



THE UNIVERSITY OF TENNESSEE

UT RESEARCH
FOUNDATION

INNOVATION
AWARDS

2018

Tuesday, December 4
11:00 AM - 1:00 PM

*Wassell Randolph
Student Alumni Center
Dining Hall*



2018

INNOVATION AWARDS

Welcome

*Richard Magid, PhD
UTRF Vice President*

Chancellor's Message

*Steve J. Schwab, MD
Chancellor, UTHSC*

Spotlight Presenter

*Michio Kurosu, PhD
Professor, UTHSC*

Keynote Speaker Introduction

*Lakita Cavin, JD, PhD
Senior Staff Attorney, UTRF*

Keynote Address

*James C. Keith, Jr., DVM, PhD
Chief Scientific Officer, EmstoPA Ltd.*

**Innovation Award
Recognition**

*Richard Magid, PhD
UTRF Vice President*

Spotlight Presenter

*Marko Radic, PhD
Associate Professor, UTHSC*

Closing Remarks

*Lakita Cavin, JD, PhD
Senior Staff Attorney, UTRF*



Keynote Speaker: Dr. James C. Keith, Jr.

Dr. James (“Jim”) Carl Keith, Jr. is a Research Pharmacologist with over 38 years of experience in science and research, including comparative medicine, animal models of human disease, vascular biology and inflammation, drug discovery, preclinical research and drug development. Dr. Keith received his BS and DVM degrees from the University of Tennessee Knoxville, and his PhD from the University of Georgia.



During his career, he has received numerous awards in both teaching and research. He is author or co-author of over 147 peer-reviewed papers and book chapters, an invited reviewer for multiple national and international scientific journals, and an inventor or co-inventor on 31 issued US and International patents.

Most recently, Dr. Keith is Co-Founder and Chief Scientific Officer of EmstoPA, Ltd, a start-up company developing an emergency antidote for treatment of severe bleeding occurring after tPA administration for thrombolysis.

Dr. Keith worked at Genetics Institute / Wyeth Research / Pfizer and achieved the title of Distinguished Research Fellow (2006–2011), after starting his career with them as a Senior Principal Scientist and Lab Head of the Animal Models Laboratory in Preclinical Research in 1993. His laboratories conducted animal model studies defining biologic activities, biomarkers of efficacy and safety, and minimum effective doses of cardiovascular drugs, inflammatory disease drug candidate molecules, recombinant human cytokines, and recombinant human therapeutic proteins for hemophilia. The pharmacology research and development contributed to the approval of Neumega, BeneFIX, ReFacto (Europe), ReFacto (US), and Xyntha. Prior to entering the pharmaceutical industry, Dr. Keith served 11 years as an Assistant and Associate Professor of Veterinary Medicine at the Virginia-Maryland Regional College of Veterinary Medicine. His research in atherosclerosis continued and the new area of interest concerning the pathophysiology of preeclampsia emerged.

Dr. Keith is a member of numerous professional organizations, including the American Heart Association, the American Physiological Society, the American Veterinary Medical Association, the Shock Society, the New York Academy of Sciences, the Royal Society of Medicine (London)-Fellow, and the International Society for the Study of Hypertension in Pregnancy.

Dr. Keith currently lives in Andover, MA with his wife Katherine. They have a son, James Charles, and a daughter, Ellen Virginia.

Spotlight Presenters

Dr. Michio Kurosu is a Professor in the Department of Pharmaceutical Sciences at UTHSC. Dr. Kurosu received his BS in Organic and Bioorganic Chemistry from Tokyo University of Pharmacy and Life Science, and his PhD/PharmD in Organic Chemistry and Pharmaceutical Sciences from Osaka University.



Dr. Kurosu has over 25 years of experience as a synthetic/medicinal chemist and has engaged in a wide range of research projects associated with infectious diseases. His research interests include synthesis and biological evaluation of biologically active natural products, rational drug design, bioorganic chemistry, development of enzymatic assays of small molecules, and new chemical tools. His current work primarily focuses on multidrug resistant TB and multidrug resistant-Gram-positive drug targets whose 3D structures have not been previously determined. Dr. Kurosu is the author or co-author of nearly 100 peer-reviewed papers and book chapters.

Dr. Kurosu says that his long-term goal is to understand immune pathology of TB and identify selective immune modulatory small molecules for the treatment of replicating and non-replicating *M. tuberculosis in vivo*.



Dr. Marko Radic is an Associate Professor in the UTHSC Department of Microbiology, Immunology and Biochemistry. Dr. Radic came to UTHSC in 2000 from MCP-Hahnemann University in Philadelphia, PA. He received his BS in Genetics from University of California-Davis, and his PhD in Biological Sciences from the University of California-Irvine. He performed postdoctoral studies in Molecular Immunology at Fox Chase Cancer Center in Philadelphia, PA.

