

# **Panel Discussion : NIH AREA R15 grant**

**Friday February 12th, 2021 - 12:00 pm (Central Time)**

## **Panel Members:**

- **Dr. Alexandra Ainsztein**
- **Dr. Eduardo Martinez-Ceballos**
- **Dr. Hector Biliran**
- **Dr. Kevin E. Riley**
- **Dr. Sanjay Batra**
- **Dr. Seetharama Jois**



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### Alexandra Ainsztein, Ph.D. Program Director at The National Institutes of Health



Alexandra Ainsztein, Ph.D., is a program director in the Division of Genetics and Molecular, Cellular, and Developmental Biology. She administers research grants in the areas of the cytoskeleton, and membrane trafficking. She is the NIGMS point of contact for the Academic Research Enhancement Awards (AREA) (R15) program, and the Collaborative Program Grant for Multidisciplinary Teams (RM1).

Ainsztein is a biochemist and cell biologist whose research focused on the microtubule cytoskeleton, centromeres, and cytokinesis. Prior to joining NIGMS, she served as a scientific review officer in the NIH Center for Scientific Review from 2001-2010. At NIGMS she has managed a portfolio on membrane trafficking and organelle biogenesis; she was both the program director and scientific liaison for several grants in the NIGMS Protein Structure Initiative; and has managed the Research Initiative for Scientific Enhancement (RISE program). Ainsztein earned a B.A. in biochemistry from Brandeis University and a Ph.D. in biochemistry and molecular biology from the University of Florida. She conducted postdoctoral research at Johns Hopkins University, the University of Edinburgh, and NIH's National Institute of Child Health and Human Development.



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**Dr. Eduardo Martinez-Ceballos is a Professor in the Department of Biological Sciences and Chemistry at Southern University, Baton Rouge.** He received his Ph.D. in Cell and Molecular Biology in 2001 from Tulane University. After obtaining his degree, he worked as a Postdoctoral Researcher in the laboratory of Dr. Lorraine Gudas at the Weill Cornell Medical College in New York City. Dr. Martinez-Ceballos joined the Biology Program at Southern University in August 2007. In 2012, he became a tenured Associate Professor and was promoted to Full Professor in 2017. Since joining Southern University, Dr. Martinez-Ceballos has been fully engaged in research and has received funding from both the NIH (R15) and NSF. Currently, the main project in his laboratory focuses on the role of the Hoxa1 transcription factor on the differentiation of mouse Embryonic Stem (ES) cells along a neuroectodermal pathway. In humans, this transcription factor has been found to promote cancer progression. Thus, the long-term goal of Dr. Martinez-Ceballos' research is to elucidate and characterize the molecular mechanisms by which the Hoxa1 transcription factor exerts its function in both mouse ES cells and human cancer cells. This project is currently funded by the NSF through an Excellence in Research (EiR) grant until July of 2022. At Southern, Dr. Martinez-Ceballos has trained a number of graduate and undergraduate students in the areas of Stem Cell and Cancer research. To date, five PhD students, five Masters, and five undergraduate students have completed their thesis dissertations working under his direction. Currently, four students (graduate and undergraduate) work on different projects in his laboratory. Dr. Martinez-Ceballos expects that the results from his research will lead to a better understanding on the dual role played by Hoxa1 as director of both embryonic differentiation and cancer progression.



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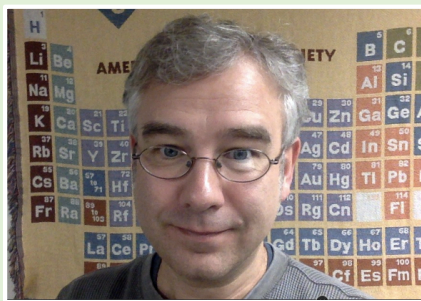


**Dr. Hector Biliran is a Professor, Department of Biology, Xavier University of Louisiana, New Orleans, LA.** He received his Ph.D. in the Molecular and Cellular Pathobiology program of Wayne State University, Department of Pathology, Detroit, MI in Dec., 2007. Following his graduate work, he focused on establishing his cancer research expertise on the molecular mechanisms and regulators of cancer cell survival and apoptosis. He did his post-doctoral research work in the laboratory of Dr. Erkki Ruoslahti at the NCI-designated Cancer Center, Sanford-Burnham Medical Research Institute, examining the novel Bcl2-inhibitor of transcription (Bit1) caspase-independent apoptotic pathway. Hector Biliran is an associate member of the Associate Member, American Association for Cancer Research (AACR) and Louisiana Cancer Research Consortium (LCRC). R15 CA158677-02, National Cancer Institute (NCI) - The major goal of this study is to elucidate the role of the Bit1 cell death machinery in the initiation and progression of NSCLC and as a molecular therapeutic target in lung cancer therapy. R15 CA158677-01A1, National Cancer Institute (NCI) - The goal of this project is to examine the role of Bit1 in the apoptosis resistance and survival of NSCLC cells and its potential use as a therapeutic target in alleviating NSCLC chemoresistance.



