


The LSU School of Veterinary Medicine presents:

# CENTER FOR PRE-CLINICAL CANCER RESEARCH SYMPOSIUM

A large, expressive yellow brushstroke graphic that sweeps across the lower half of the purple header area, starting from the left and moving towards the right.

October 18 • 8:30 a.m. to 5:30 p.m.

LSU Veterinary Medicine Auditorium and Zoom

The LSU School of Veterinary Medicine received an \$11 million National Institutes of Health grant in 2021 to establish a Center of Biomedical Research Excellence (COBRE), specifically the Center for Pre-clinical Cancer Research (CPPCR). As part of the annual review for this grant, LSU Vet Med is hosting this cancer research symposium featuring three world-renowned scientists, research project updates from CPPCR researchers, and information on three pilot projects.

**REGISTRATION DEADLINE: OCTOBER 16**

# SYMPOSIUM AGENDA

8:30 – 8:40 AM	Introductory Remarks	Dr. Joseph Francis (PI), Dean Oliver Garden
8:40 – 9:40 AM	Keynote Speaker: Uncovering Molecular Targets to Overcome Therapy Resistance in Metastatic Melanoma	Dr. Allan Tackett
9:40 – 10 AM	Coffee Break	
10 – 11 AM	Keynote Speaker: Regulation of anti-Tumor Immunity by Lipid and Lipid Receptors	Dr. Augusto Ochoa
11 AM – 12 PM	Keynote Speaker: Actionable Targets for Breast Cancer Intervention Identified in Diversity Outbred Mice	Dr. Wei-Zen Wei
12 – 1 PM	Lunch for Speakers, Presenters, Project Leaders, External Advisory Committee	
1 – 1:25 PM	Phosphoglycerate mutase 5 (PGAM5) in the regulation of hepatic lipid metabolism and carcinogenesis	Dr. Andrea Johnston
1:25 – 1:50 PM	Evaluation of Subtype Specific Collagen Remodeling in Breast Cancer Progression	Dr. Elizabeth Martin
1:50 – 2:15 PM	Strategic inhibition of EGFR-family signaling using novel peptidomimetic inhibitors of HER-2 for the treatment of osteosarcoma	Dr. Sita Withers
2:15 – 2:30 PM	Coffee Break	
2:30 – 3 PM	Mechanism of cancer progression in prostate cancer cells	Dr. Xiaoping Yi
3 – 3:20 PM	Pilot 1: Modulation of TCR/ITK signaling for sustainable CAR-T therapy	Dr. Weishan Huang
3:20 – 3:40 PM	Pilot 2: Pre-clinical investigation of precision immunoradiotherapy for breast cancer	Dr. Rui Zhang
3:40 – 4 PM	Pilot 3: Design of a 3D co-culture platform to investigate breast cancer and stromal cell interactions	Dr. Adam Melvin
4 – 4:30 PM	Cores Overview	Drs. Joseph Francis, Gus Kousoulas, and Mandi Lopez
4:30 – 5:30 PM	Closed Session: Core Administration and External Advisory Committee	

# FEATURED SPEAKERS



## **August Ochoa, MD**

Chair, Department of Interdisciplinary Oncology  
Deputy Director, LSU-LCMC Cancer Center  
Professor of Pediatrics  
Al Copeland - Cancer Crusaders Chair  
Stanley S. Scott Cancer Center  
LSU Health Sciences Center

## **ABOUT AUGUST OCHOA, MD**

Dr. Augusto Ochoa is a practicing physician specializing in the field of Allergy/Immunology. His research interests include T-cell function, cytokine production, macrophage T-cell interaction, immune regulation, immune dysfunction, and disease, as well as tumor immunology. His current research is focusing on regulation of anti-tumor responses by lipids and lipid receptors.



## **Wei-Zen Wei, Ph.D.**

Professor of Oncology, Karmanos Cancer Institute, Wayne State University

## **ABOUT WEI-ZEN WEI, PH.D.**

Dr. Wei-Zen Wei is Professor of Oncology at the Karmanos Cancer Institute, Wayne State University. She holds the Herrick endowed chair for Cancer Research. Wei lab studies tumor immunology and immunotherapy. Having developed HER2 genetic vaccine, her lab and collaborators validated the vaccine activities in multiple strains of mice, domestic cats and human clinical trials. It became clear that genetic elements regulate anti-tumor immunity. To resolve the regulatory mechanisms of oncogene induced tumor, Wei lab established a novel gene discovery platform of Diversity Outbred (DO) F1 mice that express HER2/Neu oncogene. Each mouse carries individually unique genetic composition that enables high-resolution linkage between genotype and phenotype. Using this platform, regulatory genes of tumor progression and vaccine response have been identified. Actionable immune regulators are being investigated as intervention targets.

Dr. Wei has served the role of Associate Center Director for Basic Sciences in Karmanos Cancer Institute, external advisor for cancer research groups and chair for many NIH study sections. Dr. Wei has mentored students, post-docs, clinical fellows and junior faculty. Dr. Wei finds it most rewarding to serve the community and develop next generation investigators.

# FEATURED SPEAKERS



**Alan Tackett, Ph.D.**

Deputy Director

Winthrop P. Rockefeller Cancer Institute  
University of Arkansas for Medical  
Sciences

**ABOUT ALAN TACKETT, PH.D.**

Dr. Tackett obtained a degree in chemistry with distinction from Hendrix College in 1998, and subsequently received a Doctor of Philosophy degree in Biochemistry and Molecular Biology from the University of Arkansas for Medical Sciences (UAMS) in 2002. Dr. Tackett performed postdoctoral training in cancer epigenetics and proteomics at The Rockefeller University in New York City from 2002-2005. He joined the faculty at UAMS in 2005 and has risen the ranks to a tenured professor of Biochemistry and Molecular Biology.

