



College of Health Professions and Biomedical Sciences  
School of Physical Therapy and Rehabilitation Science  
School of Public and Community Health Sciences  
Skaggs School of Pharmacy  
School of Social Work  
**Office of the Dean**  
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Date: Nov 9, 2010

To: Perry J. Brown  
Interim Provost and VPAA

From: Dave Forbes  
Dean, CHPBS

Re: Regents' Professor Nomination

Enclosed is an updated nomination for consideration of a Regents' Professorship for Professor Richard Bridges. Professor Bridges' nomination was in process last year (see attached memo from The Provost's Office dated 8/30/10) while the Policy was being updated. Thus the added materials conform to the new policy.

Materials enclosed include:

- a.) Nomination letter and letter from the Dean
- b.) Letters from academic colleagues of national and international stature.
- c.) Professor Bridges' curriculum vitae
- d.) Additional materials requested by the Regents' Professor Selection Committee Nov. 2009



The University of  
**Montana**

October 26, 2010

Perry J. Brown, Interim Provost and VPAA  
The University of Montana  
32 Campus Drive  
Missoula, MT 59812

College of Health Professions and Biomedical Sciences  
School of Physical Therapy and Rehabilitation Science  
School of Public and Community Health Sciences  
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The University of Montana  
Missoula, Montana 59812-1512

**David S. Forbes**

Dean

340 Skaggs Building

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E-mail: david.forbes@umontana.edu

Website: www.health.umt.edu

Dear Provost Brown:

I am honored to provide this letter enthusiastically supporting the nomination of Department Chair and Professor Richard Bridges for a Regents Professorship. As Professor Vernon Grund outlined in his letter of nomination, Professor Bridges has brought much distinction to The University of Montana by dramatically elevating the profile of the University in biomedical research and by helping to lead the Skaggs School of Pharmacy to a national ranking of 7<sup>th</sup> (out of 119 pharmacy schools) in NIH (National Institutes of Health) funded biomedical research.

In his letter of nomination, Professor Grund outlines in detail Professor Bridges' University of Montana accomplishments; therefore, I will not repeat Professor Bridges' outstanding record in this letter of support. Rather, I will focus on the results of Professor Bridges' work as observed from my position as Dean of the College and the Skaggs School of Pharmacy.

Professor Bridges has been a builder of programs which have moved the Skaggs School of Pharmacy and The University of Montana into national recognition in terms of biomedical and pharmaceutical sciences research. Without Professor Bridges' leadership and success at program building this School and University would not have the extra-mural funded resource base that both enjoy today. Additionally, Professor Bridges is providing outstanding leadership to the School as Chair of the Department of Biomedical and Pharmaceutical Sciences.

Professor Bridges is a collaborator of the highest caliber, a personal and professional trait that again has moved this School and University forward. With these collaborations, Professor Bridges has not only benefited the School, but also the College of Arts and Sciences, especially so for the Department of Chemistry and the Division of Biological Sciences.

As I stated above, the Skaggs School of Pharmacy and The University of Montana have benefited immensely from the leadership provided by Professor Bridges. I receive fairly frequent inquiries from deans and faculty of other pharmacy programs asking what we have done to move our research programs rapidly up the National Institutes of Health rankings. There are a number of reasons for our success, but no one in our School has contributed more to this success than has Professor Bridges. I believe that there needs to be three different types of support available to fund a high quality research program. Those three areas are state support, private support and federal support. These three areas of support tend to be synergistic, and Professor Bridges has been instrumental in moving the Skaggs School of Pharmacy forward in all three areas. Private donors are attracted by high quality research and federal programs provide support

for such research. We hope that the State of Montana will better recognize the need to provide additional state support for proven high quality academic programs.

Professor Bridges is a scholar who has competitively funded his own research and his Center of Biomedical Research Excellent (COBRE) grants have been the “seed corn” supporting collaborative research in the School and The University. Professor Bridges’ career has spanned the entire time from when the Skaggs School of Pharmacy was just beginning to be involved in extra-mural funded research, to today, when the School is ranked 7<sup>th</sup> in the U.S. Professor Bridges also has reached out to many faculty by personally providing assistance in order to enhance their own research skills.

Dr. Bridges is a very distinguished scholar who has contributed a great deal to The University. No one has had a greater impact on the growth of interdisciplinary biomedical research at The University of Montana than Professor Richard Bridges.

Sincerely,

A handwritten signature in black ink, appearing to read "David Forbes", written over a light gray rectangular background.

David S. Forbes, Ph.D.  
Dean and Professor

DF:jw

**Table 1: Total Amount Awarded  
FY 2009 NIH Grants and Contracts**

Rank	Institution	Total NIH Award
1	University of California-San Francisco	\$28,019,964
2	University of Kansas	\$22,742,796
3	University of North Carolina-Chapel Hill	\$19,483,833
4	University of Utah	\$14,250,800
5	University of Illinois at Chicago	\$14,185,566
6	University of California-San Diego	\$11,355,442
7	<b>University of Montana</b>	<b>\$11,224,774</b>
8	University of Arizona	\$10,652,466
9	University of Washington	\$9,742,629
10	Rutgers University	\$8,778,857
11	Purdue University	\$8,443,900
12	University of Colorado	\$8,277,427
13	University of Michigan	\$8,157,943
14	University of Minnesota	\$6,847,309
15	Northeastern University	\$6,652,979
16	University of Nebraska	\$6,624,637
17	University of Southern California	\$6,621,824
18	University of Rhode Island	\$6,280,268
19	University of Florida	\$6,081,908
20	Xavier University	\$6,070,502
21	Virginia Commonwealth University	\$6,058,950
22	University of Pittsburgh	\$6,020,131
23	University of Kentucky	\$5,997,490
24	Ohio State University	\$5,970,406
25	University of Texas at Austin	\$5,598,222
26	University of Wisconsin-Madison	\$5,567,454
27	University at Buffalo-SUNY	\$5,287,001
28	South Carolina College of Pharmacy	\$5,247,008
29	Florida A & M	\$4,506,671
30	University of Mississippi	\$4,463,342
31	University of Maryland	\$4,209,632
32	University of Iowa	\$3,829,387
33	University of New Mexico	\$3,180,189
34	University of Missouri-Kansas City	\$3,070,490
35	University of Tennessee	\$2,881,281
36	Oregon State University	\$2,674,650
37	University of Houston	\$2,438,488
38	Wayne State University	\$2,135,505
39	Texas Tech University	\$2,005,121
40	Duquesne University	\$1,780,670
41	University of Oklahoma	\$1,523,868
42	University of Georgia	\$1,482,730
43	University of Connecticut	\$1,310,545
44	West Virginia University	\$1,195,760
45	University of Arkansas	\$1,185,122
46	Albany College of Pharmacy	\$1,162,051
47	Washington State University	\$1,148,922
48	Temple University	\$898,503
49	Howard University	\$736,000
50	North Dakota State University	\$720,087
51	Southern Illinois at Edwardsville	\$674,249
52	Creighton University	\$619,187
53	University of Cincinnati	\$535,424
54	University of the Sciences-Philadelphia	\$434,939
55	University of Toledo	\$416,544
56	University of Wyoming	\$393,339
57	Texas Southern University	\$361,795



