end, our goal is to obtain an NIH T32 Training grant to provide both the resources and credibility to sustain such a program. These grants are highly competitive and *require a faculty composed of at least ten, NIH-R01 funded investigators. These investigators need to contain a mix of both senior and junior faculty with significant track records in training, and our program needs. There has to be a graduate level, first year course, with hands on training in neuroscience for the program to be credible, which will involve significant faculty involvement. For CBN to be competitive, this would require the hiring of additional research-active faculty.*

- *Impending retirements.* At least two faculty members (Eiger and Lefcort) will be retiring by 2020, and possibly two more senior faculty members as well. Dr. Eiger is our only physiologist and as such, plays a critical role in teaching physiology to our undergraduates, medical students and veterinary medicine students.

Recommendations:

- We currently have five (six with Dr. James Mazer) faculty who are applying for and receiving NIH R01 grants. This number, coupled with our impending retirements, our projected increased enrollment (interest in neuroscience is only growing nationally) and our need to grow our graduate program, translates to the need to hire *five tenure track research-active faculty over the next five years.* Some of these hires could be interdisciplinary. A good example would be to build on the new nation wide interest in neuroengineering. This is a very popular discipline that couples neuroscience technology development with basic engineering in a way that builds value into both the neuroscience and engineering programs. It would help us build bridges to related departments on campus and with the burgeoning Center for Mental Health Research and Recovery.
- Given the tremendous growth internationally in the neurosciences, we are certain that we can hire a diverse set of faculty but they can also span areas that will facilitate interdisciplinary collaborations across the campus. Our training in the best possible hiring practices by the ADVANCE-funded Society for Neuroscience program has led us to cast wide nets early in the process of recruiting faculty and given us the tools to avoid the many pitfalls that bring gender bias into the process. We have demonstrated in the recent searches that recruited Susy Kohout, Behrad Noodost and his wife Neda Nadegh, and most recently Jamie Mazer that given the green light to hire we can find top notch faculty who can build internationally recognized research programs while bringing quality teaching to the classroom.
- With the addition of these highly research active faculty who will be training Ph.D students in their labs, we significantly increase the likelihood of MSU returning to Carnegie Research Level I status.



To: Frances Lefcort, Department Head, Cell Biology and Neuroscience Department

From: Martha A. Potvin, Executive Vice President for Academic Affairs and Provost *Martha A. Potvin*

Re: 2015 program review

Date: June 10, 2016

The CBN program review was initiated in spring, 2015. The site visit was conducted May 11-12, 2015. The dean's recommendations were received on September 21, 2015. A meeting of the department head, the dean, the associate provost and the provost was held on April 27, 2016.

The dean's response to the program review was reasonably comprehensive. The external reviewers were impressed by the caliber of the department's upper division undergraduate classes. 400 level courses could be opened to graduate and undergraduate students to boost the graduate curriculum. The self-study cites data that are not consistent with current institutional KPIs. The faculty FTE is the highest (without counting Byerly and Mazer) that it has been in the last 10 years. The student/faculty ratio reached a high in 2012-13 at 30 and is now at 22. There has been SFTE growth in service courses. The recent hire of two additional accomplished senior faculty members will improve the student faculty ratio, and help with current offerings. While the department notes \$39M in grant funding since 2008, there has been limited recent grant success.

The graduate program is undersubscribed and its viability is questioned. This was noted as an area of concern in the last program review. Especially problematic is the low PhD production with an average of <1 degree per year. This despite an increasing college and institutional average.

Recommendation: Given the strong recent hires in the unit, the department is expected to have at least 20 graduate students within four years with an interim program review in year three. Without significant improvement, the program should be considered for moratorium.

The department's reported standard teaching load of one course a semester is among the lowest at MSU (7 cr/FFTE/yr compared with 13 in chemistry and physics) and is not reflected in the research productivity of the unit. Using Academic Analytics benchmarks, compared to peer institutions, the department is underperforming in research productivity in areas of awards,

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citations of faculty publications, number of published articles, number of funded grants, grant funding per faculty and number of faculty with a grant. It is also low compared to other units that have a similar teaching loads. This underperformance is especially acute when the comparisons are made to other public VHR institutions that do not have medical schools.

The department is to be commended for attracting a large number of strong students. Graduates go on to the health professions and graduate school. Given that the department feels there is insufficient staffing to serve their current students, the department should consider streamlining its curriculum to focus on courses required for degree completion and consider using graduate students as GTAs. The department has chosen to use some resources to offer courses that are interesting and well subscribed, but tangential to its cellular and neurobiology mission (e.g., global health, advanced anatomy dissection). With its recently rebased budget, the department has tremendous potential to advance its mission of teaching and research. With some re-allocation and focus on academic and research priorities, the department has the potential to reach the status of other strong STEM programs on campus.

Cc: Ronald Larsen, Associate Provost
Nic Rae, Dean, College of Letters and Science
Karlene Hoo, Dean, Graduate Studies

https://billingsgazette.com/opinion/columnists/guest-view-msu-cutting-critical-program-that-has-more-than/article_f5d8c7dd-916a-552d-9de8-677545d4aa8e.html

Guest view: MSU cutting critical program that has more than \$12M in funding

By FRANCES LEFCORT and five other Montana State University faculty members Feb 10, 2019

TRY 1 MONTH FOR \$5

If you are as concerned as we are about Montana having the tragic distinction of being No. 1 in the nation for suicide, then you understand the need for biomedical research on mental illness.

Unfortunately, changes to the Department of Cell Biology and Neuroscience at Montana State University proposed by the MSU administration could shutter active research on this problem and severely limit options for neuroscience research and training in Montana. These changes will deprive Montana students of a first-rate education in neuroscience, throttle a rapidly developing Montana bioscience industry and may delay or even prevent cures for mental illness, Alzheimer's disease and other neurological disorders affecting our state.

Most disturbing, restructuring this highly successful and popular program is completely counter to MSU's land-grant mission because it will deprive students from ranches and small towns across Montana of the educational opportunities afforded students from urban areas like Boston or San Francisco. That is unfair, the very antithesis of our land-grant mission and a violation of our responsibilities as educators to the students who choose to attend MSU.

The underlying cause of suicide, mental illness, neurodegenerative diseases like Alzheimer's, Parkinson's and Multiple Sclerosis, PTSD, and opioid and other drug addictions is malfunctioning nerve cells in the brain. Clearly social and medical services are required to treat these conditions, but we also need biomedical research to develop

cures and preventative treatments. This need, in Montana, across the United States and around the world, has made neuroscience one of the fastest growing, exciting and rapidly advancing areas of biomedical research.

How can Montana be part of the cure?

Almost 20 years ago, MSU had the foresight to establish a department specifically dedicated to clinically-relevant basic neuroscience research. Since then cell biology and neuroscience has graduated more than 1,000 majors, many of whom are now highly successful scientists and physicians working in Montana and throughout the country to tackle these challenging problems. According to our students and alumnae, the department has been an effective launchpad for MSU students, propelling them into careers helping to solve some of the most pressing problems facing Montanans today.

One example of department's commitment to MSU's land-grant mission is our efforts, in partnership with the National Alliance on Mental Health (NAMI), to establish MSU's Center for Mental Health Research and Recovery, a center specifically dedicated to developing new tools for the diagnosis and treatment of mental illness. Cell Biology and Neuroscience's focus on neuroscience training and research has drawn neuroscience biotech companies to the Bozeman area, companies that, like our department, employ a substantial number of people from Gallatin Valley, and collectively have a considerable impact on the Montana economy.

In fact, the negative economic impact to MSU and Montana associated with the loss of neuroscience research at MSU is estimated to be more than \$11.6 million per year (not including effects on the local biotech industry.)

While classroom education is an important part of undergraduate education, science education truly comes alive in the laboratory, particularly when students can work on their own research projects. The department gives our students the benefit of intensive one-on-one interaction with faculty in our labs. The Cell Biology and Neuroscience labs currently have more than \$12 million in open grants from the National Institutes of Health and National Science Foundation. Finally, our doctoral program, which the

administration has repeatedly threatened to eliminate, cost neither MSU nor the state taxpayers a dime: The department faculty support students entirely off of federal research grants, paying both tuition and salaries.

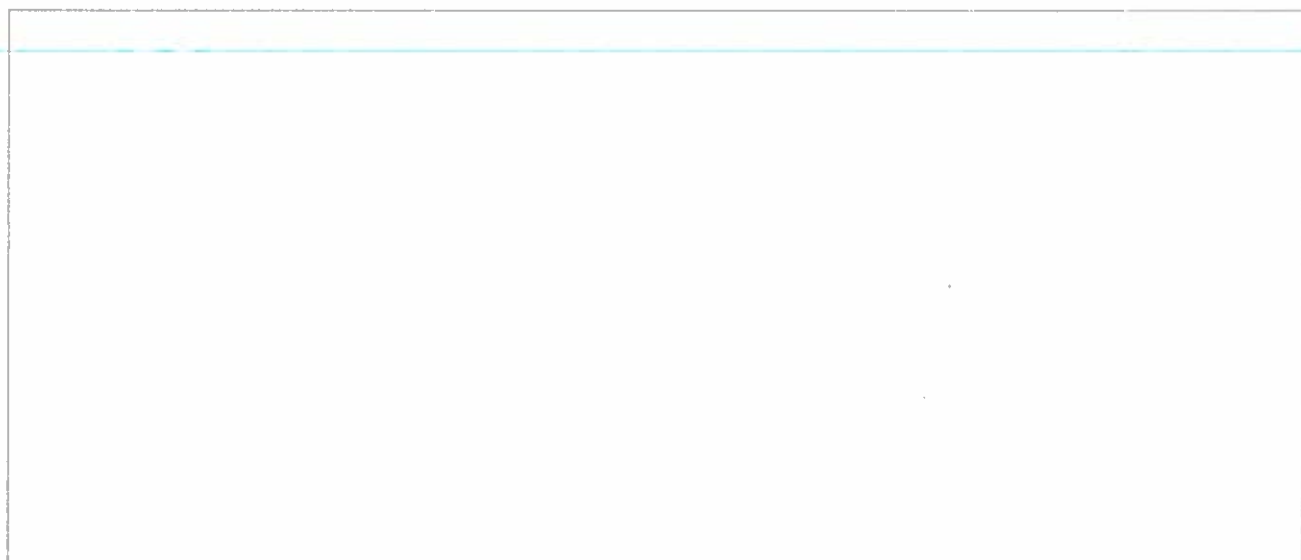
Cutting the neuroscience program will therefore not save any Montana University System funds. In fact, it would actually reduce tuition income, not to mention negatively impact MSU's land-grant mission to provide graduate educational opportunities to Montanans.

That MSU would even consider backing away from neuroscience research is both astonishing and disheartening. If we want these life-changing educational opportunities to continue to be available to our students, and for the important scientific advances that will help solve the problems of mental illness to be made in Montana, MSU must commit to it's vibrant neuroscience community and support neuroscience research in Cell Biology and Neuroscience.

If this is of concern to you, please contact the MSU administration, the Commissioner of Higher Education, the governor, and the Board of Regents.

The following faculty members in the Department of Cell Biology and Neuroscience contributed to this guest view --Frances Lefcort, professor; Steven Eiger, associate professor; James Mazer, associate professor; Steve Stowers, associate professor; Charles Gray, professor; and Thom Hughes, professor.

MORE INFORMATION





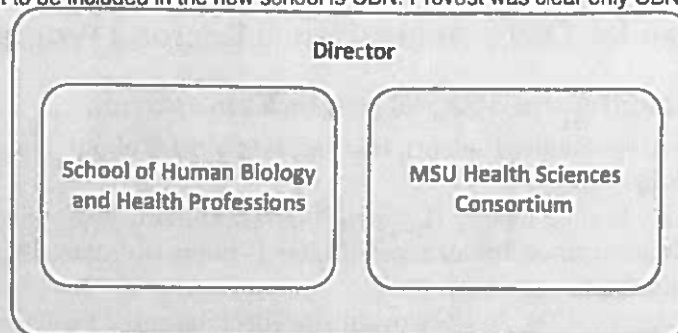
This week's letters to the editor: The wall, American Prairie Reserve, One Big Sky

- Roy Brown: The myths about the death penalty



CONCEPT SHEET – FOR DISCUSSION 11/19/2018

Original proposal presented by Provost Mokwa to CBN DH Roger Bradley 2018-11-19. This document describes creation of a new "School of Human Biology and Health Professions" intended to provide high-throughput teaching for pre-medical students with not basic science research mission. Only dept to be included in the new school is CBN. Provost was clear only CBN - no other biomed depts.



Concept: School of Human Biology and Health Professions and MSU Health Sciences Consortium

Goals:

- Create an enhanced focus on health professions at MSU
- Help health professions students better navigate through all of MSU's medicine-related options
- Create new opportunities for collaboration and integration across disciplines
- Highlight engagement opportunities in the health professions

Excerpted from UM Health and Medicine Presentation to BOR (for comparison purposes)

- *Coordinating a comprehensive approach to recruit students into the health professions and creating new degree programs to meet projected employment demands*
- *Strengthening relationships with regional academic programs and clinicians committed to MUS undergraduate and graduate health and medicine education (OT, IPE)*
- *Strengthening relationships with community and regional partners to systematically improve care deliver and health outcomes in an evidence-based fashion, testing best practices and exploring new approaches*
- *Providing oversight for collaboration across UM of our instructional, research and clinical care expertise in healthcare*
- *Facilitating a robust research initiatives focused on improving health outcomes in Montana*

School of Human Biology and Health Professions

The administrative home for programs primarily related to pre-medicine, providing clarity for prospective students seeking information on pre-medical and health science professions.

MSU Health Sciences Consortium

A dynamic community for all MSU scholars working in health-related areas to share ideas and inform interested students, faculty, and the community of the work being done in these areas.

Notes:

1. The Consortium is open to all MSU faculty, staff, and students in units that are engaged with the health professions.
2. The Director is responsible for overseeing the Consortium and ensuring that opportunities for interaction, collaboration, education, and engagement are available.

Approved 12/19/2018 by Provost Mokwa (via email from Interim Grad Dean Larsen). This plan was later rescinded by President Cruzado and Provost Mokwa at a January meeting with all CBN faculty. Provost Mokwa claimed at the time he had never approved this plan and that Dean Larsen was in error when he relayed that information to CBN faculty earlier in the month.

A Two Year Plan for CBN's Neuroscience Doctoral Program

Relevant departmental and doctoral program information

- 8 research-active faculty (Lefcort, Hughes, Merzdorf, Kohout, Mazer, Stowers, Bradley, Gray)
- 6/8 externally funded faculty (Lefcort, Hughes, Kohout, Mazer, Stowers, Gray)
- 6 current Neuroscience doctoral candidates (Thuen, Hoffman, Thomas, Molina, McKinney, Carlson)
- In the last 2 years: 10 G, 34 UG working in CBN labs and 2 PhD's awarded
- >\$12,000,000 in open grants
- >\$300,000 in grant expenditures/TT faculty - highest in CLS
- Only active doctoral student "training grant" on campus (EPSCOR "Attention in the Brain")

Programmatic targets for neuroscience doctoral program

Enrollment Numbers

The goal over the next two years is to reach a sustainable target population of 1.5 doctoral students per research-active, externally funded principle investigator.

Background. Neuroscience doctoral students at MSU, as in most other US Neuroscience doctoral programs, are *primarily* funded through external grants (typically NIH and NSF) awarded to individual faculty members. These grants generally cover student stipends, tuitions, fees and research expenses. In most programs, doctoral students teach almost exclusively for training purposes – typically teaching only 1-2 semesters across their entire graduate training. The rationale for this program, is to ensure that students focus exclusively on their training as research scientists. This means that nationally students are almost exclusively supported by GRAs (or their equivalent) and not GTAs, so to be competitive in recruiting qualified students to MSU, it is essential that Neuroscience doctoral students receive GRAs. Since GRAs in the Neuroscience program are 100% derived from external grants, the Neuroscience doctoral program's training capacity is limited by the number of funded researchers participating in the program. This means that the target enrollment for the Neuroscience doctoral program must be linked to the number of funded investigators.

The most recent Report of Neuroscience Departments & Programs Survey published in 2017 by the Society for Neuroscience, the largest professional society in the field, with more than 37,000 members, indicates that the national average number of doctoral students per Neuroscience faculty member is around 0.84, which is almost exactly MSU's current enrollment level (currently around 0.85). These data are based on a survey of more than 60 participating Neuroscience doctoral programs in 2016-2017. This means that MSU's Neuroscience doctoral program training levels are almost identical to national averages. However, we believe we can increase the enrollment numbers over the next two

years and reach a sustainable level of 1-2 doctoral students per funded faculty member. The Department of Cell Biology and Neuroscience currently has 6 externally funded faculty members. Based on the current size of the department we plan to reach a sustainable target of 6-12 Neuroscience doctoral students within two years.

Time to degree

The same report indicates that a national average of 5.6 years-to-degree in the Neurosciences across the same 60+ programs, which is close to the performance of recent students graduating from CBN's Neuroscience doctoral program. Therefore, we propose that a sustainable target is to maintain parity with the national, published averages in the field.

Plan for achieving and sustaining programmatic targets

As noted above, the capacity of the Neuroscience doctoral program is limited by available funding. Therefore, a key to achieving and sustaining the 1-2 student/funded-PI enrollment level is securing a stable source of external funding for students to supplement individual investigator's research grants. The 1-2 students/funded-PI level is sustainable indefinitely, however, to grow beyond that level it will be necessary to secure external training grants (e.g., NIH T32, NSF NRT, NSF EPSCOR, or awards from private foundations) or individual graduate student research fellowships (e.g., NIH NRSA/F31, NSF NGRF, etc).

The department has already had some success in obtaining external funding for graduate students. In 2016 CBN faculty applied for and received an NSF EPSCOR award specifically for the purposes of graduate student training in the Neurosciences. This renewable, multi-site award, with Dartmouth College as the lead, currently supports 3 Neuroscience graduate students in CBN and has sufficient funds to recruit and support an additional 1-2 students through the end of the current award. In addition, we have used the EPSCOR award this Fall to support effective graduate student recruiting for both the Neuroscience and MBS doctoral programs and will continue to do this for the duration of the award.

The department has also developed a 2 credit research class offered by Thom Hughes that helps Neuroscience graduate students develop an effect grant application that will be submitted as either an NIH NRSA/F31 or NSF GRPG at the end of the course. As a direct result of this course, Rosana Molina, a current Neuroscience doctoral student, applied for and was awarded an NIH F31 individual research fellowship.

Finally, NIH-GMS has recently announced a new training grant program (PAR-19-102) designed to fund training and advance development of small-to-medium sized biomedical graduate education programs that would include the MSU Neuroscience doctoral program. We propose to take the lead on developing an interdepartmental/interdisciplinary proposal for this RFA to be submitted in Spring 2019. If awarded, this grant is designed to fund incoming graduate students for the first three years of their training, at which time the funding obligations would transfer to the PI; this mechanism would secure the long-term viability and success of our doctoral program, as well as help biomedical researchers in other departments on campus attract and retain doctoral students.



86/161



Email from Graduate School Dean Larsen confirming Provost Morkwa's acceptance of the graduate plan submitted for approval on 12/17/2018. This approval was subsequently rescinded at meeting between Administration and CBN faculty in January, 2019.