As a faculty member at UAMS, Dr. Tackett has built an internationally-recognized research team that is focused on developing new therapeutic strategies to treat metastatic melanoma. He has published over 150 scientific articles and holds multiple patents in this area; and has received over 30 million dollars of funding from the government to support his research endeavors. Dr. Tackett is in the top ten most well-funded researchers in the United States for his area of expertise. Furthermore, he serves as director of two national research centers in Arkansas, one at UAMS and another at Arkansas Children's Hospital. In recognition of his achievements in cancer research, Dr. Tackett received the Sharlau Family Endowed Chair for Cancer Research in 2016 and was nominated into the Arkansas Research Alliance in 2021.

Dr. Tackett serves as Deputy Director of the Winthrop P. Rockefeller Cancer Institute at UAMS. In this role, he provides guidance for the cancer research mission of the institute and efforts to achieve National Cancer Institute designation. Achieving National Cancer Institute designation is a top priority for the Winthrop P. Rockefeller Cancer Institute, which will enable clinicians and researchers to increase the quality of cancer care for all Arkansans and thereby reduce the cancer burden for the state.

# REGISTRATION

## TO REGISTER

### In-Person

LOCATION: LSU School of Veterinary Medicine Auditorium

DATE: 8:30 AM – 5:30 PM

### ZOOM

A Zoom link will be provided to all registered participants.

### REGISTRATION REQUIRED

There is no fee to participate, but we do require registration to ensure that everyone gets the Zoom link.

### CONTACT

[lbrn@lsu.edu](mailto:lbrn@lsu.edu)



## ABOUT THE CPCCR COBRE

The LSU School of Veterinary Medicine received an \$11 million grant in 2021 to establish a Center of Biomedical Research Excellence (COBRE). The COBRE funds will create the Center for Pre-Clinical Cancer Research (Cancer COBRE), which will be based at LSU Vet Med. This grant will last for five years and can be renewed for five or more years. The total amount awarded is \$11,027,290. The grant's Principal Investigator is Joseph Francis, BVSc (DVM equiv.), MVSc, Ph.D., professor in the Department of Comparative Biomedical Sciences and Dr. Gus Kousoulas, Professor and Head of the Department of Pathobiological Sciences serves as Co-Investigator.

Less than 5% of anti-cancer drugs are successful in clinical trials, indicating that current pre-clinical cancer drug research is not predictive of efficacy in humans. Louisiana ranks fifth in the nation for cancer mortality and above the national average for a number of cancers that also disproportionately affects African Americans. This health disparity is of great concern to Louisiana.

The Cancer COBRE has established a new specialized core facility, Pre-Clinical Evaluation Core (PCEC), to provide scientific expertise and technical support for the cancer projects as well as to all LSU researchers. To accomplish this approach, advanced 3D cancer cell culture systems (spheroids) will provide critical translational information.

The Cancer COBRE enhances cancer research both at LSU and at Southern University, strengthens collaborative research efforts with LSU HSC-New Orleans, and aids in efforts to establish a National Cancer Institute (NCI)-designated Cancer Center in Louisiana.

The Cancer COBRE aims to identify clinically relevant mechanisms of human cancer using models that closely reflect the disease state in the context of the tumor microenvironment to reveal insights into tumorigenesis and thus drive novel therapeutic discovery. The Cancer COBRE junior investigators address devastating and/or chronic human diseases that exhibit poor outcomes in patients and for which there are unmet therapeutic needs. The four cancer projects feature osteosarcoma, breast cancer, liver cancer, and prostate cancer as diseases that would benefit from pre-clinical models that are more predictive of mechanistic efficacy in humans and animals. Advanced pre-clinical evaluation capability at LSU provides exceptional training and mentoring to research scientists, including PJs, graduate students, and postdocs.

The funding comes from the National Institutes of Health, National Institute of General Medical Sciences (NIH:NIH) Centers of Biomedical Research Excellence (COBRE) program, which seeks to promote the initiation and development or expansion of unique, innovative, state-of-the-art biomedical and behavioral research centers at institutions in IDeA-eligible states, including Louisiana. Research supported by this program spans the full spectrum of basic and clinical sciences and encompasses all areas of health-related investigation. In addition, COBRE projects augment the ability of investigators to compete for investigator-initiated NIH research grants or other external nationally peerreviewed funding.

LSU Vet Med is now host to three Centers of Excellence, including the Center for Experimental Infectious Disease Research (CEIDR), established in 2004, Konstantin "Gus" Kousoulas, Ph.D. as Principal Investigator, and the Center for Lung Biology and Disease (CLBD), established 2019, Samithamby Jeyaseelan, DVM, Ph.D. as Principal Investigator. LSU DVM also administers the Louisiana Biomedical Research Network (LBRN) supported by the NIH:NIH IDeA Network for Biomedical Research Excellence (INBRE) program.

## About the LSU School of Veterinary Medicine

The LSU School of Veterinary Medicine is one of only 32 veterinary schools in the U.S. and the only one in Louisiana. LSU Vet Med is dedicated to improving the lives of people and animals through education, research, and service. We teach. We heal. We discover. We protect.