

ASPET 2008 Centennial Meeting Program

Symposia



Centennial Symposia

Sunday, April 6

9:00 - 11:30 am



Drug Discovery Paradigms: Past, Present & Future (Division for Drug Discovery, Development & Regulatory Affairs)

Chair: **Robert R. Ruffolo**

One hundred years of drug discovery

R. Alan North, *University of Manchester*

Evolution of pharmacology in drug discovery - The future is bright

Graeme Milligan, *University of Glasgow*

Using mouse genetics to guide drug discovery

Brian Zambrowicz, *Lexicon Pharmaceuticals*

CNS drug discovery: Back to the future.

Sam J. Enna, *University of Kansas Medical Center*

Drug discovery of the future.

Robert R. Ruffolo, *Wyeth Research*



The G-Whizards of GPCR/G-Protein Signaling (Division for Molecular Pharmacology, jointly sponsored by ASBMB)

Chair: **Lee E. Limbird**

[Stream video or download to your iPod](#)

How the seed was sown: The interdependent evolution of the GPCR/G protein signaling field

Lee E. Limbird, *Meharry Medical College*

Seven transmembrane receptors

Robert J. Lefkowitz, *Duke University Medical Center*

Where are we?

Alfred G. Gilman, *University of Texas Southwestern Medical School*

Receptor-catalyzed activation of heterotrimeric G proteins

Heidi E. Hamm, *Vanderbilt University Medical Center*

Julius Axelrod Symposium

Celebrating a Pioneer Pharmacologist and His Legacy: Creating New Drugs by Revealing Mechanisms of Drug Action on Fundamental Biological Processes

Chair: **Lee E. Eiden**

[Stream video or download to your iPod](#)

A brief history of ASPET's Julius Axelrod Award and introduction of Randy Blakely, the 2008 Julius Axelrod Awardee.

David R. Sibley, *Chair, ASPET Julius Axelrod Award Committee; NINDS, NIH*

Julie Axelrod: A legacy of fundamental research for drug discovery.

Lee E. Eiden, *NIMH, NIH*
Methylation pharmacogenomics: Neurotransmitters to drug response.
Richard M. Weinshilboum, *Mayo Clinic College of Medicine*
Neurotransmitter transporters: New views of form and function
Susan G. Amara, *University of Pittsburgh School of Medicine*
Biochemical and behavioral actions of monoamines in genetic animal models
Marc G. Caron, *Duke University Medical Center*

Cannabinoid CB1 Receptor Interdependence with Other Receptor Systems as a Target for Medication Development

(Sponsored by the Divisions for Behavioral Pharmacology, Neuropharmacology, Molecular Pharmacology, Systems & Integrative Pharmacology)

Chair: **Steven R. Goldberg**

Introduction: Cannabinoid CB1 receptor interdependence with other receptor systems as a target for medication development

Steven R. Goldberg, *NIDA, NIH*

Cannabinoid CB1 receptors form functional heteromers with dopamine, adenosine and opioid receptors

Sergi Ferre, *NIDA, NIH*

Drug-discrimination and in-vivo microdialysis procedures for studying nicotinic, dopaminergic and opioid receptor interactions with cannabinoid CB1 receptors in rats.

Marcello Solinas, *University of Poitiers, France*

Drug self-administration and conditioned place preference procedures for studying interactions between cannabinoid CB1 receptors and other receptor systems in rodents

Walter Fratta, *University of Cagliari, Italy*

Intravenous drug self-administration procedures in nonhuman primates for studying interactions between cannabinoid CB1 receptors and other receptor systems

Zuzana Justinova, *University of Maryland School of Medical*

Cannabinoid CB1 receptor interdependence with other receptor systems as a target for medication development: Future directions and potential payoff for human health in the next 10 years

TBD

Pharmacology Education for the Next 100 Years: Preparing the Next Generation of Pharmacologists

Sponsored by the Division for Pharmacology Education

Chairs: **Lynn M. Crespo** and **Joey V. Barnett**

Pharmacologists in Pharma.

D. Euan MacIntyre, *Merck Research Laboratories*

Pharmacologists in government and regulation.

Aisar H. Atrakchi, *FDA*

Pharmacologists in academia.

Jordan E. Warnick, *University of Maryland School of Medicine*

The pharmacology curriculum - past vs. present

Lynn M. Crespo, *University of Central Florida College of Medicine*

Sunday, April 6
2:30 - 5:00 pm



Pharmacotherapeutics for Drug Abuse - The Cocaine Challenge (Division for Behavioral Pharmacology)

Chair: **Alice M. Young**

Pharmacological modification of drug taking: Origins and evolution.

William Woolverton, *University of Mississippi Medical Center*

Cocaine: Consequences of rapid elimination.

James H. Woods, *University of Michigan Medical School*

Benzotropine-related dopamine uptake blockers that prevent cocaine effects

Jonathan Katz, *NIDA, NIH*

Employment-based reinforcement in the treatment of cocaine addiction.

Kenneth Silverman, *Johns Hopkins University*

Where will it go in ten years?

