



## **ORGANIZATIONAL UNIT PROPOSAL FORM**

**DIRECTIONS:** *Use this form when proposing a new organizational unit, center, institute, department, school, or college.*

**DATE OF REQUEST:** 01/14/2018

*Date of AAC Approval:*

April 24, 2018

**INSTITUTION:** University of Nevada, Reno and University of Nevada, Reno School of Medicine

**NAME OF PROPOSED UNIT:** Institute for Neuroscience

*Date of Board Approval:*

**DATE OF IMPLEMENTATION:** Upon approval

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### **PART 1**

#### **A. Action requested**

This proposal is to establish an Institute for Neuroscience that will serve as a hub for bridging and promoting research and academic programs in neuroscience on the UNR campus. The institute will fill a critical need for better communication, efficiency, strategic planning, visibility, and resources for the neuroscience programs.

#### **B. Brief description and purpose of proposed unit**

Within the last 10 years UNR has seen significant growth in both research and education in the neurosciences. This growth has been fueled by several initiatives and programs, including:

1. An undergraduate BS degree in neuroscience was started in 2008 as an interdisciplinary major offered through the Departments of Psychology and Biology. The major was the first to span two colleges (Liberal Arts and Science) and currently has approximately 400 active majors, including a large proportion of pre-medical students and Honors Program students.
2. An interdisciplinary Graduate Program in Integrative Neuroscience was established in fall 2016 and currently has over 20 doctoral students and more than 50 affiliated faculty members.
3. In 2011 and 2012 UNR was awarded two \$10 million NIH COBRE grants, one to establish a Center for Cell Biology and a second to establish a Center for Integrative Neuroscience. Both COBREs had a thematic focus on the neurosciences, and both brought major research support and infrastructure to the campus for cellular/molecular neuroscience and cognitive neuroscience. This included developing a partnership between the Neuroscience COBRE and Renown Health to provide long-term access to functional Magnetic Resonance Imaging (fMRI), a tool that has become requisite for noninvasive studies of the human brain. In the fall of 2017 the Neuroscience COBRE was awarded a further \$10.6 million for a second 5-year phase of support.
4. UNR selected neuroscience as a priority for growth by allocating a strategic cluster of 8 new tenure-track faculty lines in the neurosciences. These positions have substantially expanded the range and depth of neuroscience research and teaching on campus.

Despite the evident success and impact of each of these initiatives, there is currently little crosstalk between them. This represents a major impediment for developing synergistic connections and cross-fertilizing the programs. Moreover, there is currently no formal mechanism to support strategic planning for the discipline and initiatives. Finally, all of the programs suffer from the lack of support and visibility provided by a traditional department. As an inherently interdisciplinary field, neuroscience does not have a dedicated department or tangible identity as an academic unit. Researchers are spread throughout most colleges on campus and the School of Medicine, and contributing faculty members each have their primary affiliation in different home departments. Students in the training programs similarly lack a base they can feel intellectually connected to, or the career development and mentoring that a dedicated unit could provide. This negatively impacts recruitment and training. The proposed Institute for Neuroscience is designed to address each of these problems, by providing a common forum to foster communication, collaboration, strategic planning, and increased impact for the growing neuroscience community.

An Institute for Neuroscience would greatly elevate the impact and visibility of neuroscience as an area of excellence for both research and teaching at the university, by providing:

1. More focused and integrated development and alignment of the graduate and undergraduate curricula.
2. A stronger and more seamless integration among the undergraduate and graduate programs and with the research centers.
3. Better strategic planning for faculty hiring, development of research strengths and core facilities
4. Increased visibility of degree and research programs to draw higher quality undergraduate and graduate students, for recruiting new faculty and research staff, and for positioning UNR's national and international reputation as a key player in the brain sciences.
5. Better positioning UNR to be competitive for programmatic research and training grants, and to provide a stronger institutional environment for supporting individual faculty grants.
6. Better opportunities for fundraising, including for endowed chairs, and for raising the priority of new research space to bring together faculty labs in the brain sciences .