James Mazer <mazerj2006@gmail.com>

Fw: Non-moratorium for CBN PhD degrees

Bradley, Roger <rbradley@montana.edu>
To: "Lefcort, Frances" <lefcort@montana.edu>, "Mazer, James" <james.mazer@montana.edu>

Wed, Dec 19, 2018 at 12:14 PM

From: Larsen, Ronald
Sent: Wednesday, December 19, 2018 12:13 PM
To: Bradley, Roger
Cc: Morkwa, Robert; Rae, Nicol
Subject: Non-moratorium for CBN PhD degrees

Roger,

I received a call from Dean Rae asking if I knew anything new about the proposed moratorium on the CBN PhD degrees. I checked with the Provost, and he is sufficiently satisfied with the progress being made on the plan to grow the CBN doctoral program that he is no longer considering moratorium for the PhD degrees. I hope that clears the path to accept the prospective doctoral students

If you have any questions, please feel free to give me a call.

Ron

Ronald W. Larsen

87/161

Vice Provost

Interim Dean, Graduate School

ronl@montana.edu

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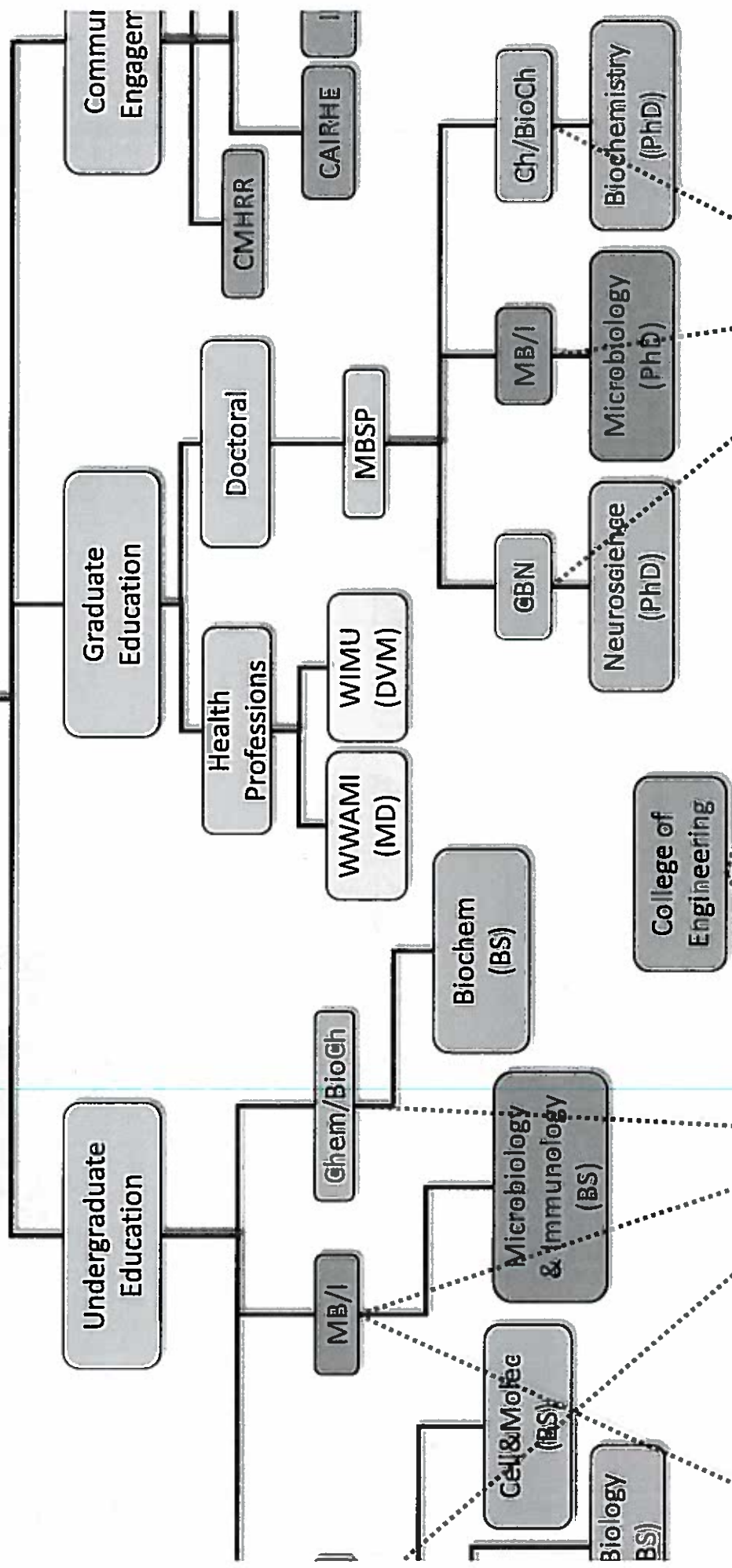


CBN Department's *Alternative* Proposal for a New Biomedical School

2018-12-20



School of Biomedical Sciences



NEW Interdisciplinary Majors

Neural Eng	Cog Sei
Genetics	Human Biol

Disc. Minors

Genetics	Health
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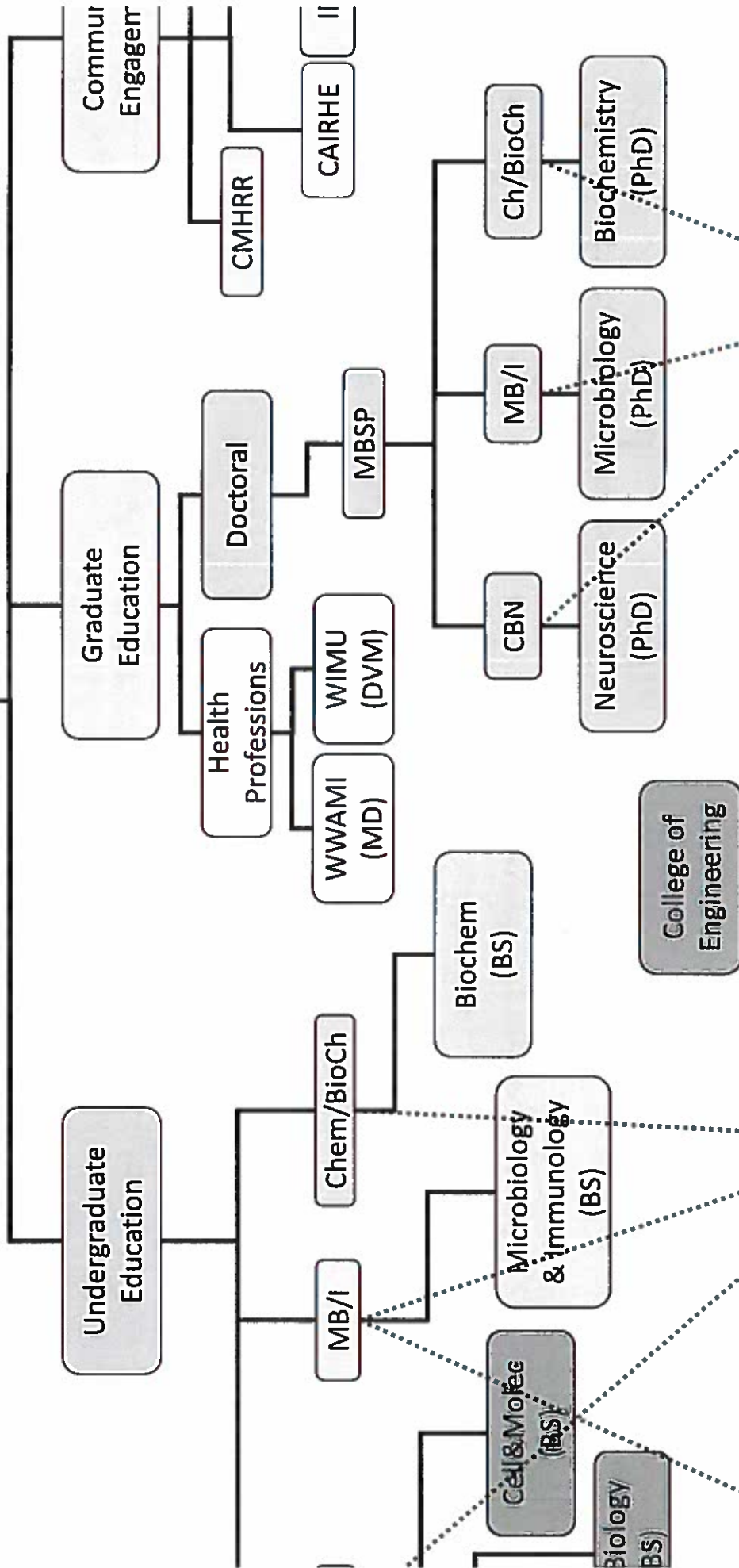
NEW Interdisciplinary PhDs

Neural Eng	Cog Sci
Genetics	Human Biol

College of Engineering



School of Biomedical Sciences



NEW Interdisciplinary Majors

- Neural Eng
- Genetics
- Cog Neuro
- Human Biol

Disp. Minors

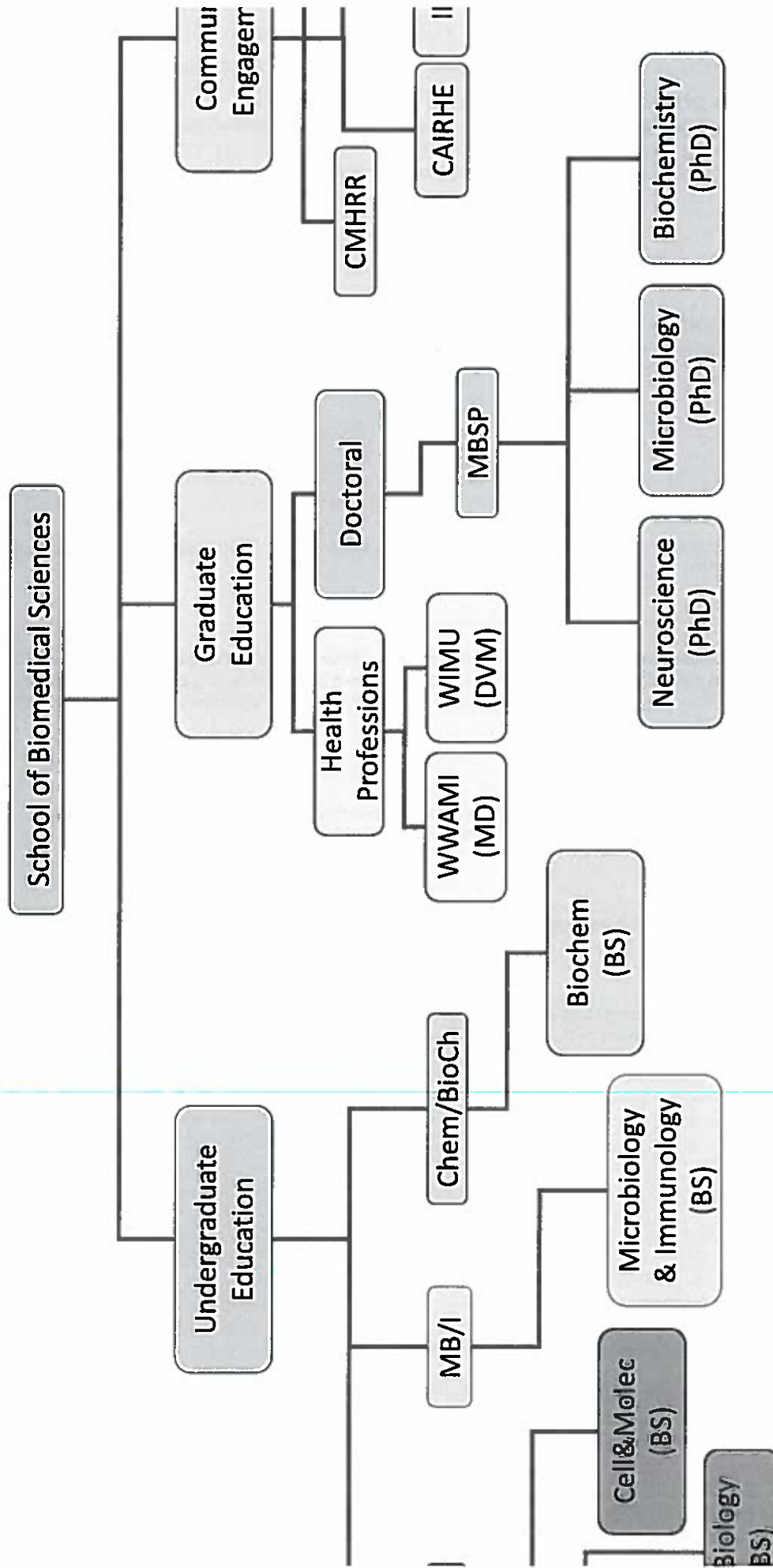
- etics
- Health

NEW Interdisciplinary PhDs

- Neural Eng
- Genetics
- Cog Neuro
- Human Biol

College of Engineering





Clarifying information about Cell Biology and Neuroscience

Office of the MSU Provost <provost@montana.edu>

Fri, Dec 28, 2018 at 4:31 PM

Reply-To: Office of the MSU Provost <provost@montana.edu>

To: "msu-faculty-staff@listserv.montana.edu" <msu-faculty-staff@listserv.montana.edu>

Dear Colleagues,

Over the holiday break, social media posts about the future of the Department of Cell Biology and Neuroscience have been causing unnecessary anxiety among our students who have been coming to the mistaken conclusion that the department and its curriculum are going to be disbanded.

This is not the case.

On Monday, Dec. 10, 2018, I met with Roger Bradley, head of the Department of Cell Biology and Neuroscience, about enhancing teaching and research.

We all want to make sure students – both undergraduate and graduate – have access to the developments in cell biology and neuroscience, but also are well-connected to other relevant fields. Some of the greatest gains in biomedicine are happening through interdisciplinary collaboration and we want to make sure we have an administrative structure where students realize the fruits of such work.

It was at that meeting Department Head Bradley outlined his idea of expanding and enhancing Cell Biology and Neuroscience through a plan he titled: "CBN Proposal: School or College of Biomedical Sciences."

Immediately after this meeting, I sent the following email (see below) to all the faculty of CBN.

I hope you will join me in sharing this information with concerned students and directing them to visit with myself, Roger Bradley, department head, or Nic Rae, dean of the College of Letters and Science.

Sincerely,

Robert Mokwa, Provost

Email sent to all CBN faculty on Dec. 10, 2018:

Dear Colleagues in the Department of Cell Biology and Neuroscience;

I am writing to provide you some general details and follow-up information from a meeting that I attended this morning that included Department Head Bradley, Dean Rae, Faculty Senate Chair Abbie Richards and President Cruzado. James Mazer attended a portion of the meeting as well.

The meeting construct was to explore opportunities for enhancing education, research and outreach opportunities in areas encompassing fields related to human biology, neuroscience and biomedical sciences in general. We discussed ideas for developing a robust dynamic community for MSU scholars and educators to conduct interdisciplinary research. This community would provide a range of educational opportunities that would envelope scholarly research with academic undergraduate and graduate programs that include significant elements of human biology and health professions. Roger provided an outline of such an idea titled: "CBN Proposal: School or College of Biomedical Sciences."

Two primary action items were developed during the meeting:

1. Roger will submit a draft plan that contains more resolution for the new model or structure. Roger agreed to work with faculty in the department to develop a draft plan to further explore the outline proposal that he provided. The plan will be multiphased. Phase I involves expanding the Department of Cell Biology and Neuroscience into a new or revised structure that could support a broader vision and mission. Ideas were discussed about using existing foundation to build and enhance upon research, scholarship and teaching opportunities for current and future students, and to expand on opportunities to serve the physical and mental health needs of the people and places of Montana. Roger mentioned possible fundraising opportunities that could develop from this type of model and also opportunities for incorporating other departments with biomedical expertise. This latter component will be addressed in subsequent phases.

2.a. Roger will submit a 2-year plan to address the PhD degree program in Neuroscience. Depending on details and goals of the plan, it is my desire that we are able to negate the need to put the PhD program into moratorium. As we discussed in the meeting, this course of action follows from the 2014 program review, which slated the MS and PhD Neuroscience programs for moratorium in 2018 because of low enrollment and the apparent disconnect between high research activity in the department and low emphasis on connecting this to graduate education. However, based on discussions today, an alternate approach will be used to delay the decision for moratorium and allow a two-year period to evaluate goals of improved outcomes. The plan will describe specific measures to address the number of graduate students enrolled and graduating with degrees in the program. The plan will be based on current department resources and will connect graduate student supervision to teaching workload expectations.

2.b. The moratorium process will proceed for the MS degree program in Neuroscience. Moratorium status initiates a process, which includes a pause to accepting new students into the program; however, the program continues in existence until current students finish and graduate. The moratorium process provides the department a two-year window to propose changes or modifications to the program, assuming there is a desire to revise and update the degree program. If not, then the program is moved to the termination process.

Various aspects of the vision and mission were discussed that could include:

1. An administrative home for existing and future MSU undergraduate programs including offerings in cell biology, neuroscience, pre-medicine, biomedical sciences, genetics, developmental biology, human biology, global health and others.

2. An interdisciplinary home for research and graduate education that would grow from the core of excellent scholars in the department of CBN.

3. Enhanced synergy between graduate education and research, with a goal of growing and expanding the quality and the size of existing programs. MSU has an active and growing research and outreach presence in several related centers and programs, including: the Center for Mental Health Research and Recovery, the Center for American Indian and Rural Health Equity, Montana INBRE, MSU Division of Health Sciences, WWAMI, RIDE and quite a few other potential options.

The question I asked Roger to address in the draft plan, is how can these existing centers and programs be better connected and aligned with faculty research projects and graduate education.

4. A structure that provides more clarity for prospective students seeking information on biology-related academic programs and programs that could lead to vibrant careers in a variety of medical and health science professions. For example, this could include a future home for health professions advising, pre-med intake majors, the post-bac pre-med certificate program and the MS in Health Sciences.

In the short term, I requested that Roger provide a draft plan that could be implemented in phases. The initial phase would use resources that are currently in place and would not involve the reallocation of additional resources. The draft document would include plans for:

Expanding interdisciplinary research and would address an approach for aligning graduate education with a consortium or affiliation of applicable research centers, thereby creating a dynamic community for all MSU scholars working in health-related areas to share ideas and inform interested students, faculty and the community of research and education in these areas.

Addressing how faculty in the re-vised model will fulfill MSU's teaching and research mission.

Enhancing the number of students and the resources available for recruiting stellar students who choose to enter a research-based PhD program in the Molecular Biosciences Program.

Addressing future opportunities for undergraduate and graduate interdisciplinary degrees and programs.

In conclusion, as we discussed in the meeting, there will be no changes to existing undergraduate degree programs, graduate students and research are vitally important and will be supported as key components in the new model, and the new structure developed by the department will enhance BOTH the research enterprise and educational opportunities for undergraduate and graduate students.

As a faculty member in the CBN department, you have an opportunity to develop two draft plans that chart a future vision with expanded opportunities. The plans are due to Dean Rae by January 14, 2019 and he will provide me his recommendations by January 21, 2019. With input from the department and dean, a schedule and timeline will be developed to implement the recommended plan. My intention is that each step in the process will be transparent, aligned with MSU's new strategic plan, and conducted with consultation and input from faculty.

Lastly, I appreciate all your work and efforts and look forward to engaging with you and other stakeholders as we work together to address new challenges and opportunities.