His research focuses on the mechanisms leading to autoimmune disease, with an emphasis on disorders that are diagnosed and mediated by autoantibodies. Work from his laboratory has contributed toward understanding the mechanisms of Systemic Lupus Erythematosus (SLE), Rheumatoid Arthritis (RA), Anti-Phospholipid Syndrome (APS), Felty's Syndrome (FS) and Sjogren's Syndrome (SS). Most recently, he has been investigating the use of immunotherapy as a means of treating lupus.

UT Health Science Center Recently Issued Patents

9,334,242

Compounds for Treatment of Cancer

Wei Li, Yan Lu, Chien-Ming Li, Zhao Wang, Jianjun Chen, James T. Dalton, Duane D. Miller, Charles Duke, & Sunjoo Ahn

UTHSC College of Pharmacy, Department of Pharmaceutical Sciences

9,447,049

Compounds for Treatment of Cancer

Wei Li, Min Xiao, James Dalton, Sunjoo Ahn, Duane D. Miller, Jianjun Chen, & Jin Wang

UTHSC College of Pharmacy, Department of Pharmaceutical Sciences

9,814,698

Selective Androgen Receptor Degradar (SARD) Ligands and Methods of Use Thereof

Ramesh Narayanan, Duane D. Miller, Thamarai Ponnusamy, Dong-Jin Hwang, Jayaprakash Pagadala, Charles Duke, Christopher Coss, Yali He, & James T. Dalton

UTHSC College of Pharmacy, Department of Pharmaceutical Sciences & UTHSC College of Medicine, Department of Medicine-Hematology

9,815,776

Selective Androgen Receptor Degradar (SARD) Ligands and Methods of Use Thereof

Ramesh Narayanan, Duane D. Miller, Thamarai Ponnusamy, Dong-Jin Hwang, Charles Duke, Christopher Coss, Amanda Jones, & James T. Dalton

UTHSC College of Medicine, Department of Medicine-Hematology & UTHSC College of Pharmacy, Department of Pharmaceutical Sciences

9,834,507

Selective Androgen Receptor Degradars (SARD) Ligands and Methods of Use Thereof

Ramesh Narayanan, Duane D. Miller, Thamarai Ponnusamy, Dong-Jin Hwang, Charles Duke, Christopher Coss, Amanda Jones, & James T. Dalton

UTHSC College of Medicine, Department of Medicine-Hematology & UTHSC College of Pharmacy, Department of Pharmaceutical Sciences

9,834,525

Inhibitors of Paxillin Function and Related Compositions and Methods

Charles Ryan Yates, Duane D. Miller, Frank Park, Jordan Toutounchian, Vanessa Morales-Tirado, Shivaputra Patil, Jayaprakash Pagadala, & Bilal Abou Alewi

UTHSC College of Pharmacy, Department of Pharmaceutical Sciences

9,844,528

SARMS and Method of Use Thereof

Ramesh Narayanan, Thamarai Ponnusamy, & James T. Dalton

UTHSC College of Medicine, Department of Medicine-Hematology

9,884,038

Selective Androgen Receptor Modulator and Methods of Use Thereof

Duane D. Miller, Ramesh Narayanan, Thamarai Ponnusamy, & James T. Dalton

UTHSC College of Medicine, Department of Medicine-Hematology & UTHSC College of Pharmacy, Department of Pharmaceutical Sciences

9,889,110

Selected Androgen Receptor Modulators for Treating Hormone-Related Conditions

Duane Miller & James T. Dalton

UTHSC College of Pharmacy, Department of Pharmaceutical Sciences

9,969,683

Methods of Treating Estrogen Receptor (ER)-Positive Breast Cancers with Selective Androgen Receptor Modulators (SARMS)

Ramesh Narayanan, James T. Dalton, Mitchell S. Steiner, & Sunjoo Ahn

UTHSC College of Medicine, Department of Medicine-Hematology

9,981,915

Compounds for Treatment of Cancer

Wei Li, Duane D. Miller, Yan Lu, & James T. Dalton

UTHSC College of Pharmacy, Department of Pharmaceutical Sciences

10,010,516

Method for Regulating Retinal Endothelial Cell Viability

Charles Ryan Yates, Jena Steinle, Duane D. Miller, & Jordan Toutounchian

UTHSC College of Medicine, Department of Ophthalmology & UTHSC College of Pharmacy, Department of Pharmaceutical Sciences

