

The 2007 ASPET Julius Axelrod Award Winner :

Tong H. Joh, PhD



The Julius Axelrod Award in Pharmacology was established to honor the memory of the eminent American pharmacologist who shaped the fields of neuroscience, drug metabolism and biochemistry. The award is given to recognize outstanding scientific contributions in research and mentoring. Dr. Joh is currently Professor Emeritus of Neurobiology, Weill Medical College and Graduate School of Basic Medical Sciences at Cornell University. He is a graduate of Seoul National University in Korea and received his PhD from New York University.

From his PhD studies to the present, Dr. Joh's goal has been to characterize dopamine (DA) neuronal plasticity, biochemistry and genetic analysis of catecholamine biosynthesis, especially DA biosynthesis, and molecular and cellular mechanisms that underlie DA neuronal degeneration.

Dr. Joh used Julius Axelrod's early findings as a stepping stone to vastly increase scientific knowledge of the catecholomine neurotransmitters. Dr. Joh was a leader in the development of critical tools for investigating the catecholomines and the proteins responsible for producing these chemicals, including antibodies and molecular biology reagents. Using these tools, Dr. Joh paved the pathway for current understanding in the development of the catecholomine network in the brain and nervous system, the factors controlling catecholomine expression and the role of the catecholomines in stress and hypertension. These early fundamental discoveries are now being applied to understanding neurological disorders and diseases.

Dr. Joh has been a remarkable and dedicated mentor to doctoral students, post-doctoral fellows and faculty. He has served as mentor and role model well beyond the domain of his own research group.

ASPET AWARD WINNERS FOR 2007



Michael D. Ehlers, MD, PhD

John J. Abel Award

Michael D. Ehlers, MD, PhD, associate professor of Neurobiology and Wakeman Scholar in the Department of Neurobiology at Duke University and Investigator of the Howard Hughes Medical Institute, is the recipient of the 2007 John J. Abel Award, sponsored by Eli Lilly & Co. The Award is given to a single young investigator for original, outstanding research contributions in the field of pharmacology.

Dr. Ehlers received his BS degree in chemistry at the California Institute of Technology before pursuing graduate and medical studies in neuroscience at the Johns Hopkins University. He is a Howard Hughes Medical Institute researcher and past recipient of the NARSAD Freedman Award and the Eppendorf & Science Prize in Neurobiology.

Dr. Ehlers' research focuses on brain plasticity and specifically on the cell biological basis of neural plasticity. He seeks to understand protein trafficking and turnover in dendrites and their relationship formation and function. In his laboratory, Dr. Ehlers has demonstrated different methods neurons use to self regulate electrical activity. More recently, he has shown how internal cell structures called recycling endosomes trigger a prolonged burst in neuron's electrical activity by causing a surge in so-called AMPA receptors.



P. Jeffrey Conn, PhD

Pharmacia-ASPET Award for Experimental Therapeutics

Peter Jeffrey Conn, PhD, of Vanderbilt University Medical Center is the recipient of the 2007 Pharmacia-ASPET Award for Experimental Therapeutics. The Pharmacia-ASPET Award for Experimental Therapeutics is given annually to recognize and stimulate outstanding research in pharmacology and experimental therapeutics—basic laboratory or clinical research that has had, or potentially will have, a major impact on the pharmacological treatment of disease. This award is funded by an endowment from Pharmacia (now Pfizer) and by ASPET.

Dr. Conn received a BS degree from Lee University in Cleveland, Tennessee and a PhD in pharmacology from Vanderbilt. Early in his professional career he was a research associate at Vanderbilt and later moved to Yale University School of Medicine for postdoctoral work. He became assistant professor and later full professor in pharmacology at Emory University School of Medicine. Dr. Conn then moved to Merck Research Laboratories to direct the Neuroscience group at their site near Philadelphia, Pennsylvania before returning to Vanderbilt where he is Director of the Program in Translational Neuropharmacology and Director of the VICB Program in Drug Discovery, which tries to facilitate translation of recent advances in basic science to novel therapeutics.