Most sincerely,

Dr. Robert L. Mokwa | Executive Vice President and Provost

Montana State University

Tel. 406-994-4371



Accurate Clarifying Information about CBN

Bradley, Roger <rbradley@montana.edu>

Sun, Dec 30, 2018 at 3:26 PM

To: MSU Cell Biology and Neuroscience <cellbio.msu@gmail.com>, "Lefcort, Frances" <lefcort@montana.edu>, "Hughes, Thomas" <thughes@montana.edu>, "Stowers, Steven" <sstowers@montana.edu>, "Mazer, James" <james.mazer@montana.edu>, Charlie Gray <cmgray.montana@gmail.com>, "Cusick, Cassie" <ccusick@montana.edu>, "Merzdorf, Christa" <merzdorf@montana.edu>, "Eiger, Steven" <eiger@montana.edu>, "Kohout, Susy" <skohout@montana.edu>

Dear Colleagues,

I am responding to a recent email from the Provost's office about the current status of the Department of Cell Biology & Neuroscience. It's important to clarify accurately the administration's original proposed plan to dissolve CBN in order create a new "School of Human Biology and Health Professions".

In November of this year, after hearing several persistent, disturbing rumors concerning the dissolution of CBN, I requested a meeting with the Provost. On 11/29, I met with the Provost, at which time I was presented with a plan to dissolve CBN into a new School of Human Biology. I was told this would entail a change in CBN's mission to focus on undergraduate biology education for pre-medical students and health outreach/outcomes research. Don't get me wrong; that is important research, but it's just not the type of research CBN faculty do. This was the first time I had heard of such a plan, although clearly the proposal had been in the planning stages for some time before this meeting with the Provost. This top-down approach to reorganizing premedical education was presented as a "great" opportunity for CBN to be part of a new school and to change the focus of our research and teaching missions. The Provost said it would make premedical education more "efficient". However, only CBN, none of the other health or pre-medicine focused departments, were to be included in the new school. Even when pressed, the Provost provided no clear rationale for this change. Nor was he able or willing to articulate the specific "problems" with pre-medical education the new school was intended to solve. Finally, the Provost informed me our Neuroscience doctoral program would immediately be placed in moratorium and slated for termination in 2 years. The only explanation I was given was that:

1) UM is doing "something different" with their new Health and Medicine plan, so MSU must respond by also doing something different.

2) Justification for killing our doctoral program was based on our "low" enrollment numbers. However, I must note, that our "low" numbers are not at all low compared to published data on Neuroscience doctoral programs nationally; in fact, the national average in the field is 0.84 Ph.D. candidates/faculty member and the MSU Neuroscience program is currently at 0.85. Furthermore, our graduate students are all paid from external grants, thus the Neuroscience doctoral program costs the university nothing.

These two points, have little or nothing to do with each other - why would creation of a new school for undergraduate premedical education have anything to do with killing our doctoral program, unless the proposal was intended to curtail neuroscience research at MSU?

In response to this meeting, CBN proposed an alternative plan, a plan that would not involve dissolving CBN as a department and would better meet the administration's stated goal to create a new, comprehensive, pre-medical education program. This plan centered on creating a School or College of Biomedical Sciences. The basic outlines of our Biomedical Sciences proposal are:

1) It includes all MSU departments involved in training pre-health and pre-med majors. We proposed that all stakeholders in biomedical education should discuss ways to create an effective

umbrella organization that would serve as an intake portal for undergraduates interested in biomedical disciplines and integrate the first year of biomedical teaching. The same stakeholders would together develop new interdisciplinary courses, degrees and research. Instead of the Provost's top-down mandated proposal, this would be a bottom-up initiative bringing together all the biomedical departments and pre-health advisors on campus from the outset.

2) Individual departments would not be dissolved, but would maintain their integrity within the new School or College. After their first year of integrated teaching, students would choose their major and corresponding department. Thus, our plan builds on the strengths of MSU's excellent departments and existing research. It would not dismantle existing departments and programs that have demonstrated track records of effective undergraduate training! There should be an add-on benefit to joining this new umbrella organization, it should not involve disrupting our existing strengths.

The Provost initially seemed interested in the biomedical sciences plan. However, his follow-up email- which was copied to all of you in that recent email- backtracked on this and put the impetus of developing a new pre-medical organization entirely on CBN. It seemed absurd that CBN was solely responsible for creating such a plan, a plan that involved so many other departments and stakeholders. So I starting meeting with other biomedical/health science department heads to show them the basic plan and ask if they wanted to be involved. All other department heads that I met with insisted they be at the table for any discussion of pre-medical/pre-health education. I also followed up with the administration with a flow chart of one possible way to organize this umbrella organization (which I am happy to share with anyone interested) and I volunteered to organize a group meeting with the other stakeholders. At that point, I was told not to discuss the plan any further with other departments and to wait for the Provost's approval. That approval never came. So, it is disingenuous at best to claim that we submitted a plan and imply that somehow it is CBN's fault nothing has happened. In fact, when some of the other biomedical department heads requested a meeting with the Provost to discuss the situation, since clearly any changes to premedical education at MSU would also impact them, I was told that the Provost declined to meet with them.

The recent campus-wide email from the Provost's office implied that this "plan" was initiated by CBN and guided by CBN. The truth is that the administration came to us and told us in no uncertain terms that CBN would be dissolved into a new school, a school with no basic-science research component and essentially organized exclusively for the purpose of attracting and teaching pre-medical undergraduates. If the administration feels that pre-medical/pre-health education at MSU needs to be examined, then let's get all the players in the room and discuss that. But first and foremost, let's identify the problems that need to be "solved". There is too much at stake when it comes to the future of all of our amazing students. For 18 years, CBN has been an effective launchpad for MSU undergraduates into biomedical careers - the Medical and Dental School acceptance rates for CBN students far exceed national averages (62%, MD, and 71%, DDS, for CBN vs 40% and 50% nationally). Why disrupt what is clearly an effective training program to develop an incomplete and poorly conceived new school?

As a consequence of an earlier email that Provost Mokwa sent to the entire CBN department several weeks ago - including staff and research professionals (both current and many who no longer work in CBN) - students started to hear rumors about a plan to radically change CBN. We received lots of questions from concerned students. To address this, we distributed a fact sheet to our current students and alums, based on the information given to us by the Provost. One thing we made clear to the students is that whatever happens, the CBN degree would not go away for currently enrolled students. The university is obligated to maintain the CBN major as long as there are enrolled

students. We were very careful not to alarm students concerning their future degree. Thus, there is no "unnecessary anxiety" amongst our students.

What is at stake is the neuroscience research that CBN faculty conduct - the very research that attracted many of our current students to MSU and the CBN major in the first place. The Provost is responding to students and alumni contacting the administration in support of CBN and CBN research. They are expressing their legitimate concerns about how the dissolution of CBN would impact their education, careers and the future of STEM research at MSU. This is a testament to the importance they place on research in general and neuroscience research in particular and the added value they see in being taught by research active faculty. Isn't one of MSU's strategic goals to create informed and engaged students, citizens and future leaders?

I am sorry that the Provost oddly felt it necessary to make this a campus-wide discussion. However, in the interest of accuracy and transparency, I feel it necessary to reply. On a positive note, the Provost's campus-wide email did provide an important piece of information to CBN faculty - it was the first official confirmation since this began in November that the administration will neither dissolve the department nor disrupt the CBN curriculum. I am glad that is finally settled. Now, if the administration wants to proceed with a discussion with all other biomedical and pre-health departments about an umbrella organization for Biomedical Sciences or pre-health education, we will be very eager participants.

Since I don't have access to the same faculty/staff list serve in which the Provost sent out his recent email, please feel free to share this with your faculty.

Thanks,
roger

Roger Bradley
Department Head
Department of Cell Biology and Neuroscience
Montana State University
Bozeman, MT 59717

Summary of CBN Current Majors and Alumnae Satisfaction Survey

In December 2018, CBN faculty reached out via social media to ask current CBN Majors and CBN Alumnae to take a short (11 question) anonymous survey designed to evaluate the relationship between research, research-active faculty and overall satisfaction with the CBN major. This document summarizes the results from that survey based on responses of the initial 200 responses (12/21-31/2018).

The only data we collected about respondent details was their graduation date, which ranged from 12/2004 to 12/2022. The cohort sampled included 75 alumnae (37%), with the remaining 126 (63%) being currently enrolled MSU/CBN students (see Fig. 1).

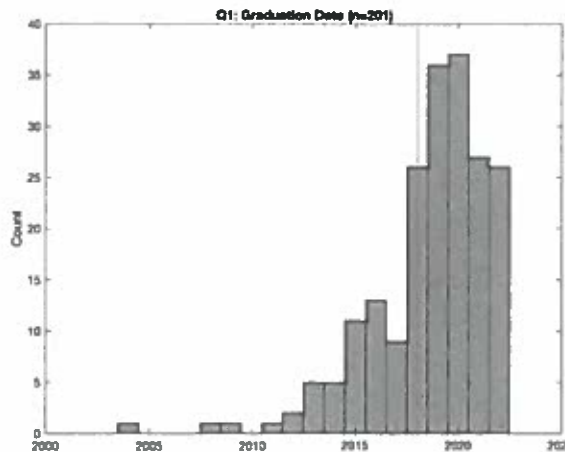


Fig. 1: Graduation dates (line indicates current vs alumnae).

We asked several questions related to overall satisfaction with MSU and the CBN program in particular. The average level of satisfaction with the CBN major was 4.3/5, with 95% of students indicating that they would recommend MSU to a friend and 91% saying they would also recommend CBN to a friend interested in biomedical undergraduate training.

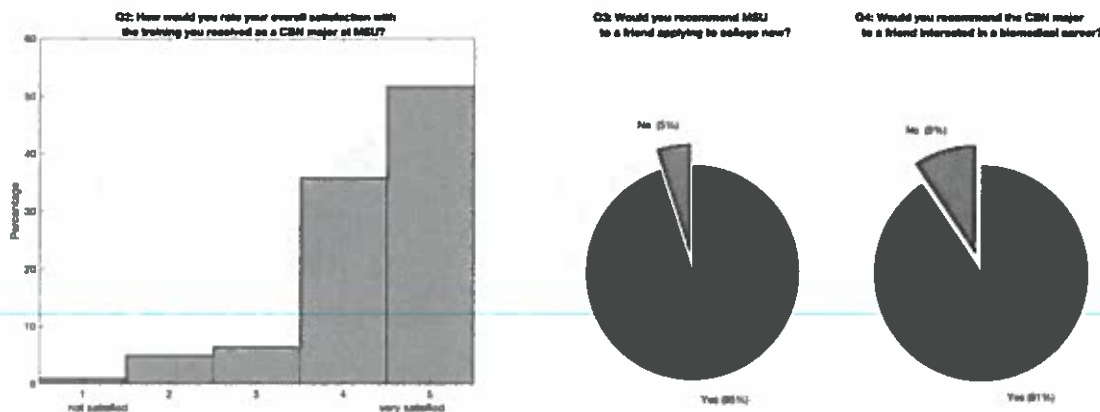


Fig. 2: Overall student satisfaction with the CBN major and MSU in general.

The survey results indicate that the CBN cohort highly valued the education obtained in the CBN major, with an average rating of 4.3/5, with 1 indicating the training they received as a CBN major was not at all valuable and 5 indicating the training was critical to their career path (see Fig. 3).

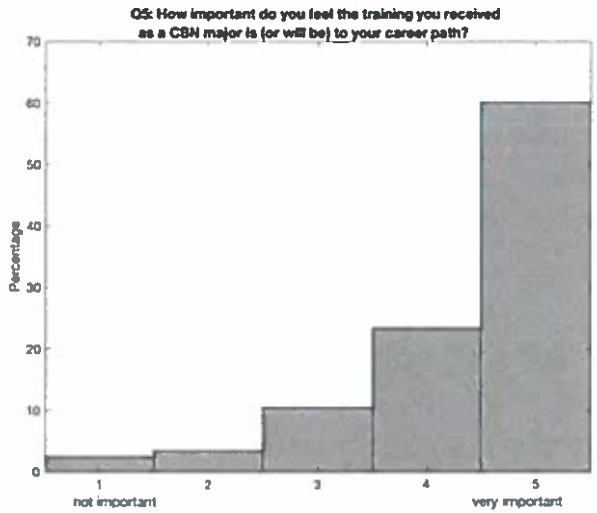


Fig. 3: Value of CBN major towards achieving career goals?

Importantly, 49% of surveyed CBN students indicated that without the availability of the CBN major they would not have chosen to matriculate at MSU. When asked to rate how important the CBN department was in selecting MSU for their undergraduate institution, the average rating was 3.9/5. Moreover, research and research-active faculty were found to be highly attractive for students, with 70% of students indicating that the opportunity to have research-active teachers was a significant factor in choosing MSU. Similarly, 72% of students indicated that having opportunities to do research in real research laboratories was also a significant factor in their decision.

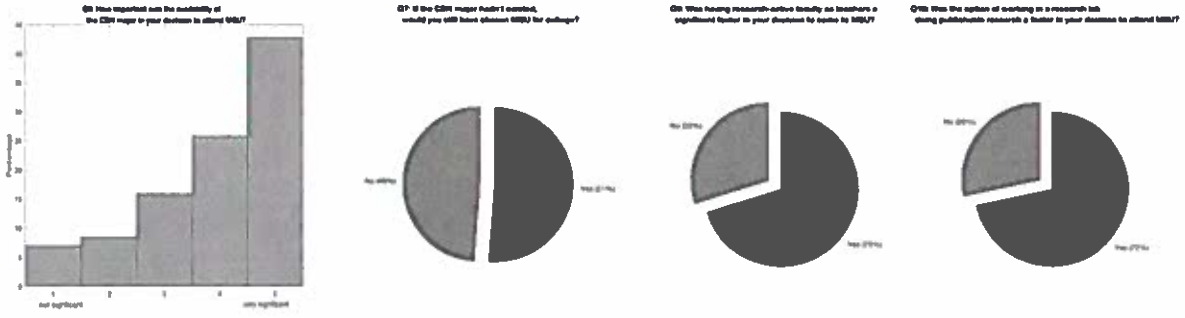


Fig. 4: Importance of research-active faculty and research opportunities in the Neurosciences in choosing MSU.

We also gave students the opportunity to supply additional, free-form information about CBN and their experiences at MSU. The following are a few representative responses from this section of the survey:

- *This degree track is important at MSU because it is more affordable while maintaining the high standards necessary for competing with more expensive schools. Montana State offers more opportunity in the field while making higher education affordable.*
- *The CBN department offers me the opportunity to explore different facets of biology and find what I love. Professor McColley's anatomy courses (specifically 409 and 411) were outstanding. Every professor I worked with has set me up to succeed in both medical school and in general. This program is a true asset to the university.*
- *The CBN major is a great preparation for a future in medicine and medical school. I had almost no interest in research before going into this major; Susie Kohout in particular has made research appealing and interesting. This major is hard but it pushed students in a really great way because so many of us want to continue on to graduate school or medical school and this prepares us for the future. To do away with this program would be a mistake and would only make MSU less unique and less innovative. Research is what keeps us learning and improving, removing that from the university would be an "in the moment" decision and not one looking towards the future as we should with the recent growth that has been overseen at Montana State.*
- *My experience thus far as a CBN major has been incredibly valuable, with classes in the department related to neuroscience and anatomy being of particular utility and importance to my education. The CBN program is preparing me to submit a competitive application to medical school, as is proven by MSU's quantifiable data as being one of the best schools in the region for pre-med students. Without this program, I would not feel as prepared to apply to medical school, and would not have had the opportunity to research and interact with many incredible research faculty who are pioneers in their fields.*
- *This was the perfect major for pre-med. It covered every thing needed in order to prepare me for my career. I think the neuroscience courses helped me develop a passion for science in general and without it, and the wonderful professors that taught them, I would be lost. I think getting rid of CBN would be a horrible idea.*
- *The CBN professors I have had while attending MSU have been outstanding. The class sizes are small enough that the professors care and build relationships with the students, all while expanding our knowledge on the subject. The opportunities within the major, such as the dissection courses and uses of cadavers are far beyond what other university's can offer and changing those would be a large mistake in my opinion. The major sets you apart from the basic biology and chemistry majors when applied to medical school, dental, pt, or anything else, while it is an extremely challenging process to make it through the program, it better prepares students for what's to come after a bachelors degree.*
- *This is a program that brings a lot of accolade to MSU and changes should not be made unless it is certain that these changes will have a net benefit on the students. Having research at the forefront of the department is pivotal to the continued success of this department too*
- *CBN provided a well-rounded bioscience education with plenty of opportunity to dive deeper into the subjects that interested me most. Chief among these were the neuroscience classes I took. The material I learned, especially in the heavily research-focused Cognitive Neuroscience course, has been broadly applicable since graduating and I'm so thankful I had to opportunity to take that and other neuroscience courses. The CBN major is well-developed as a springboard to numerous specialties in academia, medicine, research, and non-research positions in public and private sector.*
- *Making it harder to attract talented professors who are also interested in research by increasing a teaching load and simultaneously removing the ability to take on graduate students has a negative impact on the quality of education.*
- *I believe the CBN major is critical to MSU. I do not feel that it be right to reorganize it into a different major. Many students are not even seeking a medical career and are pursuing a research career instead. The CBN faculty are amazing, and they were valuable teachers, providing priceless insight on real-world application of material. I would be very disappointed to see MSU remove the CBN major.*
- *I think having a research professor offers a very unique learning opportunity for students. The classes that were offered were very interesting and helpful in my graduate training at another school. I think it would be a disservice to not have them teach these classes that are specific to the CBN department.*
- *It would be a devastating decision to remove CBN. I will transfer to another university if this gets removed.*
- *I am currently a first year medical student and my undergrad degree in CBN has been more helpful than I can put into words. I feel as if I am ahead of my classmates that didn't have CBN as an undergrad. I think this degree option is very helpful and needs to be kept in place for pre med students as well as others who enjoy the research aspects of this degree.*

In summary, the results of the survey indicate that both current and past CBN majors highly value the educational opportunities provided by the Department of Cell Biology and Neuroscience at Montana State University. Neuroscience and neuroscience research are clearly significant factors in attracting this outstanding group of undergraduates to MSU. Close to half of the students surveyed indicated that they would have gone elsewhere if the CBN major had not existed, was not taught by research-active faculty or the CBN program had not been able to provide opportunities to participate in real-world scientific research.

Although there is clearly more to evaluating a department's effectiveness than revenue, it must be noted, that since approximately half of all CBN students are "out of state", disruption to the current structure of the CBN department or the CBN major could potentially result in a net loss of \$1.5M/year in tuition revenue alone. Based on published "sticker price" data on colleges (fees, room and board, etc., in addition to tuition), that corresponds to a potential estimated total revenue loss of \$2.8M/year for the university.

CBN Major Satisfaction Survey (<5 mins)

Help us determine the future of the CBN major at Montana State! Please tell us about your experiences as a CBN major.

* Required

1. When did you graduate or expect to graduate? *

Example: December 15, 2012

2. How would you rate your overall satisfaction with the training you received as a CBN major at MSU? *

Mark only one oval.

	1	2	3	4	5	
not satisfied at all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	very satisfied

3. Would you recommend MSU to a friend applying to college now? *

Mark only one oval.

Yes

No

4. Would you recommend the CBN major to a friend interested in a biomedical career? *

Mark only one oval.

Yes

No

5. How important do you feel the training you received as a CBN major is (or will be) to your career path? *

Mark only one oval.