The importance of developing a neuroscience institute was also independently emphasized in the external review of the Psychology Department Program review conducted in 2016.

Discussion of the institute was included as part of the closing MOU for the Neuroscience BS Program Review (October 7, 2016). The MOU noted that the institute would serve the purpose of (1) providing a mechanism to coalesce and strengthen research at the university in neuroscience; (2) providing a governance structure for the academic program; and (3) creating and enhancing development possibilities for the program.

An Institute for Neuroscience was also proposed as part of the Phase II renewal of the Neuroscience COBRE, which was awarded on September 1, 2017, prompting formal development of the proposal.

The purpose of the institute is not to replace the current administrative structure of the COBRE center, the academic programs, or other neuroscience initiatives on campus. They will remain as autonomous programs under their current reporting lines. The institute is instead designed to facilitate better communication, integration, and coordination between these programs; more efficiently and cost-effectively address shared goals and needs of students and faculty in the neurosciences; and stimulate more collaboration both within and outside the university including community and industry partnerships as well as partnerships with basic and clinical researchers, to address fundamental basic and applied questions in neuroscience. Through these efforts the institute will play a critical role in fully connecting and leveraging the deep and diverse potential for research and training in the brain sciences throughout the campus and School of Medicine. In turn this will

greatly elevate the visibility of UNR's neuroscience programs at the state, national and international levels, attracting students, faculty and community partners to the university.

### **C. Outline plans for the success of the proposed unit**

The Phase II renewal of the Neuroscience COBRE included an institutional commitment to fund the operation and activities of a neuroscience institute for the next five years, during which we will prioritize the activities of the institute and develop plans to transition to a self-sustaining model. The most important activity will be to provide a formal structure for communication, planning, and collaboration. We will establish committees for each of our goals and facilitate communication through coordinated meetings. The success of the institute will be driven by faculty and student interest, and the institute will be designed to provide a culture and environment promoting inclusiveness and valuing multidisciplinary approaches and perspectives. It will also connect teams of researchers addressing common questions from different approaches. The programs that will be aligned with the institute are already highly successful on their own, and together will both benefit from and contribute to the success of an institute designed to elevate their visibility and impact.

## **PART II**

### **A. Mission statement**

Advances in understanding the brain are key to solving many of the challenges facing modern society, with implications for almost all fields of study. The Institute for Neuroscience promotes the multidisciplinary brain sciences as an area of excellence for research and education at the University of Nevada, Reno campus and School of Medicine. It bridges and fosters the growth and impact of academic and research programs in neuroscience, providing a central and visible forum for communication, strategic planning, and synergistic activities. Through its integrated support of research, education, and outreach, the institute's mission is to facilitate fundamental scientific advances in the brain sciences, prepare future generations of neuroscientists, and serve the community and society by generating and disseminating neuroscience knowledge and technologies promoting the quality of life and human health.

### **B. Goals and objectives**

#### **i. Teaching**

The institute is designed with the specific purpose of bridging research and education. This will foremost be done by fostering communication between the programs to identify shared and complementary needs and strengths, and through strategic planning focused on meeting the needs and cross-leveraging strengths. The planning and communication are built into the organizational structure of the institute, while specific potential initiatives to meet these goals are detailed in section G. In teaching, the institute will better integrate the undergraduate and graduate programs, and provide increased opportunities for student research and lab-based courses as well as better access and training with core research facilities. The institute will also more closely integrate both academic advising and career advising for our students. Finally, the institute will support graduate teaching by helping position UNR to be eligible and competitive for NIH or NSF training grants. These training grants provide stipends for a large number of graduate students as well as postdoctoral fellows, and would substantially elevate education and research in the neurosciences. As noted, the administrative homes of the graduate and undergraduate neuroscience degree programs will remain under their current academic units.

#### **ii. Research**

The institute will promote research by providing resources to support and mentor faculty for pursuing extramural funding. It will provide a forum for identifying research ideas,

collaboration, and networking both within and beyond UNR, and for strategic planning to identify important intellectual and resource areas to grow and support research.