Skaggs School of Pharmacy		
National Ranking History		
Biomedical (NIH) Research Funding		
<u>Year</u>	<u>Total Funding</u>	<u>Funding per Ph.D. FTE</u>
1990	Unranked	Unranked
1998	37 <sup>th</sup>	38 <sup>th</sup>
1998-2002 (Ave)	21 <sup>st</sup>	18 <sup>th</sup>
2003-2009 (Ave)	8 <sup>th</sup>	7 <sup>th</sup>
There are currently 112 U.S. Colleges/Schools of Pharmacy		



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Oct. 19, 2010

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Dave Forbes, Dean  
College of Health Professions and Biomedical Sciences  
The University of Montana  
Missoula, MT 59812

Dear Dean Forbes:

It is my distinct honor to nominate Professor Richard Bridges for a Regents' Professorship. As I will outline in this letter, Professor Bridges has brought distinction to The University of Montana by dramatically elevating the profile of the University in research in his 17 years at UM and by helping to lead the Skaggs School of Pharmacy to a national ranking of 7<sup>th</sup> (among all U.S. Schools/Colleges of Pharmacy) in NIH (National Institutes of Health) – funded biomedical research. It should also be noted that Professor Bridges is a truly well-rounded scholar, having won teaching awards and numerous distinctions for service to go along with his many accomplishments in research and program building at The University of Montana. He currently serves as Chair of the Department of Biomedical and Pharmaceutical Sciences in the College of Health Professions and Biomedical Sciences. This is a complex department of over 30 faculty, four Ph.D. and four M.S. programs, and two National Institute of Health funded Centers of Biomedical Research Excellence.

Richard came to the University of Montana as an Associate Professor in 1993. He was promoted to Professor in the Department of Pharmaceutical Sciences (now Department of Biomedical and Pharmaceutical Sciences) in 1998 and became chair in 2008. He has received seven merit awards and a teaching award since joining UM. He has trained eight Ph.D. and five M.S. students and currently has one graduate student in progress. He has published 69 papers (36 at UM alone) of which 10 are invited reviews or chapters. He has co-authored a book published in 2006, and he is the co-author on three patent applications. Since joining UM in 1993 he has been the principle investigator on grants totaling over \$25 million, most notably, the two 5-year grants (NIH-COBRE grants) in Structural and Functional Neuroscience. The first NIH-COBRE grant, funded in 2000, was one of the original 7-COBRE grants funded by the NIH in the U.S., and was the foundation for the Regent's approved Center for Structural and Functional Neuroscience at The University of Montana. This program has been recognized nationally as a model for impacting research growth in states without a medical school. This grant and another NIH-COBRE grant in the Department of Biomedical and Pharmaceutical Sciences paved the way for the College of Health Professions and Biomedical Sciences to obtain a 5-year \$3 million building grant from NIH, the initial funds raised towards the \$14 million Skaggs

Building expansion completed in May 2007. Indeed, Professor Bridges was a central figure in the functional planning and design of this biomedical research facility and science learning complex.

In addition to his own grants, the faculty recruited into the Center for Structural and Functional Neuroscience and mentored by Dr. Bridges have also been major contributors to the rapid growth and expansion of biomedical research and graduate programs not just in the College of Health Professions and Biomedical Sciences, but also in the Chemistry department and the Division of Biological Sciences. The Ph.D. and M.S. programs in Neuroscience, approved by the Montana Board of Regents in 2005, depend greatly on the support provided by the Center for Structural and Functional Neuroscience and its faculty.

Dr. Bridges has also seen to it that the Center for Structural and Functional Neuroscience is a true interdisciplinary center, crossing department/division/college lines to include and support faculty from both the Division of Biological Sciences (DBS) and the Department of Chemistry. It should be noted that two center faculty from DBS and one from math, are housed in the new Skaggs Addition since the lab design was intended to encourage interdisciplinary research.

Part of what all of the center affiliated faculty take advantage of are the outstanding core research facilities and other infrastructure that Professor Bridges has put in place with the two NIH-COBRE grants and a NIH-IDeA grant (institutional development award) totaling \$7.7 million that preceded the COBRE awards, dating back to 1995. This infrastructure also paved the way for Professor Bridges to work with the State of Montana's Board of Research and Commercialization Technology to enhance economic development in affiliation with the Montana Neuroscience Institute Foundation and St. Patrick Hospital and Health Sciences Center. Dr. Bridges is a founding member of the Montana Neuroscience Institute Foundation and is currently Chair of the Board of Directors of that Institute. Collectively, working with the Montana Board of Research and Commercialization Technology and Dr. Dave Poulsen of the Institute, the Board has contributed over \$640,000 as match support for the COBRE grant. As a result of this support a spin-off company (Sinapis Pharma) was recently developed by Dr. Poulsen and a major Department of Defense grant was landed. All in all, some 14 faculty members affiliated with the Center for Structural and Functional Neuroscience have generated over \$35 million in research grants (total award) just since 2004. It should be noted that Professor Bridges was also highly instrumental in recruiting Professor Andrij Holian who came to UM to establish the Center for Environmental Health Sciences and start Ph.D. and M.S. programs in toxicology. Dr. Holian was also able to obtain a NIH-COBRE grant, largely patterned after the original COBRE grant obtained by Professor Bridges. Both centers work synergistically and have a major cross-over in the area of neurotoxicology.

Since joining The University of Montana, Professor Bridges has received the Montana Academy of Sciences Mershon Award (2003) for outstanding research contributions to the State of Montana. He has served on several prestigious national NIH study sections including the national NIH-IDeA Program Review and Advisory Panel. He was a founding member and serves on the Board of Directors of the Montana Bioscience Alliance and the Montana Neuroscience Institute (board Chair). He has won a Rho-Chi AACP Pharmacy teaching award and was selected as a Provost's Distinguished Faculty Lecturer (2004). Dr. Bridges is a true distinguished scholar in every sense of the word and was a highly deserving

recipient of the George M. Dennison Faculty Award for Distinguished Accomplishment that he received in 2008. Thus, Professor Bridges has excelled in all three areas of University expectation: instruction, scholarship, and service and has had a major impact on the growth of research and graduate education at the University of Montana and throughout the state. It is my distinct honor to nominate him for a Regent's Professorship.

Sincerely,

A handwritten signature in blue ink that reads "Vernon R. Grund". The signature is fluid and cursive, with the first name "Vernon" being the most prominent.

Vernon R. Grund, Ph.D.