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**Dr. Kevin E. Riley is and Associate Professor of Chemistry at Xavier University of Louisiana.** Dr. Riley's research is all based on computational chemistry techniques and is mainly focused on the treatment of noncovalent interactions. Noncovalent interactions play critical roles throughout Chemistry and are extremely important in protein structure, the interactions of ligands with proteins, material science, and fluid dynamics. The main focus of Dr. Riley's research is in the application of computational methods to treat noncovalent interactions in biological systems, including nucleic acids (DNA/RNA), proteins, and (especially) protein-ligand complexes. Dr. Riley is particularly interested in halogen bonds and the roles that they play in protein-ligand bonding. 1R15GM113193-01 - National Institute of General Medical Sciences (NIGMS) - The LXRs are a nuclear receptor, exhibiting two isoforms (LXR $\alpha$  and LXR $\beta$ ) that have been demonstrated to be important mediators in a number of human diseases, including atherosclerosis, diabetes, cardiovascular disease, autoimmune disorders, Alzheimer's disease, and several types of cancer. The main goal was to conduct research, using modern computational and chemical synthetic techniques, that will lead to the development of new isoform-specific LXR agonists that selectively bind LXR $\beta$ .





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**Dr. Sanjay Batra is a Professor of Environmental Toxicology at the Southern University-Baton Rouge (SUBR).** Dr. Batra obtained his Ph.D. from Central Drug Research Institute, Lucknow and Kanpur University, Kanpur, India in 1993. He was selected through Union Public Service Commission of India as a Biochemist/In-charge of Clinical Biochemistry Department at Kalawati Saran Children's Hospital, New Delhi, India in 1992. In 2002, Dr. Batra came to US as a visiting scientist to work in the field of cancer and immunology at The Ohio State University, Columbus, OH. Subsequently Dr. Batra migrated to US in 2006 to pursue his advanced research career at The Ohio State University. He later worked at Texas Tech University, Amarillo, TX and Louisiana State University, Baton Rouge as a postdoctoral researcher, Senior Research Associate and as Assistant Professor (Research), respectively. Dr. Batra joined Southern University and A&M College in 2014 as an Associate Professor of Environmental Toxicology, and is currently serving as a Professor and Chair of the Department. Dr. Batra was able to secure funding from NIH (R15), Flight Attendant Medical Research Institute (FAMRI), Louisiana Biomedical Research Network and Southern University System Foundation during this period. His projects focus to determine the role and epigenetic regulation of autophagy mechanism, immunoproteasomes and lipid rafts during exposure to environmental pollutants. Dr. Batra has trained numerous undergraduate and graduate students, postdoctoral fellows and clinical residents. He has published over 65 original research/review articles in peer-reviewed journals. Dr. Batra has served on the review panels or as a grant reviewer for several national and international funding agencies including NIH, FAMRI, French National Cancer Institute; American University of Beirut; UK Research and Innovation (Future Leaders Fellowships), to name few.



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### **Seetharama Jois is a Professor at the School Basic Pharm & Toxicol Sci – ULM.**

Dr. Jois' research interest is to modulate the protein-protein interactions (PPI) using peptides and peptidomimetics. He has worked extensively on the design of peptide/peptidomimetic molecules to target proteins important in human diseases such as cancer and rheumatoid arthritis using computational and experimental methods. His research group is interested in structural aspects of epidermal growth factor receptor (EGFR) extracellular domains, which have important implications in cancer. He has designed novel peptidomimetics that target human epidermal growth factor receptors (EGFRs) and inhibit the dimerization of HER2 with other receptors such as EGFR and HER3. This research was supported by NCI (R15 CA188225-01A1, 2015-2019). In this project, Dr. Jois and his group investigate the molecular mechanism of inhibition of dimerization of peptides using in vitro and in vivo models of non-small cell lung cancer. Recently, he designed grafted peptides of these peptidomimetics using sunflower-trypsin inhibitors as a template to inhibit the PPI of EGFRs.

