Louisiana State University Medical Center • School of Medicine in New Orleans

Neuroscience Center of Excellence

Calendar of Events 1999

All Lectures, unless otherwise noted, will be held at the LSUMC Neuroscience Center of Excellence, 2020 Gravier Street, 8th Floor Conference Room, New Orleans, LA 70112

Chancellor's Award Lecture

January 29, 1999, 12:00 p.m. — **Osamu Hayaishi, M.D., Ph.D.**, Director Emeritus, Osaka Bioscience Institute, Osaka, Japan, Member of the National Academy of Sciences
"Molecular Basis of Sleep-Wake Regulation"

Distinguished Lecturer Series

March 26, 1999, 12:00 p.m. — **Lutz Birnbaumer, Ph.D.**, Professor and Chair, Molecular, Cell and Developmental Biology, Professor, Anesthesiology and Biological Chemistry, University of California, Los Angeles, Member of the National Academy of Sciences
"Molecular Basis of Capacitative Calcium Entry"

April 16, 1999, 12:00 p.m. — **Ronald Hayes, Ph.D.**, Professor and Director, Neurosurgery Research Laboratorie, University of Texas-Houston, Medical School , Houston, Texas
"Proteolytic Mechanism of Necrosis and Apoptosis following Traumatic Brain Injury"

May 21, 1999, 12:00 p.m. — **Pak Chan, Ph.D.**, Professor of Neurosurgery, Neurology & Neurological Sciences, Vice Chairman, Neurosurgery, Director, Neurosurgical Laboratories, Stanford University Medical Center, Stanford, California
"Role of Oxidative Stress in Ischemic Cell Death: Molecular and Subcellular Mechanisms"

June 9, 1999, 12:00 p.m. — **Roger Tsien, Ph.D.**, Professor, Pharmacology, Chemistry and Biochemistry, University of California, San Diego, California
"New Molecules for Seeing and Controlling Neuronal Activity in Depth"

June 24, 1999, 12:00 p.m. — **Ian S. Trowbridge, Ph.D.**, Professor, Department of Cancer Biology, The Salk Institute, La Jolla, California
"Signal-dependent Trafficking of b-Amyloid Precursor Protein"

Sept- Oct, 1999 — **Julio Alvarez Builla**, University of Alcala, Spain
"Combinatorial Chemistry in Drug Discovery"

Dean's Award Lecture

April 9, 1999, 12:00 p.m. — **Matthew M. LaVail, Ph.D.***, Professor, Departments of Anatomy and Ophthalmology; Vice Chair, Department of Anatomy; Director, Kearn Family Center for the Study of Retinal Degeneration; Beckman Vision Center School of Medicine, University of California, San Francisco, California
"Toward Pharmaceutical and Gene Therapies for Retinal Degenerative Diseases."

* Jointly sponsored by the Center, Ernest C. and Yvette C. Villere Chair for the Study of Retinal Degeneration and the Department of Ophthalmology.

November 1999, 12:00 p.m. — **Edmond Fischer, Ph.D.**, 1992 Nobel Laureate in Medicine or Physiology, Professor Emeritus, Department of Biochemistry, University of Washington, Seattle, Washington, Member of the National Academy of Sciences
"Cell Signaling in Health and Disease"

Protein phosphorylation can be considered the most prevalent mechanism by which eukaryotic cellular events are regulated, and phosphorylation of tyrosine residues in proteins has been directly implicated in the regulation of cell growth, differentiation and transformation. Receptors for mitogenic hormones and growth factors are tyrosine kinases. Their signal is transduced by a variety of adapter proteins interacting with one another through binding modules (SH2, SH3, WW, PH, PDZ, etc.) thereby initiating diverse signaling pathways. Their mutations can lead to a number of pathological conditions such as non-insulin dependent diabetes or oncogenicity. Of course, regulation must also involve protein tyrosine phosphatases (PTPs), an expanding family of transmembrane and intracellular enzymes that catalyze the reverse reaction. Most receptor forms contain two cytoplasmic catalytic domains and highly variable external structures that display all the hallmarks of cell adhesion molecules, suggesting that they are involved in - or regulated by - cell-cell interaction, with the very exciting possibility that they might be directly implicated in contact inhibition.