Associate Dean for Research and Graduate Education

College of Health Professions and Biomedical Sciences

Assistant to the Vice President for Research and Development/Health Sciences

The University of Montana

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200 First Street SW  
Rochester, Minnesota 55905  
507-284-2511

**Matthew M. Ames, Ph.D.**  
Chair, Department of Molecular  
Pharmacology and Experimental  
Therapeutics

October 22, 2010

Dave Forbes, Dean  
College of Health Professions and Biomedical Sciences  
The University of Montana  
Missoula, MT 59812

RE: Professor Richard Bridges

Dear Dean Forbes:

I am privileged to provide my strongest support for the nomination of Professor Richard Bridges to be named a Regents' Professor. I have been acquainted with Dr. Bridges for more than fifteen years through numerous relationships with the University of Montana, most notably as an External Scientific Advisor to the University's NIH COBRE grant in Structural and Functional Neuroscience. Dr. Bridges was the Principal Investigator for the first two cycles of that funding instrument, and we interacted frequently through that activity. Further, I have collaborated with University investigators, presented seminars in the School of Pharmacy and am acquainted with a number of faculty members. I am very comfortable commenting on Dr. Bridges' many talents and successes on behalf of the University.

Dr. Bridges is first and foremost an outstanding scientist. There are clear challenges in building a strong NIH-funded basic and translational research program at 1) a smaller university and 2) one without a medical school. Historically, those challenges presented an additional challenge--recruiting outstanding scientists to such institution. Dr. Bridges came to the University of Montana in 1993 and promptly continued his scientific success begun at the University of California through publications and extramural funding based on his work at the University of Montana. He was the "model" demonstrating that cutting edge biomedical research could successfully be conducted and funded in this setting. His productivity, along with leadership in the Department of Biomedical and Pharmaceutical Sciences and the School of Pharmacy, was instrumental in moving the department and school to more visible and strengthened reputations in the neurosciences. He is a nationally recognized leader in his field of expertise, most notably working with the neurotransmitter glutamate, relevant transporters and the role of these systems in neuronal signaling and function. He has served on multiple NIH Study Sections and Site Visit panels, a further indication of his national reputation.

Dr. Bridges' success as a research scientist has been equaled by his success as a leader. Most notable in that regard was his successful planning, submission and implementation of the NIH COBRE grant. The grant brought extraordinary visibility to the University of Montana in the highly competitive world of NIH recognized biomedical research as well as substantial NIH funding (both directly and through research initially fostered through the COBRE program) to the University. Another indication of Dr. Bridges' leadership, both as PI of the COBRE grant but also as a leader in the School of Pharmacy has been his impact on recruitment. Through the COBRE grant, but also as a product of that success, he has been instrumental in recruiting a cohort of strong research scientists in the neuroscience, pharmacology



and medicinal chemistry arenas. In aggregate, the grant and recruitments have fundamentally altered the biomedical research status of the University, and the impact extends far beyond the immediate program, department and School. Evidence of this is the current ranking of the School of Pharmacy as 7<sup>th</sup> among U.S. Schools or Colleges of Pharmacy, as measured by NIH funded research.

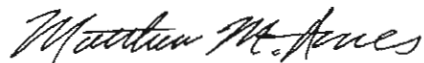
Shortly after completion of his tenure as PI of the COBRE grant, I was not surprised to learn that he was appointed Chair of the Department of Biomedical and Pharmaceutical Sciences. This was a logical progression for Dr. Bridges. It was obvious from conversations with his colleagues that his appointment was very well received. During recent visits, there was visible excitement and enthusiasm about the future among department members. Simply put, Dr. Bridges is a natural born and effective leader.

I am less well versed in Dr. Bridges' educational contributions to the University. Having said that, a number of my visits to the campus have involved seminars and, as is often the case for visiting faculty, conversations with undergraduate and graduate students. It is absolutely clear that Dr. Bridges is very highly regarded by students. It is obvious to me from years of observations and conversations that he is totally committed to not only his students, but to all students with whom he has interactions or responsibilities. I am aware that he has been recognized through numerous teaching awards at the University.

In summary, I believe Dr. Bridges would bring great honor to the University as a Regents' Professor. As someone who has long roots in the state of Montana (including most of my childhood in Libby, Montana), I have long had a particular interest in the University and many interactions with research faculty on the Missoula campus. While it may seem presumptuous, it is my candid opinion that within the scientific community, there is no one on the faculty more deserving of this honor or who would better represent the University in this manner. It is a pleasure to have this opportunity to support Dr. Bridges.

If I can provide any additional information, please do not hesitate to contact me.

Sincerely,



Matthew M. Ames, Ph.D.  
Sandra J. Schulze Professor  
Professor and Chair,  
Department of Molecular Pharmacology  
and Experimental Therapeutics  
Phone: 507-284-2424  
Fax: 507-293-0107  
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MMA:pb



October 25, 2010

Vernon R. Grund, Ph.D.  
Associate Dean for Research and Graduate Education  
College of Health Professions and Biomedical Sciences  
The University of Montana  
32 Campus Drive, Skaggs 342  
Missoula, Montana 59812

Dear Dr. Grund;

It is a great pleasure to learn that Professor Richard Bridges is being nominated for a Regent's Professorship. I am honored that he considered me to support that action. Richard certainly merits that honor and appointment.

I first met Richard during our Strategic Planning meetings for the Centers of Biomedical Research Excellence (COBRE) initiative. His input helped to structure the new initiative. He then competed for a COBRE award and was among the successful new principal investigators in the inaugural class of COBREs. That COBRE award provided the resources for Richard to establish the Center for Structural and Functional Neuroscience. This Center has developed into an exceptionally productive research platform that brought together Chemistry and the Biological Sciences on the campus.

Our interaction was productive and helpful especially during the years when the Institutional Development Award (IDeA) program was growing rapidly. During that time the COBRE program was being modified and the INBRE program was starting, first as BRIN planning grants and then as the IDeA Networks of Biomedical Research Excellence (INBRE) Network initiative. Richard participated in all meetings of principal investigators and other meetings as required in a role demonstrating sound judgment and leadership. I learned that Richard was the principal investigator on an early IDeA grant, "Advancement of Neuroscience in Montana", funded in September of 1996. This was one of the first IDeA awards when the total budget for the program was at \$1.1 million (current IDeA budget is \$229 million). This certainly demonstrates outstanding initiative to find such a small program and to be successful as one of its first grantees.

Richard participated on early Review Panels that evaluated IDeA and Research Centers in Minority Institutions (RCMI) grant applications. His point of view as an IDeA principal investigator, an eminent scientist and an IDeA state resident provided a much needed point-of-view. He helped the diverse review panel to understand IDeA program goals and IDeA state environments that provided for a fair and complete review process.

He initiated a yearly Neuroscience meeting in Montana that brought together the institutions in the State and built bridges and initiated communication and collaborations among those institutions.