	1	2	3	4	5	
not important at all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	critical to my path

6. How important was the availability of the CBN major in your decision to attend MSU? *

Mark only one oval.

	1	2	3	4	5	
not important at all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	wouldn't have gone to MSU without it

7. If the CBN major hadn't existed, would you still have chosen MSU for college? *

Mark only one oval.

Yes

No

8. What other colleges did you consider (and not choose)? *

Check all that apply.

None (only applied to MSU)

University of Montana

University of Washington

Washington State University

University of Colorado

Colorado State University

University of Utah

University of California (any campus)

Other: _____

9. Was having research-active faculty as teachers a significant factor in your decision to come to MSU? *

Mark only one oval.

Yes

No

10. Was the option of working in a research lab doing publishable research a factor in your decision to attend MSU? *

Mark only one oval.

Yes

No

11. How important was the availability of Neuroscience-specific classes in your decision to become a CBN major? *

Mark only one oval.

1 2 3 4 5

not important at all very important

12. Anything else you'd like to tell us about your experience as a CBN major at MSU? (use as much space as you like)



Letter to the Bozeman Daily Chronicle submitted by Dr. Roger Bradley, immediately after publication of this letter, Dr. Bradley was removed as CBN Department Head.

https://www.bozemandailychronicle.com/opinions/guest_columnists/the-importance-of-neuroscience-research-at-msu/article_88be877f-f5d8-53d8-8b02-11efd9c4c4d1.html

The importance of neuroscience research at MSU

By Roger Bradley Guest columnist 10 hrs ago

It's as if the Bobcats just punted from the 50-yard line on the second down. That's how we should feel about a recent proposal by MSU's administration to curtail neuroscience research at MSU and change the Department of Cell Biology and Neuroscience's (CBN) mission to a primarily teaching role. This is neither in the best interests of our students nor the state of Montana.

Don't get me wrong; teaching is fundamental to a university. However, a university is not just a bunch of buildings where faculty pass along words from dusty textbooks. Universities are the places where we expand the frontiers of human knowledge. Scientific research at MSU provides students with opportunities to participate in discovery, it creates new technologies, cures diseases and helps drive our local economy.

Thanks to 125 years of combining higher education with research, MSU is a world-class university. This is evidenced in over \$120 million in externally funded research expenditures spread across multiple colleges and departments. For every federal grant dollar awarded to our faculty, an additional \$0.44 goes directly to the university to cover infrastructure costs. This means that CBN, with approximately \$10M in research expenditures from 7 research active faculty members, brings in an additional \$4 million to MSU to help keep the lights on and support further research investments. These grants also directly pay the salaries of numerous research professionals, graduate and undergraduate students who work in CBN labs.

Unfortunately, there are people in the current administration who question the importance of research and its relevance to the mission of MSU. Administrators opposed to research generally make one of two arguments. Some say that with the recent growth of MSU's student population, faculty efforts are better spent teaching more and larger classes. They say lecturing full-time is a better use of payroll dollars than having scientists working in labs, conducting and supervising research. Other administrators mistakenly claim that research doesn't pay for itself when you consider the infrastructure costs in maintaining laboratories. These folks are missing the long-term benefits of research.

So what then do MSU's research active faculty members provide to students and the state that makes research a worthwhile endeavor and a great investment? As head of CBN, I can speak directly to what our strong, active, research department brings to MSU and the state of Montana. We have a growing major of over 300 amazing students and a stellar track record of getting those students into graduate and professional schools. The acceptance rate for CBN students applying to medical or dental school averages 62 and 71 percent respectively, far above the national averages of 40 and 50 percent. In fact, CBN graduates are currently providing health care to Montanans across the state. Several of our students have received national recognition, including recent Goldwater Scholars (the nation's premier undergraduate science scholarship), Rhodes Scholar finalists, Truman Scholars and Gilman Scholars. What attracts many of these outstanding students to CBN is the research, specifically, the chance to perform groundbreaking neuroscience research under the direct supervision of a dedicated faculty mentor. Working in our laboratories our students obtain cutting-edge research skills on par with those learned at the very best universities in the country. Many of these students are co-authors on peer-reviewed, published scientific papers, greatly increasing their competitiveness for professional or graduate school. Opportunities for undergraduate research like this are far harder to come by at less research-intensive colleges and larger universities where student to faculty ratios are much higher.

Neuroscience is by nature an interdisciplinary field. CBN faculty have teamed up with biochemists, microbiologists, engineers and computer scientists from MSU, UM and across the nation, helping to put Montana on the map as a great place for biomedical research. Four successful neuroscience-focused biotech companies have been drawn to Bozeman because of neuroscience research at MSU. These companies have, in turn, obtained millions in state, federal and private funding, creating even more employment opportunities in the Gallatin Valley.

Finally, as part of our land grant mission, CBN recently partnered with the National Alliance on Mental Illness (NAMI) to establish the Center for Mental Health Research and Recovery (CMHRR) at MSU. Montana has one of the highest suicide rates in the country and mental illness touches many families in our state. The center's mission is to develop new neural technologies for the diagnosis and treatment of mental illness. Achieving this goal requires research active neuroscience faculty working to support CMHRR's community outreach efforts.

The above is only a snapshot of the successful and vibrant CBN department. Multiply that by the number of excellent research faculty across more than 30 departments at MSU and it becomes clear that investing in research and research active faculty has provided an excellent return for MSU and the state of Montana. We hope that MSU's administration will work with

us to continue this success. If you support neuroscience research at MSU, and its important role in student education, training and job creation in the state, I urge you to contact MSU, your legislators, the governor and the Montana Board of Regents. Go Cats!

Roger Bradley is head of the Department of Cell Biology and Neuroscience at Montana State.

Article appearing in Bozeman Daily Chronicle investigating Dr. Bradley's letter to the editor

BREAKING

Officer kills man at home in south Bozeman

https://www.bozemandailychronicle.com/news/montana_state_university/msu-neuroscience-takes-fight-with-montana-hall-public/article_a07988ab-ffc4-5375-980a-6902c7e62b01.html

TOP STORY

MSU neuroscience takes fight with Montana Hall public

By Gail Schontzler Chronicle Staff Writer 5 hrs ago



The sun sets on Montana Hall on Thursday evening, January 3, 2019, on Montana State campus.

Rachel Leathe/Chronicle

Bu

One of Montana State University's science departments has taken the highly unusual step of going public with an internal fight, charging that university administrators plan to cut out the department's scientific research and change it into a school focused just on teaching.

MSU has responded with a public letter saying the university has a firm commitment to research and arguing that the real issue is the department's own shortcomings.

The dispute centers on MSU's department of cell biology and neuroscience (CBN). It has about a dozen faculty members, including research scientists who investigate issues like how the brain and neurons work. Many of the 309 undergraduate majors they teach and train in labs are aiming for medical school.

Roger Bradley, associate professor and CBN department head, wrote a column, published Wednesday in the Chronicle's opinion section. Bradley urged the public to contact MSU, legislators, the governor and the Board of Regents to speak up for the importance of research to students' education, their futures and job creation.

Tracy Ellig, MSU vice president for communications, responded with a letter saying, "Nothing could be further from the truth" than claiming that MSU isn't committed to research.

In fact, Ellig wrote, MSU has been asking the department to change "because it is underperforming in many areas, including research."

The rare public dispute has upset CBN undergraduates and grad students, worried faculty members about their futures, and prompted a spate of emails with widely different versions of events.

"We've got some very frightened junior faculty and grad students and undergrads," said Thom Hughes, a longtime CBN professor. Hughes said he was "baffled" by the administration's moves. "This is top-down decision making. It was never discussed with Roger or any of our faculty."

Bradley's column described the department as "successful and vibrant," saying the seven faculty members active in research have \$10 million in research spending, and bring in another \$4 million in overhead dollars to MSU.

CBN students have a great track record, Bradley wrote, with 62 percent who apply to medical school and 71 percent applying to dental school getting accepted, compared to 40 and 50 percent nationally. Bright students are attracted to MSU by the chance it offers undergrads to do cutting-edge research in scientists' labs, he added, and many students have won prestigious national awards like Goldwater scholarships.

But Ellig's letter describes a department with significant shortcomings. He wrote that in 2004, when CBN won approval to offer a doctorate in neuroscience, it predicted attracting 15 to 20 Ph.D. students, but it "has never come anywhere close to that." Over 10 years it averaged 3.8 grad students a year.

In 2015, two professors from Colorado conducted an external review of the CBN department. They recommended fixing the "faltering graduate program," but also that MSU hire four more CBN faculty members, because the department was "stretched to the max" by a tremendous increase in undergraduate students.

Hughes argued that while MSU has grown rapidly from 12,000 to 17,000 students, CBN and other science departments have the same number of faculty members to teach more students.

In 2016, then-Provost Martha Potvin sent the department a terse warning letter saying CBN's graduate student enrollment was very low, that the faculty had the lowest teaching loads on campus, and said that it needed to have at least 20 graduate students within four years or it would be "considered for moratorium."

About the same time, Ellig wrote, the Board of Regents — who faced dropping enrollment at nearly every state campus except MSU — asked campuses to review their academic programs and set priorities. MSU focused on graduate students because the Carnegie Foundation deemed MSU to be behind in that category if it wanted to be a top-tier research university.

Because of CBN's "lack of progress in enrolling masters and doctoral students," Ellig wrote, "Provost (Bob) Mokwa has put the department's master's program into moratorium. The department has yet another chance to turn around its doctoral program in the next two years or it too will be put into moratorium.

"The bottom line," Ellig wrote, is that MSU "has been asking for three years for the department to improve, just as it has been asking every other academic and non-academic department to improve. The department is underperforming in terms of graduate students; its faculty have teaching loads that are lighter than their peers across campus ... the department's research grant activity has been, until recently, stagnant and its scholarly publication has been low."

Instead of trying to do anything to improve, Ellig wrote, "some members of the department have decided to wage a campaign and social media and in the newspaper which has unnecessarily distressed undergraduates and unfairly and inaccurately characterized out efforts to get them to do their jobs."

Ellig wrote that MSU has an obligation “to be responsible stewards of taxpayer dollars.” Hughes responded that half of CBN’s undergrads come from out of state, which means paying triple tuition, and that research grants from the National Institutes of Health and other outside sources pay for graduate students, so “they cost MSU nothing.”

Provost Mokwa sent CBN students an email last week saying despite social media posts, the department and curriculum were not going to be disbanded. He wrote that he had met Dec. 10 with Bradley, who “outlined his idea of expanding and enhancing Cell Biology and Neuroscience through a plan he titled: ‘CBN Proposal: School or College of Biomedical Sciences.’”

An email by Bradley to department colleagues made clear that the idea of a new school didn’t originate with him.

After hearing “persistent disturbing rumors” that the department was going to be dissolved, Bradley wrote, he asked for a meeting with the provost. On Nov. 29, he wrote, Mokwa presented a plan “to dissolve CBN into a new School of Human Biology,” that would focus on undergraduate biology education for pre-med students and health research.

“This was the first time I had heard of such a plan, although clearly the proposal had been in the planning stages for some time,” Bradley wrote.

The only explanations he was given, Bradley wrote, were that the University of Montana was doing something different with its health and medicine education, and that CBN’s graduate student numbers were too low. Bradley disagreed, writing that the national average for neuroscience doctoral programs is 0.84 graduate students per faculty member, and CBN averages 0.85.

“The recent campus-wide email from the Provost’s office implied that this ‘plan’ was initiated by CBN,” Bradley wrote. “The truth is that the administration came to us and told us in no uncertain terms that CBN would be dissolved into a school, a school with no basic-science research component and essentially organized exclusively for the purpose of attracting and teaching pre-medical undergraduates.

“Why disrupt what is clearly an effective training program to develop an incomplete and poorly conceived new school?”

No matter what happens to the department, Bradley wrote, he has emailed current students to reassure them that MSU is obligated to let them graduate in their major as long as they are enrolled.

“What is at stake is the neuroscience research that CBN faculty conduct – the very research that attracted many of our current students to MSU and the CBN major in the first place,” Bradley wrote.

Kevin McRae, deputy commissioner of higher education in Helena, sent an email to the Chronicle on Thursday to say that the commissioner of higher education and Board of Regents support setting priorities for academic programs and “support Montana State University’s examination of its programs for efficiency and effectiveness. We have great confidence in the ability of MSU’s faculty and administrative leadership to serve students and the state in the best ways possible.”

Gail Schontzler can be reached at gails@dailychronicle.com or 406-582-2633. Follow her on Twitter @gailnews.

Gail Schontzler

Gail Schontzler covers schools and Montana State University for the Chronicle.

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Officer kills man at home in south Bozeman

County to consider change allowing billboard in Gallatin Canyon



MSU neuroscience takes fight with Montana Hall public



State finalizes easement in Bridger foothills



message from the Dean

Rae, Nicol <nicol.rae@montana.edu>

Wed, Jan 9, 2019 at 10:43 AM

To: "Cusick, Cassie" <ccusick@montana.edu>, "Eiger, Steven" <eiger@montana.edu>, "cmgray@cns.montana.edu" <cmgray@cns.montana.edu>, "Hughes, Thomas" <thughes@montana.edu>, "Kohout, Susy" <skohout@montana.edu>, "Lefcort, Frances" <lefcort@montana.edu>, "Mazer, James" <james.mazer@montana.edu>, "Merzdorf, Christa" <merzdorf@montana.edu>, "Bradley, Roger" <rbradley@montana.edu>
Cc: "Musgrave, Lisa" <lisa.musgrave@montana.edu>, "Huttinga, Cori" <chuttinga@montana.edu>, "Cherry, David" <dcherry@montana.edu>, "Eitle, David" <deitle@montana.edu>

Dear CBN Faculty:

Over the last few years, I have been working with the departments to strengthen their research focus and doctoral education, as well as our commitment to teaching and outreach as indispensable components of our land-grant mission. To those of you who have been part of those efforts, I thank you.

Sadly, there has recently been a breakdown of communication between some members of the department and the university that is getting in the way of fostering an environment that is conducive to learning, discovery and engagement. In order to promote effective communication and to minimize distractions that impede the fulfillment of our mission, I am moving the department under the direct administration of my office.

As of today, Dr. David Cherry, Associate Dean of the College of Letters & Science, will take on administrative responsibilities for the department. Dr. Cherry will be meeting with members of the department in short order to discuss your concerns.

This change will have no impact on currently enrolled students in the department. I expect all faculty, both tenured and non-tenured, to assure our students that they will have continued access to the curriculum they expect and an unimpeded path toward graduation.

I look forward to your cooperation with Dr. Cherry as we work together to advance the department in critical areas and help CBN's students and faculty to achieve their scholarly and career goals.

Sincerely,

Nic

Nicol C. Rae, D. Phil
Dean, College of Letters and Science
2-205 Wilson Hall
P.O. Box 172360
Montana State University
Bozeman, MT 59717-2360
406.994.4288
406.994.7580 (fax)
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Article appearing in Bozeman Daily Chronicle after Dr. Roger Bradley was removed as CBN Department Head.

https://www.bozemandailychronicle.com/news/montana_state_university/msu-removes-outspoken-neuroscience-department-head/article_34a13de3-3af7-5c11-ae25-db6d8a2b8686.html

TOP STORY

MSU removes outspoken neuroscience department head

By Gail Schontzler Chronicle Staff Writer 3 hrs ago



The sun sets on Montana Hall on Thursday evening on the Montana State University campus.

Buy Now

Rachel Leathe/Chronicle

Montana State University moved Wednesday to put a college administrator in charge of the department of cell biology and neuroscience, replacing the department head who went public in a fight with Montana Hall.

The action came on the same day that Provost Bob Mokwa told the Chronicle he hoped to improve communication with the faculty and students and include them in discussing ideas for the department's future.

Roger Bradley, associate professor of cell biology and neuroscience, said the dean of the College of Letters and Science, Nic Rae, had removed his duties as department head and given that part of his job to David Cherry, the college's associate dean.

Bradley said he saw it as "retaliation" by the provost's office.

"No, this is not retaliation," Michael Becker, MSU spokesman, wrote in an email. "This change now is a step to move the department forward. There is a need to create an environment that will allow for positive, constructive and effective communication."

He added that Bradley remains a tenured faculty member and has been notified that the university will continue to pay his administrative department head's stipend.

Dean Rae wrote to the faculty, "Sadly, there has recently been a breakdown of communication between some members of the department and the university that is getting in the way of fostering an environment that is conducive to learning, discovery and engagement.

"In order to promote effective communication and minimize distractions ... I am moving the department under the direct administration of my office."

Rae added the change would have no impact on current students or their path to graduation.

"We are outraged that they fired Roger," said Frances Lefcort, a CBN professor who recently won with colleagues a \$2.9 million National Institutes of Health grant for brain research. "He has our total confidence and trust."

Removal as department head means Bradley can continue teaching and working as an associate professor but loses authority over teaching assignments, hiring staff and similar administrative duties. The department head stipend is worth several thousand dollars a year.

Last week Bradley went public with a column in the Chronicle's opinion section. He wrote the CBN faculty had learned that MSU was planning to end the department's graduate student training and scientific research and turn it into a teaching school instead.

Bradley argued that CBN is a successful department, that its scientists do \$10 million in research and that their research offers more than 300 undergraduates valuable opportunities to work in scientists' labs. Many of its undergraduates plan to apply to medical school, and they have a 62 percent acceptance rate compared to 40 percent nationally.

MSU spokesman Tracy Ellig responded that MSU remains strongly committed to research and that the real problem is that the department is "underperforming in many areas, including research."

Ellig pointed out that in 2004 when CBN won Board of Regents approval to offer a doctorate in neuroscience in cooperation with the University of Montana, the department predicted it would attract 15 to 20 Ph.D. students to MSU, but it has never come close to that. The archived online records of the March 2004 regents meeting show that was CBN's prediction.

The department currently has five graduate students, and argues it would need to hire more tenure-track faculty to expand the graduate program.

Because of the lack of progress in enrolling graduate students, Ellig said, Mokwa put the master's program on moratorium and gave the department two years to turn around the doctoral program or else it would be ended, too.

Mokwa, asked about the public dispute after Wednesday's University Council meeting, reaffirmed MSU's commitment to research and said combining research and undergraduate education has made the Bozeman campus "stand out."

Asked if he still intends to turn CBN into a teaching school, Mokwa said, "That's up to our faculty.... We're open to discussing ideas." Structural changes like that take 12 to 24 months to plan, he added.

Asked about the faculty taking the dispute public, Mokwa said, "This is not the way we typically do business at MSU. But I recognize there is a lot of interest and passion ... and I do appreciate that. I'm looking forward to channeling that passion, working with the dean and department head and faculty to channel that passion in a positive direction in support of our students."

Thom Hughes, a professor in the department, released a letter signed by 11 CBN professors and sent Monday to the Board of Regents, which rejected MSU's assertion that Bradley represented only a few disgruntled faculty members.

“To be clear, Dr. Bradley speaks for all the faculty in his department and does so with honesty and integrity,” the faculty letter said, praising his “courageous leadership” and exercising “his freedom of speech to correct the record” from what they see as provost’s misstatements.

MSU “is a public institution that should be committed to full transparency with the public, the students and the faculty it serves,” the CBN faculty letter said. “The public has a right to know when university administrators get the facts wrong, particularly when it comes to the education of our students and the future of research at MSU.”

The CBN faculty is upset over the provost’s Dec. 28 campus-wide email about the future of the department. In the email Mokwa stated it was Bradley who “outlined his idea” to enhance CBN by turning into a “School or College of Biomedical Sciences.”