Likewise, the intracellular PTPs display a great diversity of regulatory/localization segments, attached to conserved catalytic domains. The data indicate that kinases and phosphatases cannot be viewed as simply providing opposing "on/off" signals: depending on their structure and where they localize within the cells, tyrosine phosphatases can act either positively or negatively in eliciting a particular physiological response.

Seminar Series

February 11, 1999, 12:00 p.m. — **Serena Dudek, Ph.D.**, Senior Staff Fellow, National Institutes of Health, NICHD, Bethesda, Maryland
"Bidirectional Modification of Synaptic Effectiveness: Implications for a Role in Ocular Dominance"

February 22, 1999, 12:00 p.m. — **Anthony Ricci, Ph.D.**, Scientist, Department of Physiology, University of Wisconsin, Madison, Wisconsin
"Calcium Regulation of Hair Cell Excitability"

February 23, 1999, 12:00 p.m. — **Diana Pettit, Ph.D.**, Postdoctoral Fellow, NIEHS, NIH, Research Tiangle Park, North Carolina
"Functional Mapping of Neurotransmitter Receptors on Hippocampal Neurons"

March 10, 1999, 12:00 p.m. — **Chris McBain, Ph.D.**, Unit on Cellular and Synaptic Physiology, NICHD-LCMN, Bethesda, Maryland
"Hippocampal Interneurons: Precision Timing Without Lasting Plasticity"

April 26, 1999, 12:00 p.m. — **James B. Rand, Ph.D.**, Member, Molecular and Cell Biology Research Program, Adjunct Associate Professor, Department of Anatomical Sciences, University of Oklahoma Health Sciences, Oklahoma Medical Research Foundation, Oklahoma City, Oklahoma
"Molecular Biology of Synaptic Transmission in Caenorhabditis elegans: What Makes the Worm Squirm?"

May 17, 1999, 12:00 p.m. — **William D. Willis, Jr., M.D., Ph.D.**, Director, Marine Biomedical Institute, Chairman, Department of Anatomy & Neurosciences, University of Texas Medical Branch, Galveston, Texas
"The Dorsal Column Visceral Pain Pathway"

Events Co-Sponsored with the Greater New Orleans Society for Neuroscience (GNOSN) and hosted by GNOSN Graduate Students and the LSUMC Neuroscience Center of Excellence

February 4, 1999, 4:00 p.m. — **Dr. Martha Constantine-Paton**, Professor of Molecular Cell and Developmental Biology, Yale University
"Synaptogenesis and Glutamate Receptor Regulation in Superior Colliculus"

October 14, 1999, 12:00 p.m. — **Dr. Carla Shatz**, Professor of Neurobiology and Investigator HHMI, University of California, Berkeley
"Wiring up the Brain: Patterned Connections from Neural Activity"

Dr. Corey Goodman, Professor of Neurobiology and Investigator HHMI, University of California, Berkeley
"Wiring up the Brain: Genes, Growth Cones, and Synapses"

The Fourth International Workshop on Maturation Phenomenon in Cerebral Ischemia-Apoptosis and/or Necrosis, Neuronal Recovery vs. Death, and Protection for Infarction

Chairmen: Nicolas G. Bazan, LSUMC Neuroscience Center, New Orleans, LA, USA
Umeo Ito, Dept. of Neurosurgery, Musashino Red Cross Hospital, Tokyo, Japan

October 31- November 2, 1999

Sheraton New Orleans Hotel, New Orleans
For Information please call: (504) 599-0835, Fax: (504) 568-5801, or email: nbazan@lsumc.edu

The Eleventh Annual LSU Neuroscience Center Retreat

Saturday, February 20, 1999, 8:00 a.m. to 2:00 p.m.