Richard invited a representative from a NIH Institute or Center to each meeting. I was fortunate to participate in one of those Neuroscience Symposia several years ago. These Symposia also served to make inroads into the NIH for the senior and developing investigators in Montana in an effective manner.

Richard sat as a member of the Steering Committee that organized the early National IDeA Symposium of Biomedical Research Excellence. That biannual meeting was recently attended by 850 participants in Bethesda in June 2010. Richard had a role in defining the initial structure and has served as a session chairperson.

Richard has continued to participate to help to develop the IDeA program since inception and to build research infrastructure and research programs in Montana. He has assumed many roles and has always demonstrated sound judgment and commitment to excellence. It has been my honor to work with him over these years and I recommend that he receive this honor without reservation.

Sincerely,

A handwritten signature in black ink, appearing to read "W. Fred Taylor". The signature is fluid and cursive, with a prominent initial "W" and a stylized "T" at the end.

W. Fred Taylor, Ph.D.  
Director, Institutional Development Award Program  
Division of Research Infrastructure  
National Center for Research Resources  
National Institutes of Health



3<sup>rd</sup> November 2010

Vernon R. Grund  
Associate Dean for Research & Graduate Education  
College of Health Professions & Biomedical Sciences  
University of Montana  
Montana 59812  
**U.S.A.**

Dear Dr Grund,

**re: Richard J BRIDGES**

I am delighted to write in support of **Dr Richard BRIDGES**, University of Montana, whom I have met on numerous occasions at various meetings, and whose work I have been familiar with since the early 1980s.

Dr Bridges work is well known internationally as shown by data from the ISI Web of Knowledge: 78 publications, 4,174 citations, 53 citations per item and *h*-index = 31. These figures are highly creditable indeed and testify to the impact of his work internationally. My understanding is that Ivy League Professors have *h*-indices in the mid-20s. Dr Bridges has 4 articles containing original data from his time at the University of Montana that have been cited  $\geq 50$  times meaning that they are much respected by scientists internationally. I would especially draw to your attention that a seminal review on the molecular pharmacology of drugs acting on transporters for L-glutamate, the major carrier of excitatory information in the mammalian brain, has been cited on  $n=81$  occasions as of 2<sup>nd</sup> November 2010 – truly indicative of his status and recognition in this field internationally.

The work of Dr Bridges indeed truly bridges aspects of medicinal chemistry, pharmacology and biology, and I note that he is a co-author on three patents. In this context I note recent publications pertinent to drug design and structure-activity relations of various transport systems - L-glutamate, cysteine-glutamate and vesicular transporter transporters.

Whilst I am best placed only to comment on the research achievements and international standing of Dr Bridges, it is very apparent that he has played incisive and seminal roles in the establishment of research initiatives at the University of Montana through his academic leadership. His key involvement in the Center for Structural and Functional Neuroscience and the Montana Neuroscience Institute Foundation have clearly been instrumental in the success of both of these centers. When taken with his success as a teacher, we truly recognize the picture of a true scholar.

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My belief is that there is very convincing evidence to support the nomination of Professor Bridges for a Regent's Professorship.

*Philip M. Beart*

**Philip M. Beart DSc  
Professor  
ISN Secretary & President-elect / International Society for Neurochemistry  
University of Melbourne**

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PROFESSOR RICHARD CHAMBERLIN, CHAIR  
DEPARTMENT OF PHARMACEUTICAL SCIENCES

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Email: archambe@uci.edu

November 3, 2010

Vernon R. Grund, Ph.D  
Associate Dean for Research and Graduate Education  
College of Health Professions and Biomedical Sciences  
Assistant to the Vice President for Research and Development/Health Sciences  
The University of Montana  
Missoula, MT 59812-1552

Dear Vern,

I am pleased to respond with tremendous enthusiasm to your recent request for a letter of support for your nomination of Richard Bridges for a Regent's Professorship. I believe such an honor is strongly justified based on his scientific stature in the neuroscience community alone; however, coupled with his incredible success at building an internationally respected neuroscience program at Montana, a prestigious professorship for him should be a proverbial "no brainer."

I have known Rich since he was a postdoctoral with Carl Cotman at UC Irvine more than 25 years ago. His interdisciplinary style was clear even then, when he approached me wanting to learn more about small molecule design and synthesis. As is typical for him, he jumped right in and became a sort of honorary postdoc in my lab, coming to group meetings and even trying some hands-on laboratory synthesis. When he began his independent career here at UCI, we continued as collaborators, and over the next decade and a half published nearly two dozen papers together in the area of excitatory amino acid receptor and transporter pharmacology. We jointly developed a number of small molecule probes for studying EAA receptor function, and over time his interests expanded to include a number of different transport systems, work carried out at Montana, for which he is best known and widely respected. He sensibly built the neuroscience program at Montana in part around his own interests, which because of his scientific reputation facilitated recruiting other accomplished scientists in the field such as Mike Kavanaugh, John Gerdes, Nick Natale, Chuck Thompson, and others who as a group have brought the program to prominence. As one of the NIH-COBRE grant external advisors, I had the opportunity to closely follow the growth of the Center for Structural and Functional Neuroscience and the skill with which Rich directed its rise to prominence. It has truly become a showpiece that any university in the country would be proud have on its campus.

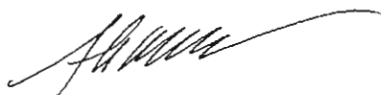
As those of us who have tried to build high-impact academic programs know only too well, it is a truly monumental task that takes a sustained effort over many years to make significant progress, and Rich has been unbelievably successful (with of course strong support from your office and others in the administration). His talent as an administrator and program builder is unparalleled; the word "productive" does not often come to mind in that context, but in fact it fits his administrative career perfectly, as the incredible list of accomplishments discussed in your nomination letter clearly demonstrates.

In addition to Rich's program-building talent and his own widely respected research accomplishments, he also an outstanding teacher and mentor. At Irvine he was a very effective advisor to students at all levels, from the least experienced undergraduate trying laboratory research for the first time to grad students and postdocs. I don't recall having seen him in the

classroom, but he is a very engaging speaker whose lectures are models of organization and clarity. His mentoring has extended even to new junior faculty members at Montana, where he keep a caring, watchful eye on the progress of new faculty recruits.

In summary, Rich Bridges runs a respected research program that adds substantial prestige to your university. Addressing significant problems in the neurobiology of EAA receptors and transporters, he has for many years maintained a high level of research productivity and national recognition that very clearly is consistent with a distinguished professorship. His teaching activities have been commendable, and the quality and quality of his service to his department, the university, and beyond has been exceptional, if not astonishing. He is an ideal candidate for the proposed honor, and I support his nomination in the strongest possible terms.

Sincerely,

A handwritten signature in black ink, appearing to read 'Richard Chamberlin', with a long, sweeping horizontal flourish extending to the right.