But CBN faculty members contend that idea originated at Montana Hall and was forced on them top-down. Bradley wrote that after hearing disturbing rumors for months that the department was going to be dissolved, he asked for a meeting with Mokwa, who presented on Nov. 29 a plan “to dissolve CBN into a new School of Human Biology” to focus on undergraduate biology education for pre-med students and health research.

Lefcort, former CBN department head, said the faculty tried several times to meet with Mokwa. “We gave him several invitations to meet with us. He refused all of them.”

Becker emphasized that MSU has no plans to change the undergraduate program.

“All we asked for – and will continue to ask for – from the faculty is a specific plan to improve the doctoral program in the next two years after having asked for the same thing in 2015 and 2016 with no result,” Becker wrote.

“At MSU we have an obligation to provide a quality education to each and every student and, as such, we are committed to strengthening both research and our academic programs.”

Gail Schontzler can be reached at gails@dailychronicle.com or 406-582-2633. Follow her on Twitter @gailnews.

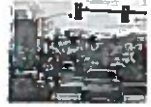
Gail Schontzler

Gail Schontzler covers schools and Montana State University for the Chronicle.

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Downtown Bozeman releases first draft of improvement plan



MSU removes outspoken neuroscience department head



Bozeman airport sets passenger record in 2018



Bozeman man pleads guilty to raping 12-year-old girl



This proposal was presented to President Cruzado at a meeting with CBN Faculty on 2019-01-14. This is the only official meeting with all CBN faculty President Cruzado has come to since this started in November, 2018. The only other meeting she participated in was a short meeting with DH Bradley and Dr. Mazer before DH Bradley was removed as DH to discuss CBN's proposal for a Biomedical School (instead of the Human Biology School).

A shared purpose: Neuroscience education at MSU in the 21st century.

A Memorandum of Understanding

We, the tenure-track faculty of the of the Department of Cell Biology and Neuroscience, share common values and goals with the MSU Administration. Both the department and the Administration care deeply about the education and future of MSU graduate and undergraduate students, and we both recognize the power of integrating scientific research with teaching to facilitate student education and success. Unfortunately, a breakdown in communication between CBN and the Administration has resulted in confusion and misunderstandings between CBN and the Administration with respect to CBN's dual teaching-research mission. In the interests of moving forward together, we respectfully submit the following proposal to scale up the educational and research strengths of MSU's vibrant neuroscience program. This plan will not only enhance the educational experience for CBN students, many of whom come to MSU specifically to learn about neuroscience and participate in neuroscience research, but will also ensure the future success of MSU as a top institution that focuses on the most important and exciting 21st century areas of study. This plan will also help CBN and the administration fulfill MSU's mission as a Land Grant institution, by providing a platform for exploring new approaches for diagnosing and treating mental illnesses that affect Montanans throughout the state. Let us work together on this shared goal by working to train the next generation of researchers and professionals to advance the exciting frontier of brain science. In this light, the following items detail what the CBN department believes would be the necessary investments in neuroscience education and research for achieving these shared goals. They will also ensure the long-term stability and success of the CBN department, CBN major and Neuroscience doctoral program at MSU:

1. The CLS Dean and MSU Administration agree to immediately instate a member of the CBN faculty as CBN Department Head, to be approved by a majority vote of the CBN faculty.
2. To make the department sustainable, the Administration commits to a five year plan to bring the CBN department up to the faculty levels specified in the most recent (2015) external review. This includes committing tenure track (TT) faculty lines coupled to competitive startup packages. This will include at least:
 - a. Initiation of a faculty search for a new TT CBN hire in the Spring of 2019
 - b. Initiation of an additional TT faculty search for CBN in the Fall of 2019
 - c. A commitment to hire an additional TT faculty member each of the following three years for a total of five additional faculty.
 - d. Initiation of a replacement TT faculty search within one semester following loss of TT faculty through attrition.

As stated in the external review, this is the minimum level of CBN staffing required to provide the critical mass of TT faculty with the teaching capacity to offer and sustain a robust neuroscience graduate curriculum. CBN department expansion will enhance both the competitiveness of CBN faculty for NIH grants and the ability of the department to recruit quality doctoral students. The return on investment for these hires will readily accrue from acquisition of additional NIH grants, which will in turn support a significant increase in the size of the Neuroscience doctoral program.

3. The Administration recognizes that Doctoral programs at MSU, including the CBN Neuroscience Doctoral Program, must be assessed in comparison to discipline-specific programs at appropriate peer institutions. The Administration further recognizes that based on those peer metrics, the Neuroscience Doctoral program is not failing and will not be considered for moratorium or closure. Any future assessment of the Neuroscience Doctoral program, either in relationship to the Doctoral Prioritization Committee Report or future external reviews, will be based on comparison to discipline-specific peer data and dialog with CBN faculty.
4. The Administration commits to working with the CBN faculty to support growing the Neuroscience Doctoral program moving forward. This support will come in the form of funding for effective recruiting, increasing student stipend levels to nationally competitive (NIH Standards) levels, commitment of GRAs, tuition waivers and continued support of the MBS graduate program.

President Waded Cruzado Date

Provost Robert Mokwa Date

CLS Dean Nicol Rae Date

VPRED Renee Reijo-Pera Date

https://www.bozemandailychronicle.com/news/montana_state_university/msu-neuroscience-dispute-goes-to-faculty-senate/article_e228f552-b7e3-541a-b9ce-10beba5435d8.html

EDITOR'S PICK

MSU neuroscience dispute goes to Faculty Senate

By Gail Schontzler Chronicle Staff Writer 13 hrs ago



The sun sets on Montana Hall on Thursday evening, January 3, 2019, on Montana State campus.

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Montana State University's embattled neuroscience department is asking the Faculty Senate for backup, while the university's No. 2 administrator denies he is trying to dissolve the department or undermine shared governance.

About 30 faculty representatives attended the Faculty Senate meeting Wednesday and raised questions but took no action on the controversy surrounding the department of cell biology and neuroscience (CBN).

Steve Stowers, associate professor and senator representing CBN, read a statement saying everyone in Faculty Senate should be concerned about MSU's actions and urged sending a message that "these governing tactics are not acceptable."

Provost Bob Mokwa, MSU's second in command after President Waded Cruzado, also spoke, saying he has no plans to dissolve the CBN department and conversations about its future are ongoing. Mokwa said he wants to move ahead and work toward "healing."

Stowers criticized the administration's "firing" of CBN department head Roger Bradley last week. Bradley was removed from the department head position, though he still has his job as a tenured associate professor, after writing a column published in the Bozeman Chronicle objecting to MSU's plan to cut out CBN's research and turn the department into a school focused on teaching.

"To believe that his removal was anything other than retaliation for exercising his freedom of speech is ludicrous," Stowers said. It sends the message that "expressing a viewpoint that dissents from that of the administration puts you at risk of retribution. This is not shared governance. This is governance by fear and intimidation."

Shared governance is the fundamental principle that as a modern university, MSU should give faculty, students and staff a strong voice in decisions and administrators shouldn't dictate in a top-down manner.

Mokwa said he absolutely respects shared governance. He said it takes a long time to develop a new school proposal and nothing leaves the campus to go to the Board of Regents for approval until the Faculty Senate has reviewed it.

Mokwa said the decision to remove Bradley as department head and replace him with an administrator from the College of Letters and Science was made by the college dean as a way to improve "communication." He blamed misunderstandings and miscommunication on the controversy appearing in the media.

Frances Lefcort, a CBN professor, defended Bradley, saying he had been forced to go public by the administration's actions.

"I'm speaking from occupied France," Lefcort said, referring to the department's oversight by an outside administrator, who has a background in Roman history rather than neuroscience. "It's not misinformation or misinterpretation. Facts matter.... We reached out in self defense."

Michael Reidy, history professor and former Faculty Senate chair, called the situation “a mess.” Reidy said he was concerned about upholding shared governance and that research is vital to MSU. Valérie Copié, a biochemistry professor, spoke of the importance of research, trust and mutual respect.

Abbie Richards, current Faculty Senate chair and associate professor of chemical and biological engineering, suggested the wisest course might be to discuss the issues in private rather than public meetings, but said she recognized CBN faculty’s right to speak up. Richards said she and chair-elect Eric Austin of political science have been involved in discussions with and about CBN behind the scenes. The situation is fluid, she said.

“Our hope is for a mutual agreement on a path forward that yields a positive outcome for faculty and the students we teach,” Richards said.

One senator said colleagues in his department have asked him, “What the hell is going on?’ I don’t know what to tell them.”

CBN has 10 tenure-track faculty members, Stowers said. Their research often focuses on the brain and neurons. The department has 300 undergraduate majors, many of whom are hoping to go to medical or dental school. Mokwa said any changes in the department shouldn’t affect students.

Gail Schontzler can be reached at gails@dailychronicle.com or 406-582-2633. Follow her on Twitter @gailnews.

Gail Schontzler

Gail Schontzler covers schools and Montana State University for the Chronicle.

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Land board to take up logging project south of Bozeman next week



Better Business Bureau announces top 10 scams in Montana in 2018

Scam Type	Frequency
Identity Theft	15
Phishing	12
Home Improvement	10
Business Opportunity	8
Online Dating	7
Lottery	6
Travel	5
Real Estate	4
Charity	3
Government	2

BREAKING Officials seek missing teen last seen at Helena High

https://helenair.com/opinion/columnists/msu-may-back-away-from-neuroscience-research/article_9ae519a7-9888-5b49-a7a1-e218dab71ca9.html

GUEST VIEW

MSU may back away from neuroscience research

Jan 31, 2019 Updated Jan 31, 2019

TRY 1 MONTH FOR \$5



If you are as concerned as we are about Montana having the tragic distinction of being No. 1 in the nation for suicide, then you understand the need for biomedical research on mental illness. Unfortunately, changes to the Department of Cell Biology and Neuroscience (CBN) at Montana State University (MSU) proposed by the MSU Administration could shutter active research on this problem and severely limit options for neuroscience research and training in Montana. These changes will deprive Montana

students of a first-rate education in neuroscience, throttle a rapidly developing Montana bioscience industry and may delay or even prevent cures for mental illness, Alzheimer's disease and other neurological disorders affecting our state. Most disturbing, restructuring this highly successful and popular program is completely counter to MSU's Land Grant mission because it will deprive students from ranches and small towns across Montana of the educational opportunities afforded students from urban areas like Boston or San Francisco. That is unfair, the very antithesis of our Land Grant mission and a violation of our responsibilities as educators to the students who choose to attend MSU.

The underlying cause of suicide, mental illness, neurodegenerative diseases like Alzheimer's, Parkinson's and Multiple Sclerosis, PTSD, and opioid and other drug addictions is malfunctioning nerve cells in the brain. Clearly social and medical services are required to treat these conditions, but we also need biomedical research to develop cures and preventative treatments. This need, in Montana, across the US and around the world, has made neuroscience one of the fastest growing, exciting and rapidly advancing areas of biomedical research.

How can Montana be part of the cure? Almost twenty years ago MSU had the foresight to establish a department specifically dedicated to clinically-relevant basic neuroscience research. Since then CBN has graduated more than a thousand majors, many of whom are now highly successful scientists and physicians working in Montana and throughout the country to tackle these challenging problems. According to our students and alumnae, the CBN department has been an effective launchpad for MSU students, propelling them into careers helping to solve some of the most pressing problems facing Montanans today.

One example of CBN's commitment to MSU's Land Grant mission is our efforts, in partnership with the National Alliance on Mental Health (NAMI), to establish MSU's Center for Mental Health Research and Recovery, a center specifically dedicated to developing new tools for the diagnosis and treatment of mental illness. CBN's focus on neuroscience training and research has drawn neuroscience biotech companies to the Bozeman area, companies that, like our department, employ a substantial number of people from Gallatin Valley, and collectively have a considerable impact on the Montana

economy. In fact, the negative economic impact to MSU and Montana associated with the loss of neuroscience research at MSU is estimated to be over \$11.6 million per year (not including effects on the local biotech industry.)

While classroom education is an important part of undergraduate education, science education truly comes alive in the laboratory, particularly when students can work on their own research projects. CBN gives our students the benefit of intensive one-on-one interaction with faculty in our labs. The CBN labs currently have over \$12,000,000 in open grants from the National Institutes of Health and National Science Foundation. Finally, our Ph.D program, which the administration has repeatedly threatened to eliminate, cost neither MSU nor the state taxpayers a dime: CBN faculty support students entirely off of federal research grants, paying both tuitions and salaries. Cutting the neuroscience program will therefore not save any MUS funds. In fact, it would actually reduce tuition income, not to mention negatively impact MSU's Land Grant mission to provide graduate educational opportunities to Montanans.

That MSU would even consider backing away from neuroscience research is both astonishing and disheartening. If we want these life-changing educational opportunities to continue to be available to our students, and for the important scientific advances that will help solve the problems of mental illness to be made in Montana, MSU must commit to its vibrant neuroscience community and support neuroscience research in CBN. If this is of concern to you, please contact the MSU administration, the Commissioner of Higher Education, the Governor and the Board of Regents.

This opinion is signed by the following faculty members in the Department of Cell Biology and Neuroscience at Montana State University in Bozeman: Professor Frances Lefcort, Associate Professor Steven Eiger, Associate Professor Steve Stowers, Associate Professor James Mazer, and Professor Thom Hughes.

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A Five Year Plan for the Neuroscience Doctoral Program at Montana State University

Why MSU needs the Neuroscience Doctoral Program

The brain is arguably both the most complex and least understood biological system we know of. Brain dysfunction is the root cause of many forms of mental illness plaguing Montana and the nation. This includes Alzheimer's disease, depression, substance abuse and addiction, as well as suicide. The international scientific community, has identified brain research and development of new approaches for treating brain dysfunction as a top priority, making neuroscience one of the fastest growing and most exciting areas of biomedical research. As a Land Grant university, it is important that MSU provide training for students, both undergraduate and graduate, to participate in this scientific revolution. A robust doctoral program in neuroscience is the foundation of virtually all research in the CBN department. CBN faculty depend on graduate students to generate the data that brings in the substantial funding required to maintain and operate neuroscience laboratories. Those labs make it possible for CBN to consistently deliver a high quality CBN undergraduate education, both in the classroom and in the lab. This intensive hands-on training is what gives MSU students an edge when applying to graduate programs, medical school and entering the biomedical workforce and qualifies them for the most prestigious national awards. The Neuroscience graduate program is inextricably linked to the CBN undergraduate major: without the graduate program, CBN labs will close and undergraduates will lose the opportunity to acquire a highly-mentored research experience. Ph.D. students work with and help train many of our undergraduate research students, acting as a multiplier and significantly increasing the number of undergraduates that can work in our labs. A vibrant graduate program attracts research active neuroscience faculty who can provide both high quality classroom instruction and cutting-edge research experiences to undergraduates. The basic research performed by CBN doctoral students is an essential supporting component of the Center for Mental Health Research and Recovery's scientific mission. Finally, neuroscience is by definition an intrinsically interdisciplinary field of study; students who train in neuroscience will collaborate with scholars in several disciplines including computer scientists, engineers, psychologists, biochemists, physicists and geneticists providing them with a powerful tool kit to best solve our future societal challenges. In summary:

1. Neuroscience is currently one of the fastest growing fields of biomedical research. There is a growing demand for both graduate and undergraduate training in the neurosciences. Universities across the country are scrambling to create or grow neuroscience programs. MSU is already well ahead of curve on this and should build on that advantage by supporting the research component of CBN's dual teaching-research mission.
2. The Neuroscience Doctoral Program is a critical component of CBN faculty research: graduate research provides the data and advances to make it possible to acquire the federal funding required to sustain biomedical research.
3. Undergraduate education in CBN is significantly enhanced by the CBN doctoral program. Conversely, loss of the graduate program, which would eliminate critical

undergraduate research opportunities and degrade the overall quality of classroom teaching, will have an immediate, direct negative impact on the CBN major and careers of future CBN majors.

4. The basic neuroscience research performed by MSU's Neuroscience doctoral students in CBN laboratories is an essential component of MSU's Center for Mental Health Research and Recovery, whose mission is to develop new neural technologies to understand and treat brain dysfunction that can be used to treat the pressing mental health issues facing Montana, including Alzheimer's disease, suicide and addiction.

Overview of the Department of Cell Biology & Neuroscience and the Neuroscience Doctoral Program (as of Jan 2019)

- 8 research-active faculty (Lefcort, Hughes, Merzdorf, Kohout, Mazer, Stowers, Bradley, Gray).
- 6 externally funded faculty (Lefcort, Hughes, Kohout, Mazer, Stowers, Gray)
- 5 current Neuroscience doctoral students (and PI)
 - Thuen (Mazer), Hoffman (Gray), Thomas (Hughes), Molina (Hughes), McKinney (Stowers)
 - 0.83 students / funded faculty
- >\$12,000,000 in open grants
- >\$300,000 in grant expenditures/TT faculty - highest in CLS
- Only active doctoral student "training grant" on campus

Plan Goals

This document is intended to clarify the current state of the MSU Neuroscience Doctoral program, the factors that determine graduate student carrying capacity for Neuroscience Doctoral programs nationwide, establish the specific carrying capacity of MSU's Neuroscience Doctoral and to establish long term goals for the program and a path to achieve those goals over the next five years.

- **Enrollment Goals: To reach a target level of 2 doctoral students per externally funded principle investigator within five years¹.**
- **Curriculum Goals: To develop a robust neuroscience curriculum for first and second year Neuroscience Doctoral students within two years.**

This plan establishes specific target metrics to be used for assessment of the Neuroscience Doctoral Program.

¹ At this time, this would correspond to a target enrollment of 12 students within 5 years. If the CBN faculty size should increase or decrease, this target number should be adjusted to reflect these changes.

Achieving and sustaining enrollment targets

Two primary factors determine the training capacity of Neuroscience doctoral programs at MSU and other institutions: (1) the amount of available funding to recruit and support students and student research and, (2) the number of participating faculty who can serve as effective faculty mentors for students (see Constraints section below).

Therefore, a key to reaching and sustaining an enrollment level of 2 students/funded-PI is securing a stable source of external funding to supplement individual investigator research grants, support student recruiting, first year lab rotations and new curriculum development. Past performance of the Neuroscience Doctoral program indicates that the current enrollment level of 0.83 students/PI (higher than the national average; see below) is sustainable. Both the CBN department and the MSU administration would like to see the size of the program increase, consistent with the growing national and international focus on neuroscience research. Successful growth beyond the current enrollment level will require either (i) securing external training grants (e.g., NIH T32, NSF NRT, NSF EPSCOR, or awards from private foundations) or (ii) increased success obtaining individual graduate student research fellowships (e.g., NIH NRSA/F31, NSF NGRF, etc) or (iii) recruitment of additional research-active faculty.

The department has recently had some success obtaining external training grant funding for graduate students. In 2016, CBN faculty applied for and received an NSF EPSCoR award specifically for the purposes of graduate student training in the Neurosciences. This renewable, multi-site award, with Dartmouth College as the lead, currently supports 3 Neuroscience graduate students in CBN and has sufficient funds to recruit and support an additional 1-2 students through the end of the current award (2020-21). In addition, EPSCOR funds were used in Fall 2018 to support effective graduate student recruitment for both the Neuroscience and MBS doctoral programs and the EPSCoR award will continue to support recruiting efforts for the duration of the award.