Dr. Conn is an internationally recognized expert in translational pharmacology in the neuroscience field. His current research focuses on the development of novel treatment strategies for Parkinson's disease, schizophrenia, and other brain disorders. Dr. Conn has established himself as an international expert on glutamate neuronal functions and pharmacology in the hippocampus, and he has explored therapeutic opportunities for epilepsy, neuroprotection, and anxiety disorders. His laboratory was the first to elucidate a selective agonist tool for G-protein glutamate "metabotropic" receptors, without activity at ion channel linked glutamate receptors. Dr. Conn serves on several scientific Advisory Boards of multiple pharmaceutical and biotech companies and the Michael J. Fox Foundation. Dr. Conn is currently Editor of *Molecular Pharmacology*.

ASPET AWARD WINNERS FOR 2007



Robert Schwarcz, PhD ***ASPET Epilepsy Award***

Robert Schwarcz, PhD, Professor of Psychiatry, Pharmacology and Pediatrics at the University of Maryland School of Medicine, is the recipient of the 2007 ASPET-Epilepsy Award. The Award is sponsored by ASPET and the International League Against Epilepsy and donated by Pfizer. The award is to recognize and stimulate outstanding research leading to better clinical control of epileptic seizures.

A native of Vienna, Austria, Dr. Schwarcz received his PhD from the University of Vienna. Following postdoctoral work at Johns Hopkins University and the Karolinska Institute, he joined the faculty of the University of Maryland School of Medicine in 1979. He is currently Professor of Psychiatry, Pharmacology and Pediatrics and Director of Neuroscience Research in Psychiatry at the University of Maryland.

Dr. Schwarcz is an internationally renowned neuroscientist who has pioneered the study of molecular and cellular mechanisms underlying neurodegenerative and seizure disorders. In particular, Dr. Schwarcz was the first to show that it is possible to protect nerve cells from injury using specific pharmacological interventions (glutamate receptor antagonists). His discoveries and concepts, which have led to several patents, are documented in more than 250 articles in peer-reviewed scientific journals and have resulted in several prizes and other academic honors. Dr. Schwarcz was Chair of the International Advisory Board of the Brain Research Institute in Vienna, Austria and is a much sought-after lecturer at academic institutions and scientific conferences.



Sue P. Duckles, PhD ***ASPET-Torald Sollmann Award***

Sue Duckles, PhD, Professor and Vice Chair of Pharmacology and Associate Dean at the University of California-Irvine School of Medicine, is the recipient of the 2007 Torald Sollmann Award. The Award was established by Wyeth Research to commemorate the pioneering work in America of Dr. Torald Sollmann in the fields of pharmacological investigation and education. Dr. Duckles was selected for this Award because of her outstanding and productive research career, her devotion to the teaching of pharmacology, and her unparalleled service to ASPET and the discipline it represents.

A native of Oakland, California, she received her BA in Philosophy from UC Berkeley and received a PhD in Pharmacology from UC San Francisco. After postdoctoral studies at UCLA, Dr. Duckles was appointed Assistant Professor in Residence. She joined the Department of Pharmacology at the University of Arizona, subsequently moving to UC Irvine in 1985.

Dr. Duckles is a cardiovascular pharmacologist and neuroscientist interested in the unique function of the cerebral circulation. Current research includes the influence of gender and sex steroid hormones on vascular reactivity and effects of estrogen on mitochondrial function. Dr. Duckles' laboratory discovered a novel effect of estrogen on mitochondrial function. These findings suggest that vascular protection by estrogen may be mediated, in part, by modulation of mitochondrial function and may also contribute to the longer lifespan of women. Dr. Duckles' work also demonstrates that chronic estrogen treatment increases vasodilator function of cerebral microvessels.

ASPET AWARD WINNERS FOR 2007

At UC Irvine, Dr. Duckles has developed innovative programs to support the career development of junior faculty, including Strategic Planning sessions to assist beginning faculty to set and revise short-term and long-term goals. Many of the programs developed by Dr. Duckles were subsequently incorporated into the UCI NSF Advance Program, where they have contributed to the recruitment, promotion and retention of women faculty across the campus.