Richard Chamberlin  
Professor of Chemistry, Pharmaceutical Sciences, and Pharmacology  
Chair, Department of Pharmaceutical Sciences

November 2, 2010

Dave Forbes, Dean  
College of Health Professions and Biomedical Sciences  
The University of Montana  
Missoula, MT 59812

Dear Dean Forbes,

I am writing to enthusiastically endorse Dr. Richard Bridge's candidacy for Regents' Professor at the University of Montana. From the policy for the selection Regents' Professors, I see that the position requires evidence of excellence in teaching, scholarship, and service.

Let me start with scholarship. Dr. Bridges trained in the laboratories of Dr. Alton Meister and then Dr. Carl Cotman. As you may know, glutamate is the predominant neurotransmitter in the mammalian CNS, mediating up to 80% of all cell-to-cell communication. About the time that Dr. Bridges began his independent career, it became clear that glutamate is essential for storage of information (memory) and contributes to cell death observed in neurodegenerative disorders.

As he evolved to his independent position at the University of California (Irvine), he began to focus his career on glutamate transporters that are found in the mammalian central nervous system (CNS) and has continued this focus at the University of Montana (Missoula). There are three broad families of glutamate transporters. The first packages glutamate into vesicles for subsequent release. The second is a Na<sup>+</sup>/glutamate symport system. The third is a glutamate/cysteine antiport system. Dr. Bridges has been a pioneer in developing compounds that are specific for different subtypes of these transporters. He and his collaborators consistently publish thorough analyses of the compounds that are developed, his publications are highly cited (ISI), and his program has been consistently funded by the National Institutes of Health and other organizations. Given the role these transporters play in handling the predominant neurotransmitter in the brain, it seems highly likely these tools will be important for advancing our understanding of basic processes and may lead to new therapeutics. In fact, the work has led to recent patents/patent applications. Based on these criteria, I would think that Dr. Bridges easily qualifies from the perspective of scholarship.

I have followed Dr. Bridges career since before he moved to the University of Montana. It is my impression that he has been a driving force in helping the institution develop several new significant research programs. He has been the lead investigator on several centers that helped the institution develop infrastructure and support junior faculty, including the center entitled "Advancement of Neuroscience at Montana", a infrastructure grant entitled "Development of a CNS Tissue Culture Facility" and several comparable grants. Until recently, he was Director of the NIH COBRE Center for Structural and Functional Neuroscience. Most recently he has taken over as Chair for the Department of Biomedical and



Pharmaceutical Sciences. I have met several of the faculty that Dr. Bridges recruited and helped transition at the University of Montana. It is clear that he has had a substantial impact on the careers of several faculty at your institution. Dr. Bridges has been a wonderful role model for the individuals.

From a teaching perspective, I have been at a few of Dr. Bridges scientific seminars. He always gives a very clear presentation and is engaging. Based on these lectures, I have no doubt that he is a very effective and respected teacher. In fact, he is the recipient of several awards from the University of Montana, some of which clearly relate to his teaching (e.g. Instructor of the Year Award). He has supervised many post-doctoral fellows and graduate students who have done well. In fact, some have joined your faculty.

In summary, I have sufficient knowledge to very comfortably recommend Dr. Bridges for this award based on his contributions to scholarship, service, and teaching. He has developed several programs that will have a long lasting impact on the quality of research that will be conducted at your University.

If I can provide any further information, please do not hesitate to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read 'M. Robinson', with a long horizontal flourish extending to the right.

Michael B. Robinson Ph.D.  
Professor of Pediatrics and Pharmacology

**Dean Vernon Grund**  
**University of Montana at Missoula**  
**Montana, U.S.A.**  
**5<sup>th</sup> November 2010**

**Dear Dean Grund**

**Professor Richard J. Bridges**

I am pleased to write in support of Professor Bridges' advancement. As I see it, there are three distinct phases to Professor Bridges' career. During his early years in Columbia he received an enviable research education and produced papers of such quality that some remain to this day milestones in the biochemical literature of its time. At Irvine, Professor Bridges continued to produce fine fundamental research, now moving towards neuroscience and developing a wide range of interests including excitatory amino acids, glutamate receptors and, increasingly, glutamate transporters in the central nervous system. This, of course, was the man who was appointed as Associate Professor at the University of Montana, Missoula, in 1993.

Since that time Richard has enhanced his international reputation by developing further his work on glutamate transporters and concentrating more recently on the glutamate/cystine exchanger. The most recent work on the glutamate/cystine exchanger in tumour cells is a very exciting development that promises much in the continued expansion of Professor Bridges' future research.

While involved in research of international standing, Professor Bridges has taken on a full share of administrative and teaching duties. The latter activity is time consuming for an active research scientist, but in my view essential as a means of encouraging young people into a research career. As you will be aware Professor Bridges has also been active in administrative positions within and outside the University of Montana, including the Johns Hopkins School of Medicine.

In making the appointment that you are envisaging you clearly need a person who will be respected because of a reputation that is not only national, but international, for in so doing you will bring prestige to the Department of Biomedical and Pharmaceutical Sciences and also to the University of Montana itself. In Professor Bridges you have such a person and I recommend him to you warmly.

Yours sincerely

Peter Nunn BSc, Ph.D.  
Senior Research Scientist  
School of Pharmacy and Biomedical Sciences  
University of Portsmouth  
Portsmouth  
Hampshire PO1 2DT  
England, United Kingdom.



The University of  
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Vernon R. Grund, Ph.D.  
Associate Dean for Research and Graduate Education  
College of Health Professions and Biomedical Sciences  
The University of Montana  
Missoula, MT 59812

I am pleased to furnish a letter in support of the nomination of Prof. Richard J. Bridges for a REGENTS' PROFESSORSHIP. I have been a scientific collaborator, co-instructor and colleague with Prof. Bridges since 1994, the year I joined the faculty at UM and have a good sense of his abilities and contributions. An important point that I wish to convey early in this letter is to not only consider what he has accomplished but also what he will surely accomplish in coming years deserving of a Regents Professor. To summarize, Prof. Bridges is an internationally recognized scholar and researcher in the area of neuroscience, a highly commended and recognized teacher and mentor, a superlative supervisor to his students and staff, a program building and facilitating administrator, and a genuinely outstanding colleague and friend. I provide a very brief list of his accomplishments that barely covers the diverse contributions he has made to The University of Montana, region and nation.