The department has recently developed and offered a 3 credit graduate seminar course focused on developing and writing effective federal grant proposals in the Neurosciences (Thom Hughes). Over the course of the semester students develop a competitive grant application that can be submitted as either an NIH NRSA/F31 or NSF GRPG at the end of the course. As a direct result of this course, Rosana Molina, a current Neuroscience doctoral student, applied for and was awarded a three year NIH F31 individual research fellowship in 2018 that covers both stipend and tuition.

The National Institute of General Medical Sciences (NIGMS) recently announced a new training grant program ([PAR-19-102](#)) designed to fund training and advance development of small-to-medium sized biomedical graduate education programs. We propose to take the lead on developing an interdepartmental proposal for this RFA to be submitted in Spring 2020. If awarded, this grant could potentially fund incoming students for the first three years of training, at which time the support obligations would transfer to the PI. This mechanism would secure the long-term viability and success of our doctoral program, as well as help biomedical researchers in other departments on campus attract and retain doctoral students.

Finally, it is important to note that size of US Neuroscience Doctoral programs is correlated with the number of participating faculty, with each additional faculty member directly resulting in an increase in student enrollment by 0.45 students. This means that any increase in the number of tenure track, research-active CBN faculty would translate directly into an increase in student numbers, probably within 1 year of hire. Conversely, loss of faculty, will reduce the capacity of the program. Therefore, to sustain a robust doctoral program, it is essential to replace CBN faculty who leave or retire from MSU in a timely fashion to avoid any potential loss of momentum or to avoid putting existing or future training grants in jeopardy.

Timeline for Increasing Enrollment

We propose a target enrollment level of 2 neuroscience doctoral students for every funded, research-active CBN faculty member. It will take some time to reach this level, since it will require a search for external funding sources and extensive new student recruiting efforts. However, we believe this enrollment level, particularly if we are able to obtain external funding for the program and/or support from MSU, can be achieved within 5 years.

Expanding the Graduate Neuroscience Curriculum

In addition to the successful grant writing course noted above, CBN faculty will transform our current one semester Neuroscience principles course (BIOH 510) into a new team-taught, two-semester series offered sequentially in alternate years that all Neuroscience doctoral students will be expected to take and pass, in addition to the grant writing course, before advancing to candidacy. All core neuroscience graduate courses will be taught by tenure-track faculty.

1. Principles of Neuroscience.

The first course will be an introductory course where critical components of neuroscience are taught by the entire CBN faculty. Each professor will teach a two week module intended to cover the basic methods and classical, foundational literature in their specific research area to provide a broad, introductory overview of the entire field of Neuroscience to first and second-year CBN graduate students in a single semester. This course will combine faculty lectures with student-led discussion of primary research materials. Faculty will provide an introductory lecture identifying and introducing the basic questions and methods used in the research area at the start of each module (1 class) and the remainder of each module (3 classes) will be based on student-led, seminar-style group discussion of assigned primary research materials.

2. Current Research in Molecular and Systems Neuroscience.

This course will focus on current, state of the art Neuroscience research (in contrast to historical, introductory material). This offering will also be team taught by all CBN faculty, again in two week modules. Instead of focusing on methods and historical developments in the field, each module will focus on current, cutting-edge research papers that are directly relevant to ongoing research at MSU. This course will be exclusively discussion based.

In both of the new courses, students will read and discuss material in each focus area under the supervision of CBN faculty. As noted above, these courses will be offered in alternate years (initially), alternating with the existing grant writing/proposal development course discussed

above. By the end of their second or third year (depending on entry path; see below), all Neuroscience students will be expected to:

1. Take and pass all three core courses.
2. In discussions with their mentor(s), identify and take any additional courses (CBN or other departments) that will address critical knowledge or training gaps that students must correct to effectively perform or complete their thesis work.
3. Develop an F31 proposal (or equivalent). If eligible, students will be expected to actually submit this proposal to an appropriate funding agency. Regardless of whether or not the proposal is submitted, the proposal will serve as the initial basis for each student's thesis proposal.
4. Convene a candidacy exam committee and schedule a candidacy exam. Candidacy exams must be completed by either the end of their 3rd year, for students entering through the MBS program, or 2nd year, for direct-admit students.
5. Publish at least one peer-reviewed, first author article prior to their thesis defense.

These required core courses and new guidelines will provide students with the breadth of training required to take and pass candidacy exams. The resulting F31 proposal from the grant writing course, regardless of whether or not the proposal is funded, will provide a solid foundation for a thesis proposal that can be presented to their thesis committee for approval, in addition to providing critical grantsmanship training.

The faculty will work with the Graduate School and Graduate Dean to develop a detailed description of the new curriculum, detailing progression towards candidacy, defense, required coursework and a student handbook. When complete, these materials will be submitted for review and approval via standard MSU curriculum approval procedures.

All tenure-track CBN faculty will participate in teaching the core courses outlined above, as well as serve on dissertation committees, based on appropriate expertise.

Timeline for New Curriculum

This proposal seeks to establish a 3 course core-curriculum for all Neuroscience doctoral students. The grant writing courses is currently being offered and will continue to be offered annually. The two new courses ("Principles" and "Current Methods") will be rolled out and offered as early as Fall of 2019, and alternate years thereafter.


Time to degree

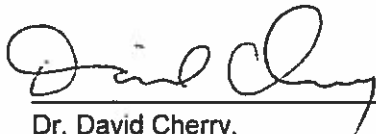
The current US national average time-to-degree for Neuroscience Doctoral programs is 5.6 years (2017 Report of Neuroscience Departments & Programs Survey, "NDP report"). This number is close to the current time-to-degree of MSU Neuroscience students, therefore, we propose that a sustainable target is to maintain parity with the national, published averages in our discipline.

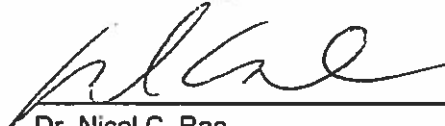
Use of GTAs

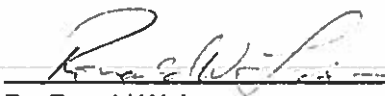
As noted above, the primary method for funding Neuroscience Doctoral training at other Universities is through GRAs with funds (stipend and tuition) coming either from institutional training grants, internal funds/waivers or federal awards directly to faculty or students. The primary training focus in the Neuroscience doctoral program is research. Students are expected to complete coursework required to advance to candidacy and support their thesis project. We will encourage, but not require, students to participate in the teaching of a Neuroscience-related course (1-2 semesters) during their doctoral training, for pedagogical purposes. If students opt to do this, we will use GTA funds to partially support those students during teaching semesters.

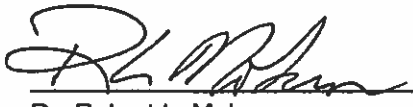
Approved February 19, 2019

 2-19-19
 Dr. Roger Bradley, Date
 Associate Professor, Cell Biology and Neuroscience

 2/19/19
 Dr. David Cherry, Date
 Associate Dean, College of Letters and Science

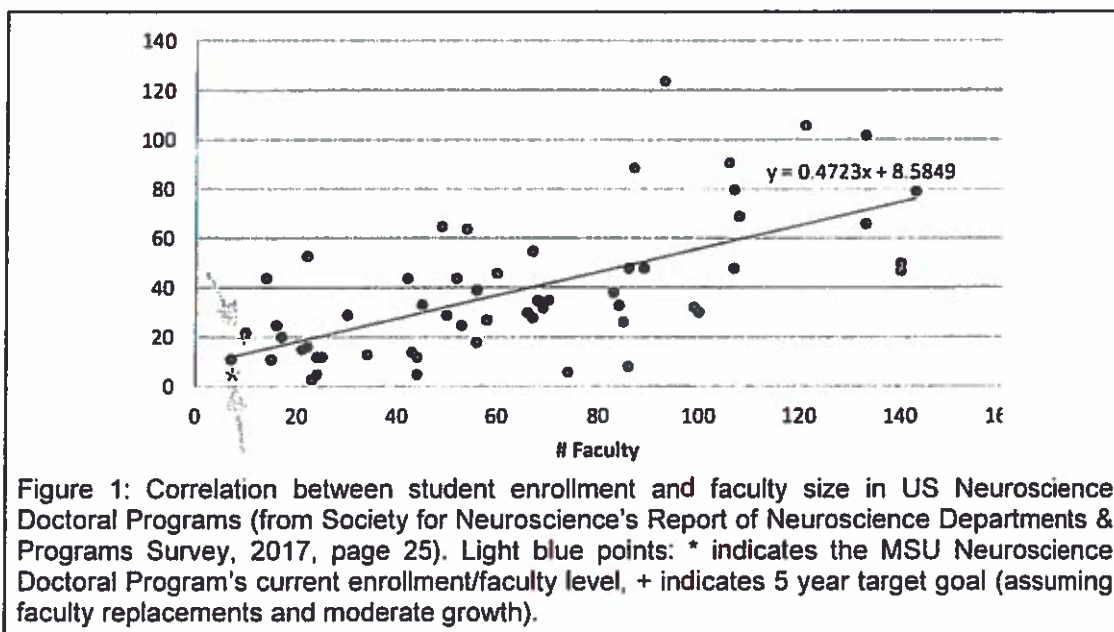
 2/19/19
 Dr. Nicol C. Rae, Date
 Dean, College of Letters and Science

 2/19/19
 Dr. Ronald W. Larsen, Date
 Vice Provost and Interim Dean, Graduate School

 2/20/19
 Dr. Robert L. Mokwa, Date
 Executive Vice President for Academic Affairs and Provost

Appendix: Current Enrollment Data for US Neuroscience Doctoral Programs

Neuroscience doctoral students at MSU, as in most other US Neuroscience doctoral programs, are *primarily* funded through external grants (typically NIH and NSF) awarded to individual faculty members. These grants generally cover student stipends, tuitions, fees and research expenses. In the majority of Neuroscience programs, doctoral students teach primarily to acquire teaching skills, *i.e.*, teaching is part of their training and not a source of income. Students typically teach only 1-2 semesters of the 15+ total semesters of graduate training (including summer semesters). The rationale for this is to allow students to focus on their training as research scientists. As a result, graduate Neuroscience students at most peer institutions are supported by GRAs (or their equivalent) and not GTAs. To be competitive on a national level in recruiting qualified students to MSU, it is essential that MSU Neuroscience doctoral students be primarily funded through GRAs. Note that this does not necessarily preclude students from teaching and receiving GTAs -- either as part of their training or because they have a specific interest in teaching. However, because MSU's Neuroscience program is 100% funded from external grants, the Neuroscience doctoral program's training capacity is strictly limited by the number of funded researchers participating in the program. This means that the target enrollment for the Neuroscience doctoral program must be intrinsically linked to the number of funded investigators.



The most recent NDP Report, published in 2017 by the Society for Neuroscience, the largest professional society in the field, with more than 37,000 members, indicates that the national average number of doctoral students per Neuroscience faculty member is significantly below one:

The number of students in a program is correlated with the number of faculty associated with the program ($r = 0.41$, $p < 0.001$) such that the more faculty

associated with a program, the greater the number of students in the program. For this comparison, the average number of students in a program was 39 (median: 33) and the average number of faculty was 65 (median: 59) [NDP Report, page 25].

Data in the NDP report are derived from a detailed survey of more than 60 participating Neuroscience doctoral programs undertaken every two years. The data indicate that the average capacity of Neuroscience doctoral programs in the US is about 0.6 students/faculty, averaging across all program types and sizes. The current enrollment level in MSU's Neuroscience doctoral program slightly exceeds this level (0.83 students/funded faculty). However, with support, we believe it is possible to increase the enrollment numbers over the next three years to 1 student/funded professor and reach a level of 2 students/funded professor within five years.

It is critical to note that Figure 1 clearly indicates that the capacity of any Neuroscience doctoral program is positively correlated to the number of research active faculty participating in the program; each additional PI increases the program's carrying capacity by about half a student. The student-faculty ratio is determined by at least two factors: (1) the intensive nature of the mentor-mentee relationship in the Neurosciences and (2) the relatively high cost of training a Neuroscience graduate student (currently around \$50k/year or more to provide nationally competitive stipends and cover tuition costs alone), which is completely borne by the faculty, and not the university. Given these constraints, the size of the Neuroscience doctoral program will always be linked to the number of faculty.

Therefore, it is always possible to increase the absolute size of the doctoral program by increasing the number of faculty. However, this could only be done with support (FTEs and/or other financial resources) from the MSU Administration. It is important to note that overall program size is a factor in determining long-term viability and the robustness of a Neuroscience program. It is difficult to obtain the necessary NIH and NSF funding to support graduate training, development of new core facilities and interdisciplinary large-scale research projects with a small cohort of faculty working in disparate research areas (note that at our current size, CBN rank as one of the smallest Neuroscience departments in the US; see Figure 1). Once a critical mass of faculty are available to collaborate on high-value federal awards, then the number of doctoral students per funded faculty can grow more readily. Moreover, most NIH doctoral training grants (T32s) typically require a minimum number (usually about 10) of NIH-funded participating researchers.

The blue points in Figure 1 indicate current (*) and target (+) enrollment/faculty size ratios (now and in 5 years). Our long term goal is to replace 3 faculty who have left (Jacobs, Noudoost and Byerly) with research-active faculty and work with the administration to hire at least one additional research-active neuroscientist, which would bring the total number of research faculty up 10, making the program theoretically capable of supporting 20 PhD students (Figure 1, light blue +).

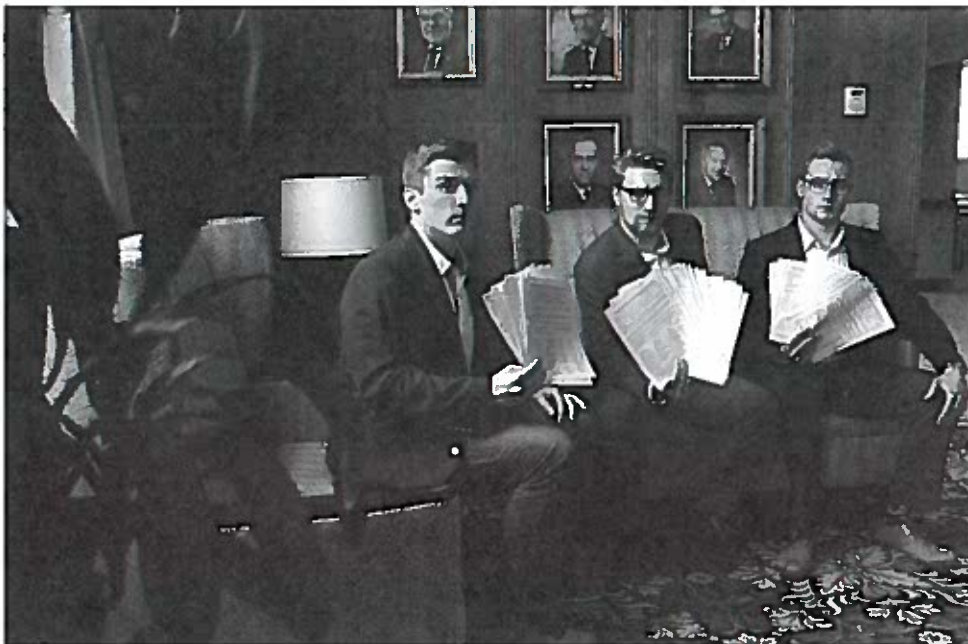
Article in the Bozeman Daily Chronicle documenting student-led efforts to save the CBN Department and major at MSU.

https://www.bozemandailychronicle.com/news/montana_state_university/students-petition-montana-state-to-save-neuroscience-department/article_64ad8eb8-d6c4-5784-8607-4e0d2cc47a7f.html

TOP STORY

Students petition Montana State to save neuroscience department

By Gail Schontzler Chronicle Staff Writer 2 hrs ago



From left, Montana State University students Luke Channer, Colin King and Derek Hetherington pose for a photo with the petition they organized.

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Rachel Leathe/Chronicle

Students at Montana State University have delivered petitions with hundreds of signatures to administrators asking them to save the department of cell biology and neuroscience from a slow death.

The petition asks MSU administrators to avert “the possibility of the complete dissolution of the department.”

If cell biology and neuroscience disappears, the petition says, that would undermine the value of students' degrees, hurt undergraduate research and harm MSU's efforts to keep its national ranking as a "very high research" university.

Students behind the petition said 537 people signed in just five days.

"We thought a petition from hundreds of students would have more authority than the three of us," said Derek Hetherington, 22, a senior from Bozeman who is about to graduate in cell biology and neuroscience.

"We're not trying to cause trouble. We're trying to stand up for and ensure the future of our department, and maintain the integrity and value of our degrees."

The Chronicle requested the chance to interview Provost Bob Mokwa to hear MSU's side of the issues. Instead MSU released a letter President Waded Cruzado wrote Tuesday to students.

"I am grateful to students who reached out to me for information and I am writing today to give you reassurance," Cruzado wrote.

She said she wanted to give students working on the cell biology and neuroscience major "peace of mind that you will be able to complete your chosen course of study" and assure graduating students that "your University will remain a leader in teaching and research in the biomedical sciences and that future students will have the same opportunities you did.

"You can have confidence that the courses and the quality experiences you have come to expect will remain intact," Cruzado wrote.

Controversy over cell biology and neuroscience first became public in January when then-department head Roger Bradley wrote an opinion column in the Bozeman Chronicle charging that administrators planned to cut out the department's scientific research and turn it into a school focused just on teaching.

MSU responded then by saying that it has a strong commitment to research and that the real problem was that the department failed to live up to its own promises from years ago to expand its research and train more graduate students.

Provost Mokwa put the department's master's degree in moratorium and gave the department two years to turn around the Ph.D. program or else it too would be put in moratorium. Bradley kept his job as an associate professor but lost his department head position to an administrator

with expertise in ancient Roman history, not brain science.

Hetherington said it seemed to him the department was “getting set up for failure.” Montana Hall demanded cell biology and neuroscience bring in more grad students, he said, but last year denied it the chance to hire a new faculty member — just what’s needed to bring in more grad students.

Despite reassurances that any changes wouldn’t hurt undergraduates, Colin King, 23, a senior from Belgrade, said he and other petitioners fear the negative publicity and threat of the department dissolving could make it impossible to get into medical school.

King said a friend interviewing at a medical school in another state “was asked point blank, ‘Why should we value your degree when your own institution doesn’t?’”

“That frankly terrifies me,” Hetherington said. He said the idea MSU floated last fall to replace the department with a “School of Human Biology” would be just “a degree factory” turning out students with “generic premed degrees.”

“Many students decide to choose MSU because of neuroscience and the opportunity to do research in labs,” said Luke Channer, 21, a junior from Corvallis.

The student petition asks MSU to hire quickly three tenure-track faculty members to fill vacancies and replace research professors who are leaving. If they’re not replaced, it will hurt the quality of education, Hetherington said.

If someone from another department fills in to teach outside their field, they’d essentially just be teaching from a textbook, King said. Working with professors who are active in research, he said, “has instilled a level of passion and excitement I would not get from a textbook.”

The petition asks the university to issue a public statement in writing that MSU is committed to the cell biology and neuroscience department’s future. It also asks MSU to appoint a department head immediately from within the cell biology and neuroscience faculty. Cruzado’s letter did not address those issues.

Hetherington said he is “passionate about neuroscience,” which studies the brain and nervous system. “It’s absolutely fascinating,” he said, “what makes us tick, what makes us human.”