An active leader in pharmacology at both the national and international levels, Dr. Duckles served as President of the Western Pharmacology Society, President of the American Society for Pharmacology and Experimental Therapeutics and as a member of the Board of Directors and Vice President for Science Policy for the Federation of American Societies for Experimental Biology. In 2000 she became founding Chair of the Editorial Board for a new ASPET publication, *Molecular Interventions*. Following a four year term as Secretary General, Dr. Duckles currently serves as President of the International Union of Pharmacology.

Dr. Duckles will give the ASPET-Torald Sollman Lecture, entitled "A career in Pharmacology: In search of beauty and joy," on Sunday, April 29, from 1:30 – 2:30 p.m. in Room 143A/B of the Washington Convention Center.

ASPET-Astellas Awards in Translational Pharmacology

The ASPET-Astellas Awards in Translational Pharmacology are intended to recognize pharmacological research accomplishments that seek to extend fundamental research closer to applications directed towards improving human health. The awards are given to 1) recognize those individuals whose research has the potential to lead to the introduction of novel pharmacologic approaches or technologies that may offer significant advances in clinical medicine in the future and 2) to facilitate that translational process. The awards are made possible by a grant to ASPET from the Astellas Foundation, and there are three recipients.



Kathryn A. Cunningham, PhD

ASPET-Astellas Awards in Translational Pharmacology

Kathryn A. Cunningham, PhD, of the University of Texas Medical Branch at Galveston is a recipient of the 2007 ASPET-Astellas Award in Translational Pharmacology.

Dr. Cunningham is currently the Chauncey Leake Distinguished Professor of Pharmacology, Director of the UTMB Center for Addiction Research and Vice Chairman of the UTMB Department of Pharmacology and Toxicology. She received her PhD from the University of South Carolina and shortly after moved to Galveston as a postdoctoral fellow, eventually joining the faculty in the Department of Pharmacology and Toxicology.

Dr. Cunningham and her laboratory are at the forefront of attempts to discover and validate new strategies to enhance abstinence, reduce craving and prevent relapse of individuals with drug abuse and addictive disorders. Her group is uniquely focused on the prospects of extant and novel serotonin (5 HT) ligands to meet these goals. Data provided from her laboratory support a serotonergic basis for the progression to psychostimulant addiction and suggest the potential of targeted serotonergic medications for tackling relapse and extending abstinence. Dr. Cunningham and her team have developed four integrated projects aligning human subjects, animal models, molecular/cellular models and medicinal chemistry methodologies into a truly translational approach to determine the efficacy of new, rationally-designed serotonergic strategies targeted to reduce relapse during withdrawal and abstinence.

ASPET AWARD WINNERS FOR 2007



Liewei Wang, MD, PhD

ASPET-Astellas Awards in Translational Pharmacology

Liewei Wang, MD, PhD, of the Mayo Clinic College of Medicine is a recipient of the 2007 ASPET-Astellas Award in Translational Pharmacology.

Dr. Wang received her MD from FuDan University Medical School in Shanghai, China and her PhD from the Mayo Clinic. She is currently an associate consultant in the Division of Clinical Pharmacology at the Mayo Clinic College of Medicine.

Dr. Wang has demonstrated for the first time in pharmacogenetics that proteasome-mediate protein degradation plays a genetically controlled role in how an individual responds to drugs metabolized by the thiopurine S-methyltransferase enzyme. This study opened a whole new area for the study of the pharmacogenetics of drug response. More recently she has moved from studying drug metabolism to studying drug targets. In particular she is studying ethnic variability in the response to bortezomib, a drug used to treat highly malignant multiple myeloma. She is testing whether the target for this drug, one particular subunit of the proteasome, is subject to genetic variability that would make it more or less sensitive to bortezomib, resulting in either toxicity or lack of efficacy, respectively. Using similar methodology, she also discovered 93 genetic polymorphisms in the Glucocorticoid receptor gene, data that would account for the high degree of variability in response of patients given dexamethasone.



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