May 21-22, 2015

ITEM 167-2002-R0515

Authorization to Confer the Title of Professor Emeritus of Cell Biology and Neuroscience upon Dr. John P. Miller, Montana State University

---

THAT

Upon the occasion of the retirement of John Miller from the faculty of Montana State University, the faculty wishes to express its deep appreciation for his years of dedicated and valued service to the University and the state of Montana by requesting that the rank of Professor Emeritus be conferred upon him by the Board of Regents of the Montana University System.

EXPLANATION

In January of 1997, Dr. John Miller moved to Bozeman from a professorship at U.C. Berkeley, to become the founding Director of MSU's Center for Computational Biology. As well as maintaining a very active and continuously funded research program here at MSU, he has carried a full teaching load at the undergraduate level, and has also taken leading roles in the development, administration and execution of Institutional grants for instruction at the undergraduate, graduate, and pre-college levels. He has also served his profession by serving on prestigious National and International committees. He was selected as a College of Letters and Science Distinguished Professor in 2007. A few career highlights are summarized below.

Dr. Miller received his B.A. in Physics at the University of California, Berkeley, in 1972, and his Ph.D. in Biology at the University of California, San Diego, 1980. After completing his thesis research, Dr. Miller was awarded an NIH extramural fellowship to do postdoctoral research in the Math Research Branch at the National Institutes of Health in Bethesda, MD., from 1981-1982. His co-sponsors were distinguished applied mathematicians working on neurobiological problems, and it was during this post-doctoral research that Dr. Miller began to carry out some of the early detailed computational modeling studies of nerve cells. Dr. Miller went back to U.C. Berkeley in 1982 to take a faculty position. From that time forward, Dr. Miller has worked on a variety of neuroscience problems ranging from the biological mechanisms underlying learning and memory to sensory processing. He was awarded an Alfred P. Sloan Research Fellowship to support his early research, and throughout his career, he has had continuous funding from a variety of agencies, including the National Science Foundation, the National Institutes of Health, the Epilepsy Foundation of America, the Office of Naval Research, and the Howard Hughes Medical Institute. Total career funding on grants for which Dr. Miller was PI or primary Co-PI was approximately $21M. At retirement, he will still have active funding from NIH and HHMI. He has published many research articles in a variety of top scientific journals, including *Nature, Science*, the *Journal of Neuroscience*, the *Journal of Neurophysiology*, the *Journal of Computational Neuroscience,* the *Proceedings of the National Academy of Science, and PLoS*. Dr. Miller has presented over 120 invited lectures and seminars at Universities and scientific conferences in the U.S., Australia, Canada, England, France, Germany, India, Japan, Spain, Yugoslavia, and Texas.

In addition to carrying on an active research program, Dr. Miller served in several executive administrative positions, including a term as the Chairman of the Graduate Group in Biophysics and the Chairman of the Academic Senate Committee on Computing and Communications at Berkeley. He was the founding Director of the Center for Computational Biology here at MSU. Dr. Miller also served as a member of the National Science Foundation Panel in Behavioral and Neural Systems, several NIH panels, and was a member of NSF's Blue Ribbon Committee for the Centers for Learning Research. He also served for ten

years on the NSF Oversight review panel for Cal Tech's Neuromorphic Engineering Research Center Member, and for eight years as a member of the Biology Advisory Committee for the Pittsburgh Supercomputer Center. Dr. Miller and five colleagues from different Universities around the US founded a new scientific journal: the *Journal of Computational Neuroscience*. Dr. Miller has also served on the editorial board of *Neurocomputing*. Along with Dr. James Bower of Cal Tech, Dr. Miller also established and co-organized another major forum for the presentation of leading research: the annual Computational Neuroscience (CNS) Meetings.

At the National level, Dr. Miller was chosen to serve as a member of the President Clinton's Information Technology Advisory Committee (PITAC) soon after moving to MSU. The charge of the committee was to provide the President, the Office of Science and Technology Policy, and the Federal agencies involved in technology research and development with guidance and advice on all areas of high performance computing, communications, and information technologies. In his capacity as a member of PITAC, he was one of 26 co-recipients of the 1999 Seymour Cray HPCC Industry Recognition Award, which recognized that year's major activity considered by industry leaders to have the most significant impact on and vision for High Performance Computing and Communication. During this same period, Dr. Miller made two trips to India as a member of the Indo-US Computational Neuroscience Working Group.

Dr. Miller's teaching at MSU has primarily been at the undergraduate level. His main teaching responsibilities were for two courses in Neurophysiology: one large-enrollment general survey course, and one smaller advanced course in Sensory Neurophysiology. He also taught one semester of the WWAMI course in Microphysiology. He has had a long-standing interest in cognitive neuroscience, and co-developed two specialized inter-disciplinary honors courses with colleagues here at MSU: a course in *Language and the Brain* (Neurolinguistics) with colleagues Jerry Coffey and Geoff Gamble, and a course on *Music in the Brain* with Greg Young. Dr. Miller and been a popular instructor, and consistently gets high ratings. He has sponsored many advanced undergraduate research projects, as well as a total of eleven graduate students and fourteen post-doctoral researchers.

Beyond this conventional classroom instruction, Dr. Miller was one of three co-investigators on the first major Graduate Instructional Training Program grant that MSU ever received: the NSF IGERT grant. He was also the Principal Investigator and Director of the very first grant awarded to MSU in 2002 from the Howard Hughes Medical Institute: the *HHMI Undergraduate Biology Program*. This very competitive, prestigious grant was awarded to enhance several aspects of MSU's undergraduate Biology curriculum, and to enhance several aspects of MSU's AIRO and MAP programs. The success of those programs lead to success in two subsequent rounds of competitive renewals to HHMI, and Dr. Miller will retire as the Director of this program as the 14th year of continuous HHMI funding ends with this academic year. Finally, Dr. Miller has been involved as one of three co-investigators on a 5-year grant from the National Institutes of Health to support hands-on science education for teenagers in rural Montana communities, through a partnership with Montana 4H. This program has also been very successful and rewarding for the students and MSU participants alike. After retirement, Dr. Miller will continue his established collaborations with several faculty in three different departments at MSU, as well as service as a Trustee to the Bradshaw Foundation.

ATTACHMENTS
No attachments