### **iii. Service**

The institute will provide visibility for the neurosciences on campus and in the community and will facilitate the growth of outreach programs. This will include resources and coordination of activities for Brain Awareness Week and the annual Brain Bee competition, promoting STEM education and the university through activities at K12 schools, and enhancing the scope and impact of the undergraduate Nu Rho Sci society and NevadaNeuroSociety club.

## **C. Major participants or collaborators**

### **i. Internal to campus**

The institute will promote an inclusive environment open to all faculty, students and postdoctorates with interests in neuroscience research and education. These investigators include many academic units on campus. For example, the neuroscience graduate program already includes faculty from 11 departments spanning 3 colleges and the School of Medicine, and these are only a subset of the range of faculty on campus working in neuroscience-related areas. It is therefore likely that the institute will attract a very broad and interdisciplinary group. The activities of the institute will also target and closely involve graduate and undergraduate neuroscience students.

### **ii. External to campus**

While the institute is primarily being established to strengthen the neurosciences at UNR, our campus has already developed connections with neuroscience researchers in Las Vegas. These include activities through the Sierra Nevada Chapter for the Society for Neuroscience, as well as an annual Nevada Neuroscience Conference that is hosted on alternate years in Reno and Las Vegas at the Ruvo Center for Brain Health, which also has an active Neuroscience COBRE. We plan to involve these investigators as affiliated members of the institute, and to leverage the institute to support and promote these statewide initiatives. Second, the institute will play a central role in connecting basic scientists and clinicians, as well as industry partners. Plans will be developed and implemented to identify and bridge with units such as the School of Medicine's new Department of Neurology as well as clinicians in the community and local hospitals, and to identify synergistic activities including the development of clinical trials. Similarly, the institute will seek and promote ties with regional industries. Finally, the institute will actively pursue connections and collaborations with other neuroscience centers in the mountain-west region. This will include hosting training workshops and developing joint conferences. This will allow UNR to build strong connections to the vast network of intellectual resources in our region.

## **D. Evidence of contact within and between affected academic units**

As noted, the proposal to establish the institute was included in the renewal of the Neuroscience COBRE and supported by an institutional commitment from the Provost and Vice President for Research and Innovation, and was discussed as part of the 2016 review of the Neuroscience BS Major. The development and planning for the institute proposal began through discussions with neuroscience faculty members, who provided input on the proposed activities and structure of the institute. The draft proposal was next forwarded to the Deans of the Colleges of Liberal Arts and Science, and has been revised based on their recommendations.

## **E. Proposed physical location**

There will not be physical space dedicated specifically to the institute. However, the Neuroscience COBRE has a suite of rooms in Mack Social Science 300 that houses both research cores and the

administrative core for the COBRE. This space will also be designated as part of the institute and will house any administrative staff supporting the institute.

**F. Proposed organizational structure (include organizational structure within the campus)**

The institute will be overseen by a Director elected by faculty members of the institute, who will initially be drawn from the faculty members of the Neuroscience Graduate Program. An alternative to consider is using a committed neuroscience faculty line to recruit to UNR a high-profile senior neuroscientist with an established record of research and program leadership. The Director will be assisted by administrative staff who will organize and manage the activities and budget for the institute. We will also work with the UNR Foundation to identify and fund an appropriate development arm or staff member focused on the neurosciences.

The institute will also be led by a series of committees with specific goals. These will include a Steering Committee representing each major participating academic unit and program director, students representatives, and a neuroscience academic advisor. This committee will lead strategic planning and coordination of the institute programs. The Director and Steering Committee will also receive guidance and recommendations from an External Advisory Committee composed of 3-4 prominent neuroscientists at other institutions in the US. The Advisory and Steering Committees will hold a video conference annually to discuss the institute activities and recommendations.