University of New Orleans

Keynote and Dean's Award Lecturer: Dr. Donald Price
"Neurodegenerative Diseases: Lessons from Transgenic Models"

In amyotrophic lateral sclerosis (ALS), patients develop clinical signs (weakness and muscle atrophy) whereas, in Alzheimer's disease (AD), patients develop memory loss and a progressive dementia. The clinical phenotypes of these age-associated neurodegenerative disorders reflects the selective vulnerability of sub sets of neurons. Risk factors for these illnesses include age and genes. Familial ALS (FALS) and AD (FAD) often show autosomal dominant inheritance: some cases of FALS are linked to mutations in the superoxide dismutase 1 (SOD1) gene; and some cases of FAD show mutations in genes encoding either the amyloid precursor protein (APP) or presenilins (PS1 or PS2). The mechanisms of cellular abnormalities in these inherited disorders can be clarified by transgenic and gene-targeting strategies that allow investigators to reproduce features of the human disorders in mice. Studies of transgenic models of FALS and FAD will be reviewed as will gene-targeting studies of SOD1, APP, and PS1. In these models, investigators have begun to define the character, spatial/temporal evolution, and mechanisms of cellular pathology as well as the biochemical bases for the gain of toxic properties associated with the presence of these mutant transgene products. The results of these studies indicate that, in mouse models of FALS and FAD, the mutant transgene products lead to a cascade of events that damage subsets of nerve cells. These models will be critical in studies designed to test new therapies.

Posters (8' wide by 4' high) of current research, may include data recently presented or to be presented at a future meeting. Informal layouts of ongoing projects are also encouraged. Abstracts are being accepted from the greater New Orleans scientific community. Please send abstracts by February 11, 1999 to the LSU Neuroscience Center. Six travel awards for members of the LSUMC will be given by the LSUMC Neuroscience Center of Excellence and two travel awards to local Chapter members of other institutions will be given by the Greater New Orleans Society for Neuroscience. The travel awards will be provided to the best posters presented by postdoctoral fellows, residents, and students at the retreat. These awards are to be used to present a paper at a national meeting during 1999.

Brain Awareness Week

April 1999

"Brain Attack and Brain Injury"

Public talks will take place in New Orleans and Baton Rouge. For more information please contact the LSUMC Neuroscience Center of Excellence at (504) 599-0835.
(Part of a nationwide effort by the Society for Neuroscience and the Dana Alliance for Brain Initiatives)

Thirtieth Annual American Society for Neurochemistry Meeting

March 14-17, 1999

Sheraton New Orleans Hotel, New Orleans
For information please call: Linda Garcia, American Society for Neurochemistry, P.O. Box 691567, Houston, Texas 77269; phone: (281) 251-9976, Fax (281) 251-3798; Email: LindaHou@aol.com

Summer Undergraduate Neuroscience (SUN) Program and the High School Neuroscience Program

The LSU Neuroscience Center SUN Program is a unique opportunity for exceptionally well-qualified undergraduate and high school students from Louisiana to experience state-of-the-art neuroscience research in the laboratory working along with investigators and their research teams. During the eight week Program, students attend a formal lecture series highlighting the cellular and molecular aspects of the nervous system, and meet with the many distinguished neuroscientists that visit the campus. Excellent stipend support is provided to the selected undergraduate students. This year, 1999, will be the sixth year of the SUN Program. Undergraduate students should have completed the second year of college, be a Louisiana resident, or attend college in Louisiana. High School students should be from the New Orleans area and will participate in an abbreviated form of the Program. Research experience is not necessary. Inquiries should be addressed to: Dr. Roger W. Beuerman, Neuroscience SUN Program, LSU Eye Center, Suite B, 2020 Gravier Street, New Orleans, LA 70112 or Phone: (504) 412-1200 ext. 1331, Fax (504) 412-1182, Email: rebeurer@lsumc.edu

Interdisciplinary Ph.D. Program in Neuroscience

Applications are now being accepted for the Interdisciplinary Ph.D. Training Program in Neuroscience. The intensive training provided by this program reflects the breadth of faculty research programs, including behavioral neuroscience and molecular neurobiology, with concentrations ranging from genes, to cells, to human behavior. Stipend support is available on a competitive basis. Highly qualified individuals should send inquiries to: Nicolas G. Bazan, M.D., Ph.D., or R. Ranney Mize, Ph.D. Co-Directors of the Interdisciplinary Ph.D. Program, c/o LSUMC Neuroscience Center of Excellence or visit our website at: http://www.neursocience.lsumc.edu

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