10,010,521

SARMS and Method of Use Thereof

Ramesh Narayanan, Thamarai Ponnusamy, & James T. Dalton

UTHSC College of Medicine, Department of Medicine-Hematology

10,017,471

Selective Androgen Receptor Degradar (SARD) Ligands and Methods of Use Thereof

Ramesh Narayanan, Duane D. Miller, Thamarai Ponnusamy, Dong-Jin Hwang, Jayaprakash Pagadala, Charles Duke, Christopher Coss, Yali He, & James T. Dalton

UTHSC College of Pharmacy, Department of Pharmaceutical Sciences & UTHSC College of Medicine, Department of Medicine-Hematology

10,022,356

Compounds for Treatment of Cancer

Wei Li, Duane D. Miller, Jianjun Chen, & Jin Wang

UTHSC College of Pharmacy, Department of Pharmaceutical Sciences

10,035,763

Selective Androgen Receptor Degradar (SARD) Ligands and Methods of Use Thereof

Ramesh Narayanan, Duane D. Miller, Thamarai Ponnusamy, Dong-Jin Hwang, Jayaprakash Pagadala, Charles Duke, Christopher Coss, Yali He, & James T. Dalton

UTHSC College of Pharmacy, Department of Pharmaceutical Sciences & UTHSC College of Medicine, Department of Medicine-Hematology

10,053,418

Selected Androgen Receptor Modulator and Methods of Use Thereof

Duane Miller & James T. Dalton

UTHSC College of Pharmacy, Department of Pharmaceutical Sciences

10,093,613

Selective Androgen Receptor Degradar (SARD) Ligands and Methods of Use Thereof

Ramesh Narayanan, Duane D. Miller, Thamarai Ponnusamy, Dong-Jin Hwang, Charles B. Duke, Christopher Coss, Amanda Jones, & James T. Dalton

UTHSC College of Pharmacy, Department of Pharmaceutical Sciences & UTHSC College of Medicine, Department of Medicine-Hematology

UT Health Science Center Recently Licensed Technologies

**Gabor Tigyi &
Duane Miller**

Benzyl and Naphthalene-Methyl Phosphonic Acid Inhibitors of Autotaxin with Anti-Invasive and Anti-Metastatic Actions

Licensee: Avanti Polar Lipids, Inc.

**Subhash Chauhan &
Meena Jaggi**

MUC13 Antibodies for Cancer Diagnosis and Treatment

Licensee: Abcam, PLC

**Chris Ivanoff,
Timothy Hottel, &
Franklin Garcia-Godoy**

Smart DDS: Radio Wave Remote Controlled Intraoral Drug Delivery System

Licensee: Peter Bass

**Charles Ryan Yates,
Duane Miller, &
Frank Park**

New Paxillin Inhibitors for Treatment of Polycystic Kidney Disease

Licensee: Ipax Pharmaceuticals, LLC

**L. Darryl Quarles,
Zhousheng Xiao, &
Charles Ryan Yates**

Novel FGF-23 Antagonist Determined by Virtual High-Throughput Screening

Licensee: Minerva Discovery, LLC

**Monica Jablonski &
Mohamed Moustafa**

Microemulsions for Topical Delivery of Water Soluble Drugs

Licensee: OculoTherapy, LLC

Startup Companies

UT Inventors & Founders

**L. Darryl Quarles,
Zhousheng Xiao, &
Charles Ryan Yates**

Novel FGF-23 Antagonist Determined by Virtual High-Throughput Screening

Start-up: Minerva Discovery, LLC

Monica Jablonski

Microemulsions for Topical Delivery of Water Soluble Drugs

Start-up: OculoTherapy, LLC





2019 Maturation Grant Awards

**Adebowale Adebisi
& Hiteshkumar Soni**

Methods of Detecting and Reducing Acute
Kidney Injury in Infants

*UTHSC College of Medicine, Department
of Physiology*

Michio Kurosu

In Vivo Studies of a Novel DPAGT1 Inhibitor,
APPB for Treatment of Pancreatic Cancers

*UTHSC College of Pharmacy, Department of
Pharmaceutical Sciences*

**Monica Jablonski &
Mohamed Moustafa**

Pregabalin Microemulsion Glaucoma Therapy:
Stability Studies

*UTHSC College of Medicine, Department
of Ophthalmology*

**Tayebeh Pourmotabbed
& Anton Reiner**

Determination of the Dosing Regimen and
Duration Benefit of DNZ6 DNAzyme
Treatment in R6/2 Mice

*UTHSC College of Medicine, Department of
Microbiology, Immunology, and Biochemistry*

UTRF Health Science Center FY 2018 Metrics

Invention Disclosures	Licenses & Options	U.S. Patents Filed	U.S. Patents Issued	Startups
28	10	32	12	3

License Revenue **\$648,000**