Four additional committees will be organized with faculty with relevant expertise to (a) plan the seminar series; (b) organize outreach and recruiting activities; (c) build partnerships with clinicians and identify translational opportunities; and (d) build partnerships with industry and facilitate entrepreneurial and tech transfer opportunities. The specific constitution and charges of the committees and the activities of the institute will be governed by bylaws developed for the institute.

**G. Activities to be sponsored (e.g. courses, seminars, research, and outreach) – indicate if courses or seminars will be offered through the proposed unit. Please specify if they will be offered for academic credit and applicable to a degree program. Give estimated enrollment.**

The institute will support a wide range of activities to promote research, education, and outreach. These will be revised and prioritized over time to target the programs yielding the highest impact and as required to transition to a self-sustaining and efficient unit. While formal courses will be offered through the graduate and undergraduate programs, the institute will support a variety of short courses and workshops open to the campus and community. Enrollments will vary with the specific activity but many will be designed to be open to all interested faculty and students.

Specific activities may include:

1. Monthly formal meetings of institute faculty members for strategic planning, including identifying resource and faculty needs and grant opportunities (including training and equipment grants).
2. Weekly informal brownbag meetings open to all faculty and students to discuss research and identify opportunities and collaborations.
3. Seminar series to communicate current research on campus and bring in prominent external investigators to expose UNR researchers to new ideas and networking opportunities.
4. Visiting Scholar program to support outside faculty to come for an extended period to collaborate with UNR researchers.
5. Monthly grant-writing workshops to develop and critique grant proposals.
6. Assistance for developing and managing grants.
7. Mentoring programs pairing graduates and undergraduates, students and faculty, and junior with senior faculty, and coordinating access and use of Individual Development Plans.
8. Providing career planning workshops for students for industry and other science careers.
9. Paid summer internship program to support undergraduates as research assistants in faculty labs.

10. Supplemental scholarship awards for undergraduate and graduate research and for postdoctorates.
11. Matching funds for graduate stipends.
12. Support for student recruiting, for example to supplement the GradVenture program.
13. Assistance and support with faculty recruitment.
14. Funding for students and faculty to attend workshops or training to acquire new research skills.
15. Support for organizing workshops and training seminars on neuroscience methods at UNR.
16. Support for organizing and hosting neuroscience conferences at UNR. An example is a proposal we are already pursuing for hosting a national conference on consciousness studies attracting scientists and philosophers.
17. Outreach activities for the campus and community including programs for K12 schools.
18. Connecting neuroscience researchers with industry partners and facilitating technology transfer.
19. Providing continuing education seminars and workshops for professionals in the community.
20. Media and publicity for research or program advances and identifying potential donors.
21. Identifying and supporting focus groups with common research interests including basic/clinical and university/industry partnerships.

**H. Resource Analysis – source of funds necessary for the proposed change (enrollment-generated state funds, reallocation of existing funds, grants, other state funds)**

For the initial 5 years UNR has committed \$100,000 per year in funding to support the activities of the institute as an institutional commitment to the Neuroscience COBRE award. During this period we will develop a business plan and identify appropriate revenue sources to maintain the institute after the sunset of the COBRE award. This could include funding through a portion of F&A from grants submitted through the institute, or training and program grants submitted to support the institute. As noted the institute will also better position the neurosciences for donor funding and industry partnerships.

The scope of activities and services supported by the institute will be limited by available funding. Once created the Director and Steering Committee will prioritize initiatives based on the available budget, with plans reviewed and revised annually.

Salary support for staff will depend on the specific model adopted. The COBRE currently provides funding for administrative and technical staff, and CLA currently provides funding for a GRA to support the COBRE Director. These individuals could potentially assume duties related to the institute as part of their role. Thus for the duration of the COBRE there may be no additional costs for staff. Whether a Director stipend is appropriate will depend on how the position is developed and filled. However, one potential model would be for an annual stipend consistent with roughly one month of overload effort.

As noted, the current space housing the administrative and research cores of the COBRE are already available and adequate to meet the short-term space needs of the institute. \$50,000 in funding is available for space renovation through an institutional match to the COBRE, which could be used if required to configure the space optimally accommodate the research center and institute.