The department also runs classes with human cadavers, which students said give undergrads a rare opportunity. Channer said that's what got him interested in medicine. "It's 100 percent different looking at a model and a body," he said.

Hetherington said students gathered petition signatures because they haven't been able to meet with anyone at Montana Hall who will tell them what MSU intends to do. Instead of transparency, he said, there has been "radio silence."

"MSU stresses transparency and shared governance," Channer said. "They're not listening to faculty or students."

The turmoil has already hurt the department, where the number of majors has slipped to around 285, down roughly 40 from last year, the students said.

When Montana University System campuses close down programs or majors, they generally assure students that majors already in the pipeline will be allowed to finish.

Thom Hughes, professor of cell biology and neuroscience, said he plans to leave or retire. He said his brain research has been funded by the National Institutes of Health since 1986.

The department's problems are part of a bigger picture at MSU, Hughes argued. As MSU's student enrollment has grown dramatically from 12,000 to 17,000 students, the university has failed to hire tenure-track faculty who do scientific research at the same fast pace, he charged.

"We grew by 40 percent and we didn't grow the faculty, and they weren't honest with the faculty or students about the ramifications," Hughes said. "They're going to backfill with adjuncts. That's what they've done but never admitted it."

Hughes compared the department's situation to "Chapter 11" bankruptcy.

"A neuroscience department run by a historian has no chance of ever hiring a neuroscientist," Hughes said.

Frances Lefcort, professor of cell biology and neuroscience, said the department is in "total limbo."

"I'm going to leave," Lefcort said, though she hopes to keep doing brain research on her \$2.9 million National Institutes of Health grant. "I can't work in an environment that doesn't support research."

“We still have no clue,” she said. “The provost refuses to meet with us.”

Hughes and another key faculty member, “two of our rock stars,” are leaving, Lefcort said, and once they’re gone students may not get classes they need to graduate. Soon the department will be down from 10 faculty members to six or four, she said.

“Students came in good faith and MSU defaulted on its promise,” she said.

Adjuncts can be great instructors, but in sciences getting students working in labs is the way to really learn, she said. The college dean said MSU plans to use the adjunct model.

“They’re cheap, they’re on temporary contracts, they don’t have to have Ph.D.’s,” Lefcort said. “If you only use the model of adjuncts, you’re depriving Montana students of a first-rate education.

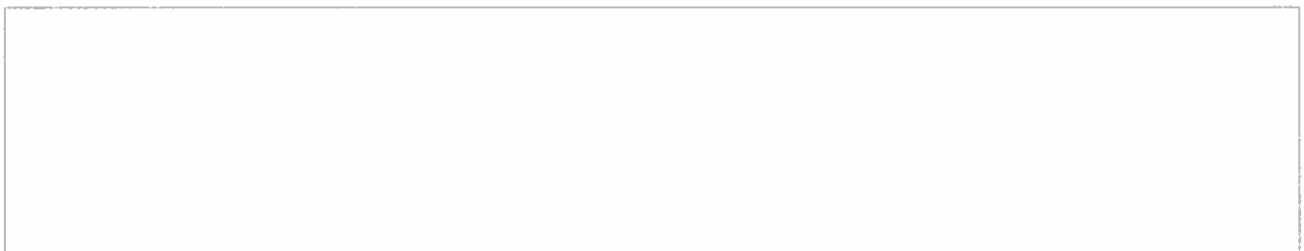
“They’re saying students in Montana don’t deserve the quality of education of the Ivies or Berkeley.”

Cruzado stressed that research is an important part of MSU’s future.

Next year the Bozeman campus will host the National Conference on Undergraduate Research, “the largest event of its kind in the world,” she said. MSU just won major grants for research infrastructure and equipment that will open opportunities in biomedical and health care disciplines at MSU, she added. “Many of these grants support our continued commitment to involving students in cutting edge research.”

The last time students petitioned to save a department was in 2010, shortly after Cruzado’s arrival, when 679 signed petitions and about 60 students politely carried signs outside Montana Hall that read “Save the Microbiology Department.” Soon after Cruzado overruled the acting provost and approved a three-year plan to turn around that department.

Gail Schontzler can be reached at gails@dailychronicle.com or 406-582-2633. Follow her on Twitter @gailnews.



Cover letter attached to student petition to MSU administration to address the current situation in CBN and to involve CBN students in the discussion.

April 29, 2019

To: President Waded Cruzado

c.c. Robert Mokwa

Nicol Rae

David Cherry

Abigail Richards

We, the undersigned students and alumni of Montana State University (MSU), harbor great concerns for the future of the Cell Biology and Neuroscience (CBN) department. Regardless of their true intent, the actions taken by the MSU administration against the CBN department demonstrate, with clearly malicious intent, the implementation of a strategy to strangle the department over the coming years, culminating in its total and absolute dissolution. In an effort to ensure the future and autonomy of CBN in its entirety, we have compiled the support and signatures of the following students from April 22nd through April 26th. We have done this out of great concern for future of our department, the degrees we and our colleagues will receive, and the degrees already held by our alumni.

Firstly, we demand an immediate appointment of an individual from our own department to the position of department head. This is important for appropriate mediation between students and professors by an individual with an understanding of the curriculum, the management of a research heavy field, the recruitment of renowned researchers, and the continuation of the longstanding tradition of excellence in education provided by Montana State University.

Second, we demand the immediate hire of three additional tenure-track faculty for the CBN department. The hiring of additional CBN faculty has been ignored despite outside reviews, the department, and the dean of CLS stating the necessity of more faculty. Left in this current understaffed state, the CBN department will be unable to continue to provide the same breadth and depth of courses offered by research-active instructors, diminishing the quality of education received by CBN students. This constitutes a violation of MSU administration's responsibility to enhance learning and promote departmental stability.

Third, we demand a written and public affirmation for the continued support and longevity of the CBN department. The existing lack of support and subversive actions taken by MSU administration have devalued the degrees already held by our alumni, sabotaged our researchers' eligibility to obtain research grants from the NIH, and gravely wounded alumni's qualifications for medical and graduate schools. Already, one student was asked in an interview to explain "why should a medical school value a degree that MSU does not?" We aim to prevent this from happening to anyone else, as should our administration.

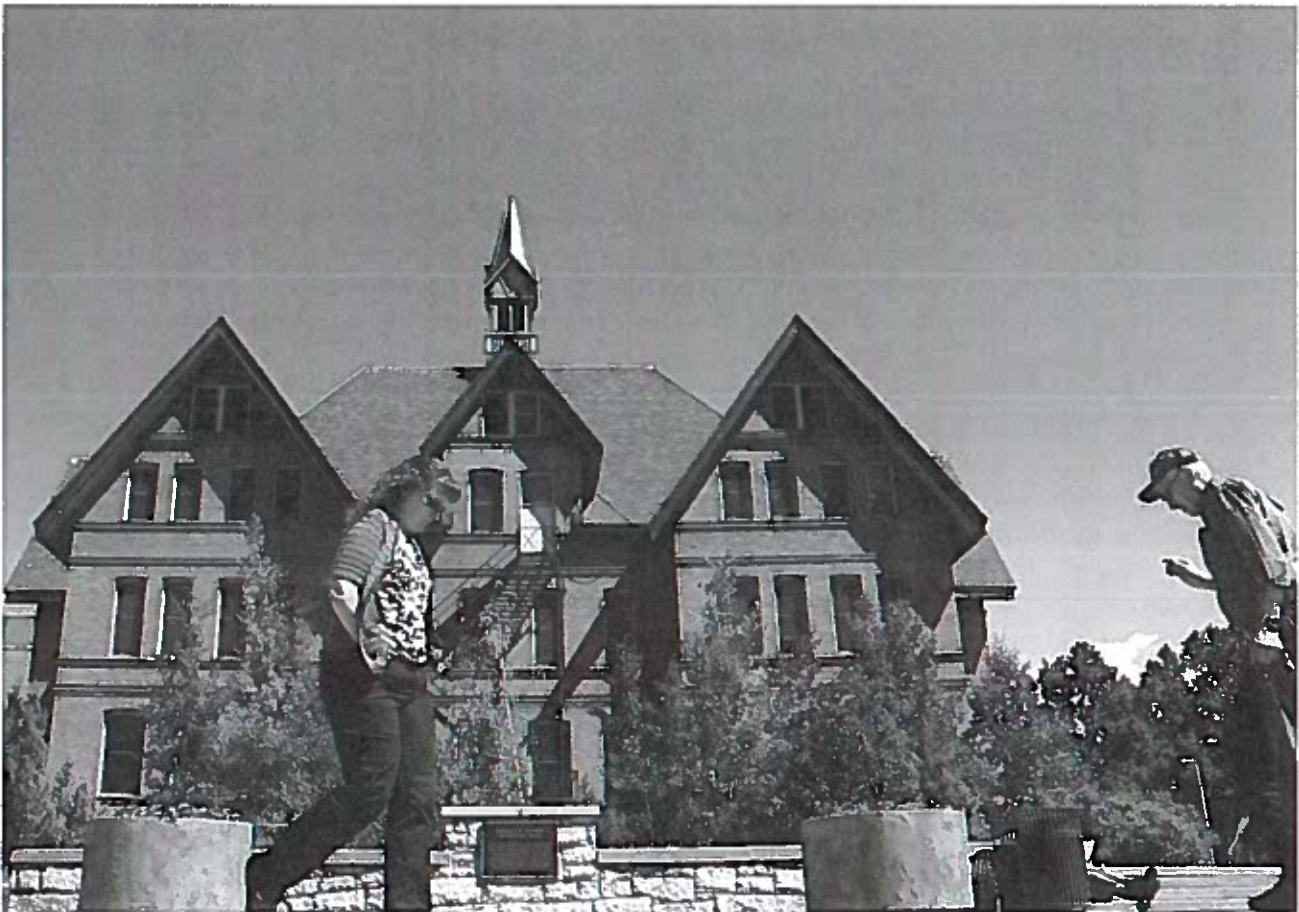
These demands being met will prove to the students of CBN, the campus community as a whole, and the many educational institutions of this nation that MSU is dedicated to open, clear communication and shared, transparent governance that exists with the best interest of any and all students in mind. We demand that these changes be implemented immediately, so that we, the students, feel that it is worth attending MSU this coming academic year.

Administration (President Cruzado and Provost Mokwa) response to petition from 500+ MSU students asked them to save the CBN department and major

https://www.bozemandailychronicle.com/news/montana_state_university/cruzado-defends-montana-state-s-efforts-to-improve-neuroscience/article_fbfc52c7-45a2-5487-abd3-9b11f826cc40.html

Cruzado defends Montana State's efforts to improve neuroscience

By Gail Schontzler Chronicle Staff Writer May 2, 2019



Montana State University's Montana Hall is pictured here.

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Chronicle file photo

Montana State University President Waded Cruzado pushed back Wednesday against complaints from students and professors in cell biology and neuroscience, saying her administration has tried to work with the department to find ways to strengthen it, but it has rejected all proposals.

"We have reached out to them and asked them for help so many times — what is the best way to move forward," Cruzado said at the end of Wednesday's University Council meeting.

A proposal to create a biomedical school was rejected, she said. An offer to create a task force of peers was rejected. The Faculty Senate brought in an outside facilitator.

“We’ve certainly done our part trying to reach out to the department,” Cruzado said. “Quite honestly, I’ve never seen anything like this before.”

Three cell biology and neuroscience students presented petitions with 537 signatures to Montana Hall on Monday. The petitions said students fear the department faces a slow death unless it gets a new department head, three new faculty members are hired to fill vacancies and the university makes a written commitment to the department’s future.

“We have nothing but the most sincere interest of seeing that department thrive, as well as every other department at Montana State University,” Cruzado said. But to be successful, she said, “we need the positive engagement” by faculty, staff and students.

When it comes to hiring new faculty, Provost Bob Mokwa said every year he gets “dozens and dozens” of requests from deans, yet “the amount of resources we have available for new lines (faculty hires) is in the single digits.”

So years ago, Cruzado said, the university set up a process based on data and measurable outcomes, to allow the provost to prioritize and allocate precious resources in a fair manner.

“I know our students are fair,” Cruzado said, “and if they knew all these processes, they will concede we should not replace a process based on data for one based on collection of signatures.”

Cell biology and neuroscience has to follow the same rules as everyone else and show progress in research, learning and engagement, she said, and if a request for a new faculty hire is rejected, that’s not a personal attack on a department.

The petition organizers — Derek Hetherington, Colin King and Luke Channer — said their petitions were signed by nearly 200 cell biology and neuroscience students, or roughly two-thirds of the student majors.

However, Cruzado said the petitions don’t represent all of the students.

“We’ve also had some students express consternation and frustration as to how much time has been devoted to this in the classroom,” she said.

Cruzado rejected as “not correct” a charge by cell biology and neuroscience professors that MSU has opted to replace tenure-track and research professors with cheaper adjunct instructors to keep up with MSU’s rapid student enrollment growth.

MSU just celebrated this week reaching a new record in the number of professors to win promotions and tenure, she said.

“We have more than at any time in history. Those individuals are doing extraordinary things in the classroom, in research and in communities,” Cruzado said. “The numbers are there to provide reassurance that Montana State University is committed to quality and excellence in everything we do.”

Mokwa, MSU’s No. 2 administrator in charge of all academics, said MSU’s numbers of tenure-track professors and adjunct instructors are in line with national norms for research universities.

He said MSU conducted a review of its Ph.D. programs to identify areas where they could improve, asked all departments to look for ways to strengthen the quality and quantity of their programs, and cell biology and neuroscience was no exception.

“We’ve asked them to address shortcomings identified in their program,” Mokwa said.

Asked about student fears that their major may disappear, their degrees could lose value and they’d have a hard time getting into medical schools, Mokwa said he’s not sure where those fears are coming from.

“Our goal is to make sure we do everything we can to have a strong cell biology undergraduate program,” he said.

Students and some faculty members charged that MSU proposed replacing the department with a School of Human Biology, which would have adjuncts teaching large numbers of pre-med students, rather than have cell biology and brain research scientists who offer students the chance to get more in-depth lab experience.

Asked about a possible School of Human Biology, Mokwa said it is something “we’re still working on with the department.”

Gail Schontzler

Gail Schontzler covers schools and Montana State University for the Chronicle.

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Day Center opens for 2nd year to help homeless



Bozeman developer proposes expansion of downtown subdivision

Developers filling up new commercial district in west Bozeman



FWP closes on Dome Mountain inholding



Fight for Neuroscience at Montana State

Professors on campus say the university plans to turn a research-rich department into a more general biology-focused premed feeder school.

By [Colleen Flaherty](#) // May 8, 2019

[0 COMMENTS \(/NEWS/2019/05/08/WHAT-WILL-BECOME-NEUROSCIENCE-MONTANA-STATE#DISCUS_THREAD\)](#) 

ISTOCK

Usually when cash-strapped public institutions target programs for cuts, they aim for the humanities.

Not so at [Montana State University](https://www.insidehighered.com/college/180461/montana-state-university), at least not this time: the institution may effectively nix its neuroscience program, professors say, and form a less research-oriented school of biology.

The university has cited the department's low numbers of graduate students and research funding, saying that it needs to improve. But professors say that assessment is dead wrong and that they can't understand why their program is so undervalued. Neuroscience is considered a hot field, and many universities are adding or expanding their programs.

"I dearly wish I knew why we're being targeted," Thom Hughes, professor of biophysics, said Tuesday. "If the administration had come and talked with us, laid out the problems, we could have worked together to find solutions."

Instead, the program's fate remains a mystery, to students as well as professors.

Tracy Ellig, university spokesperson, said via email that as Montana's land-grant university, Montana State "provides research, education and outreach opportunities for our students." The university has tried "and will continue to try to work with the faculty to strengthen the academic and research profile of our programs in cell biology and neuroscience."



([//careers.insidehighered.com?utm_source=ihe&utm_medium=editorial-site&utm_content=article-promo-box-link&utm_campaign=jobs](https://careers.insidehighered.com?utm_source=ihe&utm_medium=editorial-site&utm_content=article-promo-box-link&utm_campaign=jobs))

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Montana State will remain a leader in teaching and research in the biomedical sciences and future students will have the same opportunities you did," she added. "You can have confidence that the courses and the quality experiences you have come to expect will remain intact."

That's a more positive take on the program than the university has expressed previously – even though it's noncommittal to the program's future status. Earlier this year, Ellig responded to an op-ed by the department's then head in the *Bozeman Daily Chronicle* saying that the program was failing internally.

Roger Bradley, the former department chair, wrote in his January [opinion piece](https://www.bozemandailychronicle.com/opinions/guest_columnists/the-importance-of-neuroscience-research-at-msu/article_88be877f-f5d8-53d8-8b02-11efd9c4c4d1.html) (https://www.bozemandailychronicle.com/opinions/guest_columnists/the-importance-of-neuroscience-research-at-msu/article_88be877f-f5d8-53d8-8b02-11efd9c4c4d1.html), that the university planned to fold the department into a more generally focused biology unit aimed at graduating premed students.

Ellig said in a public letter quoted in the Bozeman newspaper that the department had managed to attract only about four Ph.D. candidates annually since launching its doctoral program in 2004, and that a master's program had been put on hold.

Professors in the department say that Bradley lost his chairship over his public dissension and that the university installed an administrator who is a Roman history scholar in his place.

The department of cell biology and neuroscience currently has some 300 majors – hardly a failing program by that metric. Of those who apply to medical school, 62 percent are accepted, Bradley wrote. Seventy-one percent are accepted to dental school. Both figures are higher than national averages.

Professors in the department have pointed out that half of their majors are from out of state, meaning that they pay three times more tuition than in-state students and therefore benefit the university. And while their overall Ph.D. student figures are low, they say, they are on target for the national student-faculty average ratio, of about 0.9.

To that point, professors in the department say they're understaffed. They number about 12. An outside review – while critical of the department's graduate program – recommended hiring new professors to teach the expanding undergraduate population.

Regarding funding, Bradley in his column said that the department's seven top researchers have brought in \$10 million in funding, plus another \$4 million in overhead. Many undergraduates assist in this work, he said. As recently as November, the university published a [news story](https://www.montana.edu/news/18205/msu-researchers-awarded-2-9-million-for-interdisciplinary-study-of-neurodegenerative-disease) (<https://www.montana.edu/news/18205/msu-researchers-awarded-2-9-million-for-interdisciplinary-study-of-neurodegenerative-disease>) about neuroscience professors earning a \$2.9 million grant to study neurodegeneration.

~~undergraduates, Bradley wrote: "Why disrupt what is clearly an effective training program to develop an~~
incomplete and poorly conceived new school?"

Ellig wrote that the university "has been asking for three years for the department to improve, just as it has been asking every other academic and nonacademic department to improve. The department is underperforming in terms of graduate students; its faculty have teaching loads that are lighter than their peers across campus ... the department's research grant activity has been, until recently, stagnant and its scholarly publication has been low."

Asked why Montana State needs a neuroscience program, Hughes said that the field is one of the most interdisciplinary within biology at the moment.

"It incorporates engineering and physics to create whole new technologies," he said, citing an initiative to study the brain that funds his research group. Such new technologies are soon put to use "by super-clever neuroscientists to unravel how the brain really works," Hughes added.

"Our students learn how to integrate chemistry, physics, physiology, pharmacology, writing and analysis skills in ways that help them appreciate all of the different ways of thinking about the brain."

