The symposium will focus on fundamental issues of cerebrovascular disease, brain injury and epilepsy. Many of these issues are also highly relevant to neurodegenerative diseases such as Alzheimer’s and Parkinson’s. The speakers will discuss the significance of intercellular signals as well as intracellular pathways of signal transduction in the pursuit of an understanding of critical pathological and neuroprotective processes.

Topics will be discussed include the involvement in neuronal death and cell death of presynaptic release, reelin and other neuronal tenor transmitters (excitatory and inhibitory), calcium homeostasis, modulators of ion channels and transporters, reactive oxygen species and other free radicals, transcription factors as signal transducers, gene expression, neurotrophic factors and their receptors, and pathways and terminal mitochondria.

Alterations in cell signal transduction leading to abnormal forms of neuronal plasticity may play an important role in epileptogenesis. Various events of the pathophysiology of stroke and epilepsy offer novel targets for neuroprotection. The symposium will conclude with a roundtable discussion during which the clinical significance of the latest cellular and molecular discoveries relevant to stroke and epilepsy will be highlighted.

LSU Neuroscience Center of Excellence

Interdisciplinary PhD Program in Neuroscience

Applications are now being accepted for the Interdisciplinary PhD Training Program in Neuroscience. The intensive training provided by this program reflects the breadth of faculty research programs — including behavioral neuroscience and molecular neuroscience — 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, PhD, or Dr. R. Ramon Mize, Co-Directors of the Interdisciplinary PhD Program, LSU Neuroscience Center of Excellence.