- publishes a number of peer-reviewed papers each year in the best journals in his field;
- one of the best directors of Ph.D. students in the University – testimony to his excellent mentoring, guidance and quality of his research program;
- he unselfishly reduced his research lab resources and personnel to allow the development of young faculty, colleagues to flourish, and new projects to be deployed;
- he is a highly sought after plenary speaker at national and international venues;
- recognized as a superb teacher/lecturer – presents cutting edge technology each and every lecture. Contributes freely to interdisciplinary classes covering a wide array of topics from brain chemistry the highly specialized area of neuroscience transporters;
- a long and successful extramurally funded research program. Prof Bridges has been NIH-funded throughout his career and usually has additional grants (Packard foundation, etc.). He is an avid collaborator and contributor and is responsible for a number of successful awards to UM faculty in which his 'actual' role in the project was far greater than originally planned.
- one of the best program builders in the state – Prof. Bridges is a visionary with a tangible sense of what the State of Montana and UM can accomplish when opportunities are presented. He co-spearheaded the creation of the Center for Environmental Health Sciences (with Prof. Grund) and more recently catalyzed and helped develop and support (with Assoc Dean Grund) the new Medicinal Chemistry PhD program.
- he devised and received Regents approval for the Center for Structural and Functional Neuroscience (that received a COBRE Award in 2000 and has been continuously funded since) and co-founded the Montana Neuroscience Institute. Few people know that despite the exhaustive hours he put into creating these programs that neither directly benefits his research or him directly. When others begin to think about program building, Prof. Bridges is one of the most sought after faculty members on campus for his insights, views and concepts.

- serving on numerous departmental, university-wide and national committees and review boards, he has achieved a enviable measure of service to the institution and community. His recent acceptance as department chairperson has further solidified his leadership and vision in service.
- when it comes to outreach and new initiatives, Prof Bridges is a star player, enabler and leader. In my work as the originator of spectrUM (the children science area at UM), co-founder of a local small biotech (ATERIS), and director of a research core facility (Mass Spectrometry and Proteomics), each instance was made possible by working with Rich Bridges. In instances when he cannot directly affect an outcome, he identifies the pathway, manner or people that can come to bear on solving a problem or initiating a new activity.
- Prof. Bridges is an avid recruiter and magnet for future faculty hires. My willingness to accept a position at The University of Montana was predicated on a potential collaboration with Prof. Bridges. This is all the more remarkable when you realize I was hired into a different department. The “word on the street” is if you really want a candidate to come to the University of Montana – have them meet with Rich. There is not a better beacon or advertisement for UM than Rich Bridges. For this reason alone, his candidacy as Regents’ Professor should be elevated.
- A rare scientist in that he can interact in a number of scientific areas including [bio]chemistry, biology, pharmaceutical sciences, neuroscience, medicine, etc.

Overall, I can state without reservation that the meteoric success of my research and scholarly program is proportional to Rich’s assistance and guidance. And although he equally brings that level of support and facilitation as Chair of Biomedical and Pharmaceutical Sciences, his willingness and ability to help all people and departments establishes him as a unique commodity on campus. Our School of Pharmacy and the University at large reaps numerous accolades for programs he has helped develop. In keeping this brief, I realize there is still so much more to add. Rich certainly deserves this recognition and elevation to Regents’ Professor. I can think of no better candidate on campus. The University of Montana will continue to benefit from his pioneering research, program building and unselfish nature.



Charles M. Thompson, Professor of Medicinal Chemistry

# CURRICULUM VITAE

Richard J. Bridges

## PERSONAL DATA:

Birthdate: November 16, 1955  
Place of Birth: Zweibrucken, Germany  
Citizenship: U.S.A.

## EDUCATION:

B.S.: University of California, Davis, (Biochemistry), 1977  
Ph.D.: Cornell University Graduate School of Medical Sciences, (Biochemistry), 1984

## RESEARCH INTERESTS:

Glutamate Transport and Metabolism, Excitatory Amino Acid Receptor Pharmacology, Mechanisms of Excitatory Amino Acid-Mediated Neurotoxicity, Gliotoxicity, Glial Tumors

## POSITIONS HELD:

2008- Chair, Department of Biomedical & Pharmaceutical Sciences, University of Montana  
2000-2008 Director, NIH COBRE Center for Structural and Functional Neuroscience Dept. of Biomedical & Pharmaceutical Sci., University of Montana  
1998- Professor, Department of Pharmaceutical Sciences, School of Pharmacy and Allied Health Sciences, University of Montana, Missoula  
1993-1998 Associate Professor, Department of Pharmaceutical Sciences, School of Pharmacy and Allied Health Sciences, University of Montana, Missoula  
1995-1998 Clinical Associate Professor, Department of Neurology, California College of Medicine, University of California, Irvine  
1993-1995 Associate Professor in Residence, Department of Neurology, California College of Medicine, University of California, Irvine  
1987-1993 Assistant Professor in Residence, Department of Neurology, California College of Medicine, University of California, Irvine  
1984-1987 NIH Postdoctoral Fellow, Dr. Carl Cotman, Department of Psychobiology, University of California, Irvine  
1977-1984 Predoctoral Fellow, Dr. Alton Meister, Biochemistry Department, Cornell University Medical College  
Winter 1977 Teaching Assistant, Dr. J.P. Preiss, Department of Biochemistry and

1975-1977 Biophysics, University of California, Davis  
Research Assistant, Dr. I.H. Segel, Department of Biochemistry and  
Biophysics, University of California, Davis

## AWARDS, HONORS, & NOTABLE PROFESSIONAL SERVICE:

1978-1979	Blau Fellow, Cornell University Medical College
1985-1987	National Research Service Award, NIH
1991-1993	Board of Directors, Paralysis Project of California
1991-	Scientific Advisory Committee, Paralysis Project of California
1992-2002	Editorial Board of the <i>Journal of Spinal Cord Medicine</i>
1992	First Step Service Award Paralysis Project of California
1995	Burroughs-Wellcome International Travel Fellow, Institute of Psychiatry, London
1995	Merit Award, University of Montana
1997	Instructor of the Year Award, Univ. of Montana School of Pharmacy
1997	Merit Award, University of Montana
1998	NIH NLS-2 Study Section, Ad-hoc Member
1998-Present	Founding Member, Board of Directors, <i>Montana Neuroscience Institute</i>
2001	Merit Award, University of Montana
2002	NIH MDCN4 Study Section Ad-hoc Member
2003	COBRE Special Emphasis Panel Member
2003	Mershon Award, Scientific Contributions, Montana Academy of Sciences
2003	Merit Award, University of Montana
2004	NIH MDCN Study Section Special Emphasis Panel Member
2004	University of Montana, Provost's Distinguished Faculty Lecturer
2004-Present	Founding Member, Board of Directors, Montana BioScience Alliance
2004-Present	Univ. of Alaska-SNRP Basic Neuroscience Center Program Advisory Committee, Current Chair
2005	NIH NTRC Study Section, Ad-hoc Member
2006	Organizing Committee and Session Chair, National IDeA Symposium of Biomedical Research Excellence, Washington, DC
2007	Merit Award, University of Montana
2007-2009	Member, RCMI/IDeA Program Review and Advisory Panel, NIH
2007-Present	Chair, Board of Directors, <i>Montana Neuroscience Institute</i>
2008-Present	Univ. of North Dakota, COBRE Neuroscience Center Program Advisory Committee
2008	Dennison Presidential Faculty Award, University of Montana
2009	NIH NTRC Study Section, SEPA panel member
2010	NIH MDN Study Section SEPA panel reviewer
2010	Merit Award, University of Montana
2010	Brain Science Institute, SPCD Review Panel, Johns Hopkins School of Medicine

## PUBLISHED WORKS:

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Seib, T.; von Doersten, K.J.; and Bridges, R.J. (2005) System  $X_c^-$  transporter activity in primary cultures of rat astrocytes is regulated by glutathione levels. *Society for Neuroscience Abstracts*, **31**: 378.18.