**I. Projected Budget – identify portions of costs which will require state resources, grants, gifts and/or contracts**

For the first 5 years we plan to operate within the committed \$100,000 per year budget. Thus no additional funds are requested to mount the institute. Initial costs will include administrative staff support and a potential development officer, as well as funding for the specific activities listed in section G.

*Please attach any supporting documentation (i.e. support letters from community, industry).*

## **Neuroscience Institute Proposal**

### **Letters of Support**

Mridul Gautam, Vice President, Research and Innovation

Thomas Schwenk, Dean, School of Medicine, Vice President, Health Sciences

Debra Modellmog, Dean, College of Liberal Arts

Jeff Thompson, Dean, College of Science

Jacqueline Snow, President, Sierra Nevada Chapter of the Society for Neuroscience





University of Nevada, Reno

**Mridul Gautam**

Vice President for Research and Innovation

March 6, 2018

Kevin Carman, Ph.D.  
Executive Vice President and Provost  
University of Nevada, Reno

Institute for Neuroscience

Dear Kevin,

I strongly endorse the proposal to create an Institute for Neuroscience for our university. Within the last decade, research in the neurosciences at UNR has seen an explosion of growth. This growth has occurred throughout the campus, and has been fueled by several factors, including targeted recruitment of faculty in the brain sciences, increasing success in investigator funding and center grants (e.g. COBRE awards), and increased infrastructure (e.g. for fMRI).

Research & Innovation recognizes the enormous impact of these initiatives for our research imprint, and has played a central role in providing the institutional support and strategic planning to lead this development. Paralleling these exciting research advances, UNR has also established strong training programs in the neurosciences at both the undergraduate and graduate levels. The time is right to coalesce these many initiatives through an Institute that will provide a unified vision and visibility to the neurosciences at UNR. The Institute will synergize and elevate all of the programs and community in the neurosciences, and will highlight the national prominence of UNR as a center for excellence in the field. This will set the stage for taking the neurosciences at UNR to the next level.

The proposal has my unreserved support.

Sincerely,

Mridul Gautam, Ph.D.  
Vice President, Research and Innovation

**Vice President for Research & Innovation**

University of Nevada, Reno/0403

Reno, Nevada 89557

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March 1, 2018

Kevin Carman, Ph.D.  
Executive Vice President and Provost  
University of Nevada, Reno

Dear Kevin:

On behalf of the University of Nevada, Reno School of Medicine, I write to provide our enthusiastic support for the proposal to establish an Institute of Neuroscience for the University of Nevada, Reno. As you know, we have a large program including several faculty members, grants, and basic science initiatives that focus on the neurosciences. This focus includes a recently approved Department of Neurology that is being developed in partnership with Renown Health. This Department will include expertise in a wide range of clinical areas including stroke and seizure disorders, but a particular focus on the muscular dystrophies and movement disorders. We have substantial donor and school support for physician-scientists in those areas. In addition, we have a substantial presence in the neurosciences in our basic science departments, particularly Physiology and Cell Biology and Pharmacology. Several of our faculty members already participate in the Graduate Program in Integrative Neuroscience, and we were the founding home of the Sierra Nevada Chapter of the Society for Neuroscience as well as the organizing school for two COBRE grants focused on neuroscience.

The proposed institute will play a vital role in bridging the research and training programs in the neurosciences and in guiding the strategic planning and growth and vitality of the discipline at UNR. We are excited to be part of this campus-wide initiative. The proposal has our full support.

Best regards,

A handwritten signature in black ink, appearing to read 'Tom'.