Hughes said one could argue that Montana State should be focused on delivering affordable, "good enough" education and "not using valuable resources to build a program for students who could go out of state and attend elite schools to learn neuroscience," Hughes said. He noted that the university president has frequently touted a new hospitality certificate program.

Yet, "if that's what is going on here," he said, "it would certainly be nice to hear it."

Frances Lefcort, professor of neuroscience, noted Tuesday that Montana State is proud of its public land-grant heritage. Yet "shutting down a neuroscience program runs absolutely counter to the spirit and ethos of the Morrill Act" that granted it that status, she said.

Faculty members, meanwhile, are "trying hard to honor it by providing our students with state-of-the-art research opportunities" in federally funded neuroscience research labs.

What about students? Citing a recent student movement to protect the program and the related petition, Hughes said he thought that those involved were "essentially saying they don't want to be food servers with hospitality certificates. They want to be doctors and scientists."

"Unfortunately," he added, "no one seems to be listening to them."

Letters of Support for CBN

1/8/2019

Adam Thuen
Montana State University
906 New Mexico Drive, Belgrade, Montana

Office of Commission of Higher Education/ Montana University System
560 N. Park – 4th Floor
PO Box 203201
Helena, MT 59620

Letter to the Board of Regents:

I am sending this letter as requested by the Board of Regents during their meeting 8 January 2019. I made a comment during the public comment portion of the meeting approximately 11:20 am. The follow is the text of that comment.

Ladies and Gentlemen of the Board,

My name is Adam Thuen and I am a graduate student at Montana State University. A recent conflict over the future of the department of cell biology and neuroscience involving faculty and university administration has cast a cloud of uncertainty and confusion. This is due to different narratives from each side. This issue has entered the public space through mass email distribution to students and local news stories that have amplified this dispute on strategic direction. This has left students, staff, and faculty concerned about their job security and the future of neuroscience research.

I am a graduate student. But I am also field grade army officer specializing civil and military government, a two-time afghan war veteran and an active member in municipal government serving on boards in the city of Belgrade, MT. This issue is causing instability at Montana State and harming the credibility of the institution. This process has been anything but transparent. Lies by omission, counter narratives, and he said, she said arguments are not the proper way to handle this matter. It is time to bring this dispute and conversation out of the shadows and secrecy of board rooms, out of new media editorial rooms and put it where it belongs for resolution. That is why I am calling for this board to set an agenda item for next meeting to address this matter and start an inquiry to obtain relevant facts and speak to all the relative stakeholders; administration, students, faculty, and staff. This issue needs to be addressed for the good of current and future students of Montana. The growing mental health crisis across the nation and in our great state requires education, training, and research to build capacity to combat this growing concern. This objective can't be compromised by internal power struggles between Administration and Faculty. This issue is bigger than them, bigger than me, and bigger than Montana State University.

Thank you for your time and consideration and I appreciate your efforts.



Adam Thuen
Graduate Student, Major U.S. Army
Montana State University

https://www.bozemandailychronicle.com/opinions/letters_to_editor/sadly-top-down-leadership-is-how-msu-functions/article_0a8b6a41-e72f-5edf-b616-95acd3a80918.html

Sadly, top-down leadership is how MSU functions

Christine O'Rourke Jan 13, 2019

I was saddened but not surprised to read the column by Roger Bradley (Jan. 2). I spent 12 years in the research program at Montana State University. During that tenure, I worked with many exceptional faculty, including those in cell biology and neuroscience. The same cannot be said for the upper administration.

Top-down leadership is exactly how things function at MSU. The current administration has spent time building student enrollment at the expense of employees. When people speak out about mistreatment of employees or unethical tactics, the university finds ways to silence or remove them. Then Mr. Ellig provides a few "alternative facts," which the Chronicle gladly prints. It's time to take off the rose-colored glasses and take a long hard look at what is happening at MSU. Yes, the student population continues to grow, but at what expense? The faculty and staff bear the brunt of this greed.

I applaud Roger and others for having the courage to stand up and do the right thing. Sometimes what appears shiny on the outside, can be dark on the inside. The only way to bring it into the light is to make it public. The Chronicle should further investigate instead of just repeating the falsehoods the university so willingly provides. I also hope the public will heed the call to support these faculty and contact MSU, legislators, the governor and the Montana Board of Regents.

Christine O'Rourke

Bozeman



January 15, 2019

Dr. Waded Cruzado
Office of the President
Montana State University
P.O. Box 172420
Bozeman, MT 59717-2420

Dear Dr. Cruzado,

I am the Founder and CEO of Neuralynx, Inc., a Bozeman-based neuroscience research tool developer and manufacturer supporting over 1000 labs and hospitals worldwide. We design cutting edge systems for recording the electrical activity of the brain down to the individual cellular level - only one of a handful of companies with this expertise. Our products are used for both basic neuroscience and human clinical epilepsy research. Neuralynx employs 25 professional and technical people in the Bozeman area, including many MSU graduates.

During the 25 years that Neuralynx has been in business, I have personally visited hundreds of university research labs and teaching hospitals, including Mayo, Harvard, MIT, CalTech and Cedars Sinai in the US alone. I am keenly aware of the research and education levels of our customers and their institutions.

My daughter, Karen, graduated magna cum laude in December from MSU's Honors Program with a double major in Cell Biology and Neuroscience and Computer Science. I was very impressed with the quality of her undergraduate education, as well as the research she performed in the Kohout CBN lab as an INBRE grant recipient for 4 ½ years.

In my opinion, the quality of neuroscience research and class instruction performed at MSU is of the same high-ranking caliber as Neuralynx's customer labs I have visited, collaborated with, and been associated with in my 32 years of Neuroscience experience. I have such a high opinion of the CBN department at MSU that Neuralynx donated one of our advanced systems for neuroscience research at MSU, a system worth a quarter of a million dollars.

We also have an active NIH SBIR grant in which CBN Gray and Mazer labs are participants. This grant is over a million dollars for product development, and will generate future revenue, wages, and taxes in excess of \$5M for Montana, with direct benefit to MSU.

In my opinion, any action other than to actively support and grow CBN would be a serious disservice to the MSU students and faculty, the Bozeman community, and the state of Montana. Neuroscience is a critical research field for advancing our knowledge of the brain to cure debilitating diseases such as ALS, cancer, Alzheimer's, epilepsy and movement disorders. MSU's CBN can continue to contribute to this effort.

Please consider my experience and opinion as you pursue action concerning the Cell Biology and Neuroscience department at MSU. Feel free to contact me at Casey@Neuralynx.com or by phone.

Sincerely,

Keith "Casey" Stengel

Fwd: Research Distinction and the Future of Research at MSU

Roger Bradley <rgrbradley264@gmail.com>

Thu, Jan 17, 2019 at 10:14 PM

To: Frances Lefcort <flefcort@gmail.com>, Thomas Hughes <thughesgfp@mac.com>, Steven Stowers <sstowers@alumni.stanford.edu>, James Mazer <mazerj2006@gmail.com>

Cc: Tom Woods <Tomwoods4MT@gmail.com>

Begin forwarded message:

From: Lisa Kelley <zialisa@yahoo.com>**Date:** January 17, 2019 at 21:31:49 MST**To:** President Waded Cruzado <President_Cruzado@montana.edu>**Cc:** "rbradley@montana.edu" <rbradley@montana.edu>, "cellbio.msu@gmail.com" <cellbio.msu@gmail.com>, "provost@montana.edu" <provost@montana.edu>, Jack Kelley <jtkelley46@gmail.com>**Subject:** Research Distinction and the Future of Research at MSU

Dear Ms. Cruzado,

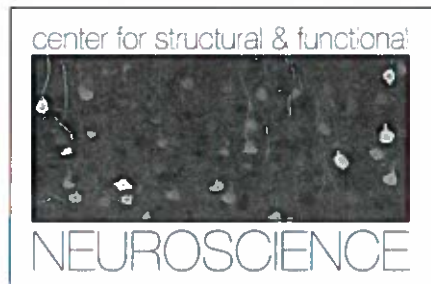
It was with great pleasure that my husband and I read about MSU's distinction as a university with high research activity. However, that pleasure was short-lived when we discussed this honor with our son, John Kelley, an honor's sophomore pursuing a degree in Neuroscience within the CBN Department. "Jack" has informed us of the changes being discussed with regards to the CBN department, specifically the opportunity for research.

While MSU is a fine academic institution, that is not what drew Jack to attend MSU instead of a university more notable in the sciences. During his "college visit" he met with Dr. Eiger who spent a considerable amount of time with him touring the labs and touting the ability for undergrads to be involved in research. That was a game-changer for Jack. Since freshman orientation, he has planned his course schedule so that by the end of his sophomore year he would be in the best position to take advantage of any research opportunities. These research opportunities are vital to any student pursuing graduate and doctoral studies. According to information that has been passed to some of the students, assurances have been made that those currently enrolled in the CBN department will be able to complete their studies and be awarded their degree. However, Jack has expressed tremendous frustration over the lack of transparency with the future of research. Rumor has it that all research within the CBN department will be stopped. So, what we are asking in an effort to relieve this, hopefully, unnecessary stress, is **written confirmation** that 1) Jack will be able to complete his degree in Neuroscience, and 2) Neuroscience research will continue for at least until May 2021. It would be unfair to those students who are serious about their studies and their future to withhold such information until such time that it would be impossible for them to be able to pursue other options outside of MSU.

Thank you for your attention to this matter and we look forward to your positive assurances.

Kind regards,
Ed & Lisa Kelley

On Thursday, January 17, 2019, 4:01:06 PM MST, President Waded Cruzado <President_Cruzado@montana.edu> wrote:



Richard J. Bridges, Ph.D.
 Center for Structural & Functional Neuroscience
 University of Montana
 32 Campus Drive
 Missoula, Montana 59812-1552

Phone: (406) 243-2972
 Fax: (406) 243-5228
richard.bridges@umontana.edu

Professor Frances Lefcort
 Department of Cell Biology & Neuroscience
 Montana State University
 Bozeman, Montana 59717

January 23, 2019

Dear Frances;

I must say that I was caught off guard and quite concerned when I read about the problems and challenges facing the Department of Cell Biology & Neuroscience. As I have known you the longest, I decided to direct this letter to you. Admittedly, I am on the outside and not fully informed on all of the issues you are dealing with, but I think the longstanding collaborative history of our neuroscience faculty and programs puts me in a position to make a few salient comments.

First, as we have discussed many times, neuroscience is a field of such breadth and relevance, that it deserves a place on every campus. The numbers of neuroscience majors in our respective programs, as well as its rising popularity at universities across the country attest to this conclusion. This issue seems to arise within the context of "duplication" within the MUS whenever either of our campuses brings forward a new degree, programs or center focused somewhere in the very, very broad field neuroscience. I have been pleased and proud of the mutual support that has been shown for developing strong neuroscience efforts at both UM and MSU.

Secondly, I (and I am confident this view is shared by my UM colleagues) recognize the quality and strength of the neuroscience faculty and research within CBN. Beyond the obvious external indicators of success, such as publications and grant funding, my appreciation of the MSU neuroscience faculty and their research comes first hand from many years of shared seminars, student presentations, retreats, and collaborative grants. In particular, it is last aspect that I think may be of greatest value. Collaborative efforts between UM and MSU neuroscientists such as yourself and Professors Hughes, Gray, Bradley, Merzdorf, Mazer, and Stowers (apologies to others I inadvertently omitted) have not only been rewarding from a scientific perspective, but have undoubtedly increased our collective competitiveness for extramural funding. The ability to strategically bring active researchers together, "combine forces", and compensate for a lack of critical mass characteristic of NIH IDeA states like Montana, has certainly played to our advantage. Our collaborative neuroscience efforts go back a least a few decades, many of which can be traced back to a Neuroscience COBRE grant that was funded in the very first cycle of the program and supported investigators at UM, MSU, and McLaughlin. The practice continues, as demonstrated by Nathan Insel's (UM Psychology) participation in a new COBRE submission with Jamie Mazer. I think it would be a highly significant loss if the neuroscience programs on either campus were reduced and one that would also have a noticeable impact on both long-term research capacity and funding.

Overall, I view the neuroscience program at MSU as a very strong and highly valued component in Montana's growing neuroscience community. I am not sure if these comments will help in any way with the challenges you are facing, but you are free to share them as you see fit.

Sincerely,

Richard J. Bridges, Ph.D.
 Regents Professor and Director,
 Center for Structural & Functional Neuroscience
 University of Montana

An Equal Opportunity University

Dear Commissioner Christian, Members of the Board of Regents, and President Cruzado

I am the director of an NIH Center of Biomedical Research Excellence (CoBRE) at the University of Montana. For the past seven years, Thom Hughes in the Cell Biology and Neuroscience (CBN) department at Montana State University and I have convened biannual grant-writing workshops with faculty, particularly junior faculty, from both our campuses to help them write effective, fundable grant applications to the NIH and NSF. This has been a successful venture, not only measured in funding success, but also in sparking collaborations and collegial interactions among biomedical scientists from both of our campuses. Our "HotWater" workshops have been attended by MSU faculty from Chemistry, Engineering, Microbiology and CBN, along with an equally diverse group of faculty investigators from UM and Montana Tech.

Hence, you might understand how distressing it has been to learn that MSU plans to impose a moratorium on the CBN doctoral program, and seeks to curtail research activity in that department, in favor of heavier teaching loads for its faculty.

With the strengthening National focus on brain-related research, Neuroscience is a popular undergraduate major for current, and likely future, generations of biomedically oriented and pre-med college enrollees. In this state, MSU has been a leader in this discipline. Indeed, it has been an inspiration for creation of our own undergraduate Neuroscience program at UM, which, in a very brief time, has become one of the top two most sought-after baccularate programs in the biosciences. Masters and doctoral programs at both campuses have attracted considerable interest. The CBN program at MSU has attracted some 300 majors – 30 for every CBN faculty member! Research-active faculty in CBN each mentor an average of two graduate students. Department faculty currently hold \$11M in active extramural research awards. One of CBN's most talented and productive faculty members is submitting an application for a 5 year, \$10M award to create an MSU CoBRE at the intersection of engineering and neuroscience. It is difficult to imagine how such an application, however scientifically meritorious it may be (and it is strong – I and others reviewed its subprojects at our most recent HotWater worksop), can succeed if MSU will not provide the institutional support sufficient even to maintain a doctoral program in the Neurosciences.

MSU's recent focus on expanding opportunities for undergraduate education to Montana's youth is compelling and important. Training in the biosciences should be strong component of this effort. Professions in biosciences and technology are highly remunerative, and graduates with skills in this area will attract high-technology industry to Montana. Yet, a strong research program at the doctoral level is essential to excellence at the undergraduate level. Talented undergraduates, including those headed to medical school, seek significant, long-term research experiences that afford opportunities to publish their best work. They know that these experiences are essential for admission to good post-graduate and medical schools. Research-active faculty, and particularly, doctoral students, are critical sources of mentorship and training for these students.

For many years, MSU has been regarded by many as the preeminent research-intensive institution of higher education in the State of Montana (of course, we at UM know that we share in this excellence!). It is inconceivable to me that MSU would want to degrade that reputation by dismantling research and doctoral training in one of its most productive departments in a research discipline of highest national priority. I sincerely hope, on

behalf of the greater Montana University System scientific community, that MSU will abandon this reckless course.

Sincerely,

<Stephen Sprang>



https://www.bozemandailychronicle.com/opinions/letters_to_editor/let-s-hope-for-a-resolution-for-troubled-department/article_8ca39bb0-8b2f-5451-8c5e-83b0df7589f8.html

Let's hope for a resolution for troubled department

Linda Weston Pierce 8 hrs ago

We all celebrated the great news! Montana State University has returned to the top ranks for its excellence in research as listed by the Carnegie Institute. Excellence in research and excellence in teaching are the foundation stones for a fine college education. And, we as a community are ever grateful for the outstanding programs sponsored by Montana State University, such as Wonderlust and the many fascinating lectures at the Museum of the Rockies.

However, I am disturbed to read of recent troubles and changes visited upon the Department of Cellular Biology and Neurology, including the demotion of the department head. I keep thinking about the fable of the "Goose and the Golden Egg." Perhaps the innovative research projects sponsored by the professors in this very department, and recently awarded a large grant by the National Institute of Health, helped win Montana State University its top ranking? What could possibly be more important for our country's future, given our aging population, then research illuminating brain function?

Let's hope for a resolution for the Department of Cellular Biology and Neurology that supports continued good research, a fair process, and freedom of speech.

Linda Weston Pierce

Bozeman

William Rankin
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wrankin250@gmail.com
307-250-6752
May 22, 2019

Montana University System Board of Regents
Office of the Commissioner of Higher Education
560 N. Park Ave
PO Box 203201
Helena, MT 59620-3201
406-449-9124

Hello, my name is William Rankin and I am a Cell Biology and Neuroscience student at Montana State University. Thank you for taking the time to listen to my comments today.

I've always been fascinated by the natural world and the organisms that occupy the Earth. The human brain is perhaps the most fascinating landmark within this realm, as it creates our advanced perception of reality and existence. The fact that this magnificent structure is composed of roughly 100 billion neurons with greatly varying functions creates a global need to conduct study in this field; it is not uncommon knowledge that a wide selection of diseases result from dysfunction within the brain. This dysfunction can potentially lead to downstream dysfunction of other organs, presenting a larger pool of research that neuroscience experts can cover. I was born and raised in Cody, Wyoming, and decided to attend MSU not only for the close proximity of a renowned research institute but also because I knew respectable undergraduate neuroscience degrees were few and far between in the Northwestern United States. The University of Wyoming does not currently have anything that can be considered an undergraduate neuroscience program, which is and has been an alarming concern for the university for a while; some Wyoming high school graduates such as myself have and are leaving the state to seek out neuroscience bachelor's degrees in places such as Bozeman. The neuroscience program here at MSU has always been well-spoken of in Wyoming and UW is not currently making bold efforts to create an undergraduate neuroscience degree program. I would wish to conduct research into the molecular aspects of neurotransmitter regulation and mental disease which is entirely possible through utilization of model organisms in research labs, with

some of this type of research being actively conducted at MSU Bozeman. The MSU neuroscience department currently conducts research that is recognized in good light by many other institutions across the country and globe. My uncle, Dr. Ted Dawson, attended MSU in the same degree program and is now the director of the Institute for Cell Engineering at Johns Hopkins. For the enrolled and future undergraduate students of Wyoming and Montana to not have plentiful access to neuroscience research opportunities is a disgrace to both of these states; MSU has already made great strides in making unique university experiences available to its undergraduate students such as the cadaver labs utilized by dissection and anatomy classes. I feel that to imply neuroscience is a dying practice and that the research holds no merit is morally wrong and potentially dangerous; mental health issues fall under the scope of neuroscience and the CDC has reported Montana have the highest suicide mortality rate among all states in the country in 2016 and 2017, along with many other years. Neuroscience research needs to stay in Montana where it has already been implemented.

The recent attempts by the MSU Administration to dissolve my department have greatly affected me. The administration attempted to keep quiet about this unsolicited decision throughout the academic year and provided few opportunities for direct student involvement. The administration advocates for transparency, which is exactly what the CBN department faculty and students are reporting to not be receiving. There is still no clearly defined reason as to why the order to dissolve the department or remove Roger from his position as department head was initially called for. I travelled to Great Falls as a MSU-CBN student and advocate to ask the Board of Regents to consider this institutional quarrel and what the potential outcomes may hold for past, current, and potential CBN students of Montana State University.

Sincerely,

William Rankin