Ye, R.; Rhoderick, J.F.; Thompson, C.M.; Bridges, R.J. (2006) Generation of a peptide map of the excitatory amino acid transporter EAAT2 using mass spectroscopy. *Society for Neuroscience Abstracts*, **32**: 629.14

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Mavencamp, T.L.; Cremins, D.; Bridges, R.J.' Kavanaugh, M.P.; and Esslinger, C.S.; (2006) Insight into EAAT3 selectivity by L- $\beta$ -benzyl-aspartate derivatives. *Society for Neuroscience Abstracts*, **32**: 629.29

Mavencamp, T.; Rhoderick, F.; Leary, G.; Ye, R.; Holley, D.; Gerdes, J.; Kavanaugh, M.; Esslinger, C.S.; and Bridges, R.J. (2007) Novel EAAT3 inhibitors suggest subtle differences between the EAAT binding sites *Society for Neuroscience Abstracts*, **33**: 682.20.

- Seib, T.M.; Patel, S.; Rhoderick, J.F., and Bridges, R.J. (2007) In vitro accumulation of extracellular L-glutamate is influenced by the activities of two transporters: System x-c and EAATs *Society for Neuroscience Abstracts*, 33: 682.22
- Grewer, C., Larsson, P., Mindell, J., and Bridges, R.J. (2008) Post structural insight into glutamate transporter mechanism. *41<sup>st</sup> Annual Winter Conference on Brain Research*, Abs #90
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- Natale, N.R., Rajale, T., Sharma, S., Kumar, R., Bridges, R.J., Patel, S.A., Gerdes, J.M., Esslinger, C.S., (2008) Diverse isoxazole glutamate analogs arise from a common intermediate, *236<sup>th</sup> ACS National Meeting*, Philadelphia, PA. MEDI 205
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- Bridges, R.J. (2009) Pharmacology of the System Xc-, American Society for Neurochemistry Abstracts, *Journal of Neurochemistry*, 108 (Supp), C12-04.
- Bridges, R.J., Patel, S.A., Sattler, R., Van Brocklin, H., and Gerdes, J.M. (2009) Cerebral positron emission tomography imaging agents for monitoring ALS therapy. *9<sup>th</sup> Annual Robert Packard Center for ALS Research Symposium*. Baltimore, MD Abstract # 33.
- N.R. Natale, N.R., Rider, K.C., Diaz, P., Bridges, R.J., Patel, S.A., Gerdes, J.M., Esslinger, C.S., Thompson, C.M., (2009) Diverse isoxazole glutamate analogs arise from a common intermediate", American Chemical Society, *64<sup>th</sup> NORM*, Tacoma, WA. Abstract 189.
- Natale, N., Bridges, R.J., Esslinger, C.S., Gerdes, J.M., Kumar, R., Patel, S.A., Rajale, T., and Sharma, S. (2009) Diverse isoxazole glutamate analogs arise from a common intermediate, *41<sup>st</sup> National Organic Chemistry Symposium*, Boulder CO, Abstract B1, p 57.
- Patel, S.A., Rajale, T., Rhoderick, J.F., Gerdes, J.M., Natale, N.R., and Bridges, R.J. (2009) Novel isoxazole-based inhibitors of the System Xc- cystine/glutamate transporter. Western Regional COBRE-INBRE Scientific Conference, Big Sky, MT.

Ye R., Rhoderick, J.F., Gerdes, J.M., Holley, D., Kavanaugh, M.P., Thompson, C.M., and Bridges, R.J. (2009) Photoinactivation of human excitatory amino acid transporters via ligand-induced singlet oxygen mediated protein oxidation, *Society for Neuroscience Abstracts*, 35, 617.24

Patel, S.A., Rajale, T., Gerdes, J.M., Natale, N.R., and Bridges, R.J. (2009) Characterization of novel isoxazole-based inhibitors of the system xc- Cystine/ glutamate exchanger *Society for Neuroscience Abstracts*, 35, 617.23

Patel, S.A., Mirzaei, Y.R., Keyari, C.M., Gerdes, J.M., Natale, N.R., and Bridges, R.J. (2010) Characterization of multiple lipophilic binding domains of the system xc- cystine/ glutamate exchanger, *Society for Neuroscience Abstracts*, 36, 544.5

#### **GRADUATE STUDENTS SUPERVISED:**

Colleen Baker; MS in Pharmaceutical Sciences, 9/95

Wallace Webster; MS Pharmaceutical Sciences, 8/98

Liping Liu; MS Pharmaceutical Sciences, 7/98 (Co-supervision with C. Eyer)

Richard Bartlett; PhD in Pharmaceutical Sciences, 5/99

Hans Koch; PhD in Pharmaceutical Sciences, 6/99

Sarj Patel; Ph.D., in Pharmaceutical Sciences 9/99

Kristin Reed, M.S. , in Pharmaceutical Sciences, 6/01

Brady Warren; Ph.D. in Pharmaceutical Sciences, 5/04

Todd Seib, M.S in Biological Sciences 7/04

Wes Smith; Ph.D. in Pharmaceutical Sciences, 1/07

Shailesh Agarwal; Ph.D. in Pharmaceutical Sciences, 5/07

Ran Ye; Ph.D. in Chemistry, 4/09

Todd Seib, Ph.D. in Pharmaceutical Sciences, 8/10

#### **CURRENT GRADUATE STUDENTS**

Jamie Newall, combined Pharm.D., M.S. in Biomedical and Pharmaceutical Sciences

#### **POSTDOCTORAL SUPERVISION**

Munaf Kadri, MD

Sean Esslinger, Ph.D. (Shared supervision with C. Thompson, Chemistry)

Michael Anderson; MD

Colin Willis; Ph.D

Sarj Patel, Ph.D.