Thomas L. Schwenk, M.D.  
Professor of Family Medicine  
Dean, School of Medicine  
Vice President, Health Sciences



College of Liberal Arts  
University of Nevada, Reno

**Debra A. Moddelmog**  
Dean

**Jane A. Detweiler**  
Associate Dean

**Darrell B. Lockhart**  
Associate Dean

**Melanie Duckworth**  
Assistant Dean

6 March 2018

Professor Mike Webster  
Department of Psychology  
1664 N. Virginia Street  
Reno, NV 89557-0296

Dear Mike,

I am pleased to support the proposal to establish an Institute for Neuroscience at the University of Nevada, Reno. This Institute would help to bring local as well as national attention to the significant teaching, research, and outreach engagement in the realm of neuroscience at our university. It would thus raise our visibility and reputation in this interdisciplinary area. In addition, the Institute for Neuroscience, especially if it were provided dedicated space, would serve as a means for bringing together students and faculty with interests in brain sciences, thus creating a stronger sense of community and identity in the area. Finally, given the prestige associated with an Institute and the opportunity it provides to consolidate resources and develop research collaborations, establishing an Institute of Neuroscience would help to generate additional possibilities for grant funding as well as fund-raising.

The College of Liberal Arts has been a committed and supportive partner in the development and maturation of the interdisciplinary Neuroscience program at UNR, and I am pleased to endorse the establishment of a formal Institute that will further advance this prestigious program.

Sincerely,

Debra A. Moddelmog  
Dean

**Dean's Office**  
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College of Science  
University of Nevada, Reno

**Jeffrey S. Thompson Ph.D.**  
Dean

DATE: March 7, 2018

TO: Kevin Carman, Executive Vice President and Provost

FROM: Jeff Thompson, Dean, College of Science

RE: Support for the proposed Institute for Neuroscience

The College of Science enthusiastically supports the proposal to establish an Institute for Neuroscience at the University of Nevada, Reno. Our college has been fully committed to building capacity in the neurosciences as a strategic priority and continues to advocate for the success of the associated programs. Early on, our Biology Department partnered with the Psychology Department to mount the interdisciplinary Neuroscience Major at UNR, a degree program that has grown far beyond expectations. Our faculty also form a central core of the recently established Graduate Program in Integrative Neuroscience. We have many faculty and students involved in cutting-edge research in the brain sciences, and will continue to recruit new faculty and graduate students within the discipline. The proposed Institute is a logical next step in bringing together and enhancing the many neuroscience researchers and initiatives throughout our campus. It has the potential to be transformational in building the impact and national visibility of our research and training programs. The proposal has our strongest support.

Cc: Professor Michael Webster

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<http://www.unr.edu/science>



March 6, 2018

Michael Webster  
Foundation Professor  
Director, COBRE for Integrative Neuroscience  
CO-Director, BS and Graduate Programs in Neuroscience

Dear Michael,

I am writing on behalf of the Sierra Nevada Chapter of the Society for Neuroscience (SfN) to confirm our enthusiasm and excitement for the proposed Institute for Neuroscience at UNR. I am the current President of the chapter, which is formally affiliated with SfN, the leading professional society in our discipline, with more than 40,000 members. Our chapter includes faculty and students in the brain sciences spanning many academic units on campus, and also includes many members from southern Nevada including UNLV and the Ruvo Center for Brain Health. We organize an annual conference to highlight neuroscience research within the state, and are also very active in education and outreach activities, with regular programs for K12 schools throughout the state and support for events including Brain Awareness Week. The proposed institute aligns perfectly with our mission of promoting a sense of community among Nevada neuroscience researchers and educating the public about the critical importance of understanding the brain. In fact, the Institute will allow us to have far greater reach and impact. As you know, many of our faculty were involved in helping to craft the proposal. I am sure I speak for all of our members in giving our full support for the proposed institute. We are very eager to become part of this exciting initiative.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. Snow', is positioned below the 'Sincerely,' text.

**Jacqueline C. Snow, Ph.D.**

President, Sierra Nevada Chapter of the Society for Neuroscience  
Assistant Professor, Cognitive and Brain Sciences and Interdisciplinary Neuroscience Programs  
Department of Psychology  
Mail Stop 296, 1664 N. Virginia Street  
University of Nevada, Reno