

BIOGRAPHIES

SCOTT T. BRADY, PHD

Professor and Head
Department of Anatomy and Cell Biology
University of Illinois at Chicago, Chicago, IL

Dr. Brady received his undergraduate training at the Massachusetts Institute of Technology in Cambridge, MA, where he earned bachelor's degrees in both Physics and Biology in 1973. He went to the University of Southern California to earn a PhD in Cell and Molecular Biology in 1978, where he began his studies on the mechanisms of axonal transport in the laboratory of Dr. William McClure. Dr. Brady then moved to Case Western Reserve University (CWRU) for postdoctoral training in Neuroscience with Dr. Raymond Lasek from 1978-1981. He remained at CWRU as a research faculty member in the Department of Anatomy until 1985, then moved to the Department of Cell Biology at University of Texas Southwestern Medical Center. He remained in Dallas until 2001 when he moved to the University of Illinois at Chicago where he is currently Professor and Head of the Department of Anatomy and Cell Biology.

In the early 1980's, Dr. Brady began doing summer research at the Marine Biological Laboratory in Woods Hole, MA where he began using live cell imaging to study fast axonal transport. In collaboration with Drs. Robert Allen and Ray Lasek, he developed a novel preparation for study of transport based on digital microscopy of isolated axoplasm from the squid giant axon. Using these methods, Dr. Brady first showed that fast axonal transport depended on a new class of molecular motor and was one of the discoverers of the kinesin family of molecular motors. Subsequently, Dr. Brady's research has focused on cell and molecular biology of kinesins in neurons, making significant contributions to our understanding of the structure, regulation and molecular biology of the kinesins. His current research includes a focus on the role that axonal transport and regulation of molecular motors play in adult-onset neurodegenerative diseases like Alzheimer's, Parkinson's and Huntington's disease.

ANA MARIA CUERVO, MD, PHD

Professor, Departments of Developmental and Molecular Biology and of Medicine
Co-director, Einstein Institute for Aging Studies
Member, Liver and Cancer Centers
Albert Einstein College of Medicine, New York, NY

Ana Maria Cuervo is a professor in the Departments of Developmental and Molecular Biology and of Medicine of the Albert Einstein College of Medicine, co-director of the Einstein Institute for Aging Studies, and member of the Liver and Cancer Centers at the same institution. She obtained her MD degree and a PhD in Biochemistry and Molecular Biology from the University of Valencia (Spain) in 1990 and 1994, respectively. After postdoctoral training at Tufts University, Boston, she started her laboratory at the Albert Einstein College of Medicine where she continues her studies in the role of protein-degradation in neurodegenerative diseases and aging.

Dr. Cuervo's group is interested in understanding how altered proteins can be eliminated from the cells. Her group has recently linked alterations in lysosomal protein degradation with Parkinson's disease. They have also proven that restoration of normal lysosomal function prevents accumulation of damaged proteins with age, demonstrating this way that removal of these toxic products is possible.

Dr. Cuervo is considered a leader in the field of protein degradation and of biology of aging and has been invited to present her work in numerous national and international institutions, including among others the Robert R. Konh Memorial Lecture, the NIH Director's Lecture and the Roy Walford Endowed Lecture. She has organized and chaired international conferences on protein degradation and on aging, belongs to the editorial board of scientific journals in this topic and she is currently co-Editor-in-Chief of Aging Cell and associate editor of Autophagy. She has served in NIH advisory panels, special emphasis panels and study sections. She was the recipient of the 2005 P. Benson Award in Cell Biology, the 2005/8 Keith Porter Fellow in Cell Biology, the 2006 Nathan Shock Memorial Lecture Award and the 2008 Vincent Cristofalo Rising Start in Aging Award. Other awards include the Howard Hughes Junior Faculty Start-Up Award and the Ellison Medical Foundation New Scholar Award in Aging.