#### **RECENT INVITED LECTURES:**

President's Advisory Council, University of Montana, Missoula, MT (Sept. 04)  
Provost's Distinguished Faculty Lecture, University of Montana, Missoula, MT (Sept. 04)  
NIH Rocky Mountain Laboratory, Hamilton, MT (Oct. 04)  
Toyo University/University of Montana Conference on Nanotechnology, Missoula, MT (Oct. 04)  
Department of Biochemistry, University of North Dakota, Grand Forks, ND (Dec. 04)  
Montana Academy of Sciences, Keynote Lecture, Butte, MT (April 05)  
Montana Neuroscience Institute Neurosurgery Conf., Chico Hot Springs, MT (Aug. 05)  
15th Annual Neuropharmacology Conference, New Perspectives in Neurotransmitter Transporter Biology, (abstract listed above), Washington DC (Nov. 05)  
Department of Chemistry, Hope College, Holland, MI (Dec. 05)  
Montana Neuroscience Institute Public Lecture, St. Patrick Hospital and Health Science Center, Missoula, MT (Nov. 06)  
Department of Pharmacology and Toxicology, Univ. of Utah, Salt Lake City, UT (Feb. 07)  
Montana BioScience Economic Development Conference, Univ. of Montana, Missoula, MT (Oct. 07)  
Annual Winter Conference in Brain Research, Snowbird, UT (Jan 08)  
Division of Biological Sciences, University of Montana, Missoula MT (Mar 08)  
Robert Packard Foundation for ALS Research, Johns Hopkins University, Baltimore, MD (April 08)  
COBRE Neuroscience Center, University of North Dakota, Grand Forks, ND (April 04)  
Annual American Society for Neurochemistry, Charleston, SC (March 09)  
Robert Packard Foundation for ALS Research, Johns Hopkins University, Baltimore, MD (April 09)  
BioScience Alliance, GSK inc., Hamilton, MT (Jul. 09)  
MOLLI Course, University of Montana Continuing Education, Missoula, MT (10/09)  
Missoula High Schools APS Fusion Lecture, University of Montana, Missoula, MT (12/09)  
Board of Regents, Montana University System, Helena, MT (1/10)

#### **PATENTS**

U.S. Patent No. 5,942,537, Issues Aug 24, 1999  
Inventors; Chamberlin, A.R., Cotman, C.W., Stanley, M., and Bridges, R.J.  
Methods of inhibiting the transport of L-glutamate to treat CNS disorders  
UC Case No. 89-036-2

U.S. Provisional Patent Application Docket UMT-110P  
Inventors: Esslinger, C.S., Bridges, R.J., and Kavanaugh, M.P.  
3-Alkylaryl aspartate compounds and their use for selective enhancement of synaptic transmission

U.S. Provisional Patent Application Docket No. UMT-120P, Serial No. 61/089,484  
Inventors: Natale, N.R.; Bridges, R.J.; Patel, S.; Rajale, T.  
Isoxazoles with in vivo anti-convulsive activity  
Serial No. 61/089,484, U.S. August 15, 2008.

#### COMPLETED RESEARCH FUNDING

NIH RO1: Bridges: PI

*Excitotoxicity, the role of non-NMDA receptors,*

Grant Period: 1989-1992

NIH RR-11796: Bridges: Project Director (Paden, MSU: Co-PI)

*Advancement of neuroscience in Montana*

Grant Period: 9/30/96 - 8/31/99

Paralysis Project: Bridges: PI

*The role of glutamate transporters in spinal cord injury*

12/15/96-12/14/97:

NIH P20 RR10169 (IDEAS): Bridges: PI,

*Development of a CNS tissue culture facility,*

3/1/95-2/28/98,

NIH: NSRA Postdoctoral Fellowship for Sean Esslinger

Bridges: Research Supervisor (Thompson co-advisor).

*CNS glutamate analogues: distal COOH substitutions.*

Grant Period: 1/1/97 - 12/31/98

NIH (AREA): Bridges: Collab. Invest., (PI: Eyer)

*Are the glutamate systems target in trimethyltin toxicity?*

Grant Period: 7/95-11/97

EPSCoR MONTS Award: Bridges: Program Director,

*Fluorescent detection of oxidative damage to the central nervous system.,*

2/1/94-8/31/94

Paralysis Project: Bridges: Collab. Investigator (S. Queen, U.M.: PI),

*Glutamate transporters: targets in spinal cord injury?*

12/15/98-12/14/99

NIH P20 RR15583-01: Bridges: PI, (Thompson, Ross, Gerdes Co-PI)

*COBRE Equipment Supplement*  
9/1/02-8/31/03

Montana Board of research and Technology Commercialization  
Bridges: PI, (Poulsen Co-PI)  
*COBRE Match for the Enhancement of Applied Research in Biomedicine*  
7/1/03 - 6/30/08

NIH R21 NS42077: Bridges: PI,  
*Vesicular glutamate transport; neurosteroid regulation*  
7/1/01-6/30/02, Total costs: ≈ \$130,000  
Grant Period: 7/1/01-6/30/03

Murdock Charitable Trust: Bridges, PI, (Collab: Coffin, Kavanaugh)  
*Functional Assessment for Animal Models of Human Disease*  
10/1/06 - 7/1/07

NIH P20 RR15583: Bridges: PI, (PI changed to M. Kavanaugh, 5/1/08)  
*COBRE Center for Structural and Functional Neuroscience*  
Grant Period: 10/1/01-4/31/10

NIH: RO1 NS 27600: Bridges: Collab. Investigator (A.R. Chamberlin, U.C. Irvine: PI),  
*Receptor specific excitatory amino acid analogues,,*  
Grant Period: 4/1/98-3/31/08

NIH RO1 NS38248: Bridges: Co-Investigator (C.M. Thompson, U.M.: PI),  
*Vesicular glutamate transport: pharmacophore elucidation*  
Grant Period: 9/1/99-8/31/08

NIH RO1 NS30570: Bridges: PI,  
*Properties and roles of excitatory amino acid transport,*  
Grant Period: 7/1/96-12/31/08

#### **CURRENTLY ACTIVE RESEARCH FUNDING**

Montana Board of Research and Commercialization Technology: Bridges: PI.  
*Enhancement of Biomedical Research in Montana*  
Grant Period: 7/1/09- 6/30/10

Robert Packard ALS Foundation: Bridges: Co-PI (J. Gerdes, UM, PI)  
*Cerebral PET imaging agents for monitoring ALS therapy*  
10/1/06 - 5/31/09

P2 ALS Foundation: Bridges: Co-PI (J. Gerdes, UM, PI)

*Cerebral PET imaging agents for monitoring ALS therapy*  
1/1/09 - 12/31/12

NCRR COBRE translational ARRA Supplement: Bridges: PI,  
*New chemical entities (NCE's) targeting the system X<sub>c</sub><sup>-</sup> glutamate/cystine exchanger as in vivo imaging agents for glial tumors*  
10/1/09-9/30/10

NIH 5R21NS067466-02: Bridges: Co-PI (Natale, Co-PI)  
*Fluorescent-based Probes for the Glutamate/Cystine Exchanger System X<sub>c</sub><sup>-</sup>*  
10/1/09-9/30/11