STEVEN M. FINKBEINER, MD, PHD

Associate Director and Senior Investigator, Gladstone Institute of Neurological Disease
Director, Taube-Koret Center for Huntington's Disease Research
Professor of Neurology and Physiology, University of California, San Francisco

Dr. Steven Finkbeiner studies the molecular mechanisms that are responsible for learning, memory, and neurodegeneration. Learning leads to the expression of new genes, which are required to form new memories. Memory disturbances occur in several neurodegenerative diseases, including Huntington's disease and Alzheimer's disease. A better understanding of the mechanisms that control memory formation and neuronal survival will yield crucial insights into the pathogenesis of neurodegenerative diseases and the memory disorders that often characterize them.

Dr. Finkbeiner received his BS from Wheaton College in 1986 and earned an MD and a PhD in neuroscience from Yale University in 1991. He completed an internship in internal medicine and was the chief resident in neurology at the University of California, San Francisco (UCSF). He then held positions at Harvard Medical School, and in 1999, he was one of the first investigators of the Gladstone Institute of Neurological Disease. Dr. Finkbeiner is also the director of the Taube-Koret Center for Huntington's Disease Research and professor of neurology and physiology at UCSF.

Dr. Finkbeiner has served on the editorial board of BioMed Central and is a member of several scientific and professional societies, including the American Neurological Association, the Society for Neuroscience, the Society for Cell Biology, and the Biophysical Society. He is very active in graduate training and is a member of the Neuroscience, Biomedical Sciences, and Medical Scientist Training Programs at UCSF.

JUDITH FRYDMAN, PHD

Professor, Biology (School of Humanities and Sciences)
Member, Cancer Center
Member, Bio-X
Stanford University, Stanford, CA

Judith Frydman grew up and was educated in Buenos Aires, Argentina. She studied chemistry at the School of Sciences of the University of Buenos Aires where she also completed her PhD in Biochemistry. Her doctoral research focused on understanding the regulation of the heme catabolism pathway in response to oxidative stress. Her studies of the cellular responses to stress sparked a long-lasting interest in the mechanisms that generate and monitor the correct conformation of proteins. At the time, little was known about how cells sense and eliminate damaged or misfolded proteins. For her postdoctoral training Dr. Frydman joined the lab of Dr. Ulrich Hartl at the Sloan-Kettering Institute in New York to study the then recently discovered "molecular chaperones." During her post-doctoral studies, she discovered a novel chaperonin complex in mammalian cells and developed a biochemical system to study how proteins fold following their synthesis on ribosomes. Her studies led to important insights into the role of chaperones in the process of *de novo* folding. She started her own research group in 1996, when she joined the faculty of the Department of Biological Sciences at Stanford University, where she is now a professor.

The long-term goal of Dr. Frydman's research is to understand how proteins fold in living cells using multidisciplinary approaches to address fundamental questions about molecular chaperones, protein folding and degradation. In addition to basic mechanistic principles, Dr Frydman's work aims to define how impairment of cellular folding and quality control are linked to disease, including cancer and neurodegenerative diseases and examine whether reengineering chaperone networks can provide therapeutic strategies.

RANDAL J. KAUFMAN, PHD

Warner-Lambert/Park-Davis Professor of Medicine
Professor, Departments of Biological Chemistry and Internal Medicine, University of Michigan, Ann Arbor, MI

Dr. Randal J. Kaufman received his BA degree in Molecular, Cellular, and Developmental Biology in 1972 from the University of Colorado, and his PhD in Pharmacology in 1979 from Stanford University where he studied gene amplification as a mechanism by which cells become resistant to anticancer agents. From 1979 to 1982 he was a Helen Hay Whitney fellow with Phillip Sharp at the Center for Cancer Research at the Massachusetts Institute of Technology where he developed gene transfer technologies based on gene amplification and expression in mammalian cells.

From 1982 - 1993, Dr. Kaufman was a founding scientist at Genetics Institute, Inc. where he engineered mammalian cells for high-level expression of therapeutic proteins, such as clotting factors that are now used to treat individuals with hemophilia. He is a former investigator with Howard Hughes Medical Institute (1993 – 2010), and a professor at the University of Michigan, as of 1993. Since his move to the University of Michigan Dr. Kaufman has focused his research on the mechanisms by which mammalian cells regulate protein folding and secretion and the cellular response known as the unfolded protein response (UPR). He currently uses mouse models to elucidate the significance of the UPR in health and disease.

Dr. Kaufman has served on numerous editorial boards and held many service positions including being a current member of an NIH Special Emphasis Panel/Scientific Review Group, and an ad hoc member of an NIH Physiological Chemistry Study Section. He was also a member of the National Hemophilia Foundation's Research Work Group and Judith Graham Pool Review Committee for Fellowships, Career Development Awards and Lab Grants. Currently, he serves on the scientific advisory board for Proteostasis Therapeutics, Inc., and Syndexa Pharmaceuticals Corp. Some of his recent awards include the Warner-Lambert/Park-Davis Professor of Medicine award, from the University of Michigan, an American Association for the Advancement of Science award (2007), and the Van Wezel Prize (2003), from European Society of Animal Cell Technology. In 2000 Dr. Kaufman was honored with the Distinguished Investigator Award from Michigan Hemophilia Society.

RICHARD I. MORIMOTO, PHD

Bill and Gayle Cook Professor of Biology
Professor of Molecular Biosciences
Director, Rice Institute for Biomedical Research, Northwestern University, Evanston, IL

Morimoto is the Bill and Gayle Cook Professor of Biology, Professor of Molecular Biosciences, and Director of the Rice Institute for Biomedical Research at Northwestern University. He holds a BS from the University of Illinois at Chicago, PhD in Molecular Biology from the University of Chicago, and did postdoctoral research at Harvard University in Cambridge, MA. Widely recognized for his research on the regulation of the heat shock stress response and the function of molecular chaperones, the focus of his current research is to understand how organisms sense and respond to physiologic and environmental stress through the activation of genetic pathways that integrate stress responses with molecular and cellular responses that determine protein quality control, the health of the cell, and the lifespan of the organism. Consequently, these studies provide a molecular basis to understand the underlying mechanisms that maintain the stability of the proteome in health and the basis of diseases of protein conformation including neurodegenerative, metabolic, and oncologic diseases.

Morimoto has published over 200 papers and edited three monographs and two books. He has received many academic honors and awards including a MERIT award from the National Institutes of Health, membership in the American Association for the Advancement of Science (AAAS) and is currently funded by the National Institutes for General Medical Science, National Institutes of Aging, National Institutes for Neurological Diseases and Stroke, Huntington Disease Society of America, ALS Association, and the Department of Defense.

At Northwestern University, Morimoto served as Chair of the Department of Molecular Biosciences and Dean of the Graduate School and Associate Provost of Graduate Education. His long-standing interest in education and training includes directing the Undergraduate Program in Biological Sciences, formation of the Interdepartmental Biological Sciences Graduate Program, and Associate Director of the Medical Scientist

Training Program at Northwestern. He currently serves as a Scientific Director of the Chicago Biomedical Consortium. On a national level, Morimoto has served on the NIH Molecular Biology Study Section, the NIGMS Molecular and Cellular Basis of Disease Panel, the AAAS Scientific Program Committee, the Beckman Scholars Advisory Panel, and the National Institute for General Medical Sciences Advisory Board where he was actively involved with the assessment of minority training programs. He currently serves on the Scientific Advisory Boards at the University of Heidelberg, RIKEN Brain Science Institute, Roswell Park Cancer Institute, BioCity Turku, the Institute for Frontier Medical Science at Kyoto University, and the Zilkha Neurogenetics Institute at University of Southern California. He is a co-founder of Proteostasis Therapeutics, Inc. a biotech recently formed in Cambridge, MA to discover small molecule therapeutics for diseases of protein conformation.