Maxine L. Stitzer, *Johns Hopkins Bayview Medical Center*



Chance Favors the Prepared Mind: A Nobel Perspective (Division for Pharmacology Education)

Chair: **Jeffrey S. Fedan**

[Stream video or download to your iPod](#)

The role of serendipity and luck in the discovery of the NO and cyclic GMP signaling pathway and their exciting future in drug development

Ferid Murad, *University of Texas, Houston*

When you come to a fork in the road, take it

Alfred G. Gilman, *University of Texas Southwestern Medical Center*

The road to Stockholm - A Nobel mission

Louis J. Ignarro, *UCLA School of Medicine*

Regulation for Ion Channels in Cardiovascular Disease

(Sponsored by the Divisions for Cardiovascular Pharmacology and Molecular Pharmacology)

Chairs: **Swapnil Sonkusare** and **Nancy J. Rusch**

Distinct regulation of L-type Ca(2+) channels localized to caveolae in heart

Timothy J. Kamp, *University of Wisconsin*

The role of potassium channels in neurovascular coupling

Mark T. Nelson, *University of Vermont*

Auto-inhibitory control of L-type Ca(2+) channels in heart

William A. Catterall, *University of Washington School of Medicine*

Vascular ion channel remodeling in hypertension

Swapnil Sonkusare, *University of Arkansas for Medical Sciences*

Regulation of K(+) channels in nitrate tolerant arteries

Stephen T. O'Rourke, *North Dakota State University College of Pharmacy*

G12/13 Signaling of Cell Surface Receptors: Molecular Insights & Disease Context

(Sponsored by the Divisions for Molecular Pharmacology, Cardiovascular Pharmacology, and the American Society of Biochemistry and Molecular Biology)

Chair: **Sandra Siehler**

Physiological relevance of Galpha₁₂ and Galpha₁₃ in various tissues

Stefan Offermanns, *University of Heidelberg, Germany*

Role of G_{12/13} signaling in cancer invasion and metastasis

Patrick J. Casey, *Duke University Medical Center*

Regulation of phospholipase C-epsilon by G_{12/13} and RhoA

T. Kendall Harden, *University of North Carolina School of Medicine*

Novel localizations and functions of G_{12/13}-regulated RGS-RhoGEFs

Philip Wedegaertner, *Thomas Jefferson University*

Mechanistic insights and therapeutic impact of G_{12/13}-related signaling of G protein-coupled receptors

Sandra Siehler, *Novartis Pharma AG, Basel, Switzerland*

Monday, April 7

9:00 - 11:30 am



P450s: Structure, Function, In Silico Predictions (Division for Drug Metabolism)

Chairs: **James R. Halpert** and **Eric F. Johnson**

Drug metabolism and cytochrome P450

Anthony Y.H. Lu, *Rutgers University*

Mechanisms of P450-dependent drug oxidation

Paul R. Ortiz de Montellano, *UCSF*

Protein and substrate dynamics of cytochromes P450

William Atkins, *University of Washington*

Crystal structures of P450 active sites

Eric F. Johnson, *Scripps Research Institute*

In silico predictions of P450 catalysis

Lovisa Afzelius, *AstraZeneca R&D*



The Obesity Epidemic – Pharmacological Challenges (Division for Systems & Integrative Pharmacology)

Chair: **Ismail Laher**

The current molecular model of body weight regulation

Matthias H. Tschoep, *University of Cincinnati College of Medicine*

Pharmacological therapy of obesity

D. Scott Weigle, *University of Washington*

Physiological regulators of appetite as a basis for pharmacotherapy of obesity

Stephen R. Bloom, *Hammersmith Hosp., Imperial College London, UK*

The endocannabinoid system as a new regulator of energy balance

Xavier Pi-Sunyer, *St. Luke's/Roosevelt Hospital*

Fatty acid metabolism and energy regulation: New pharmacological strategies for obesity therapy

Gabriele Ronnett, *Johns Hopkins Bayview Medical Center*

Ray Fuller Symposium

Preceded by the [Ray Fuller Lecture](#) from 8:00 - 8:50 am

Antidepressants for the New Millennium: Circumventing the Monoamine Synapse

Chair: **Phil Skolnick**

[Stream video or download to your iPod](#)

The role of the NMDA receptor signaling cascade in antidepressant activity.

Ian A. Paul, *University of Mississippi Medical Center*

Neurotrophic and neurogenic actions of antidepressants.

Ron S. Duman, *Yale University School of Medicine*

AMPA receptor potentiation: A core antidepressant pathway?

Jeffrey M. Witkin, *Eli Lilly and Co.*

Potentiation of synaptic AMPA/NMDA mediated throughput in the development of novel therapeutics for mood disorders.

Carlos Zarate, *NIMH, NIH*

The Emerging Science of Drug Safety

(Sponsored by the Divisions for Clinical Pharmacology, Translational Medicine & Pharmacogenomics, Drug Discovery, Development & Regulatory Affairs, Toxicology, Behavioral Pharmacology, Cardiovascular Pharmacology, Drug Metabolism)

Chairs: **Darrell R. Abernethy** and **Judith K. Jones**

Introduction. **Darrell R. Abernethy**, *U.S. Pharmacopeia*

Approaches to enhance drug safety in the ambulatory outpatient setting

Michael Murray, *University of North Carolina School of Pharmacy*

Identification and evaluation of drug induced disease

Judith K. Jones, *The Degge Group, Ltd., Arlington, VA*

European experience with active surveillance methods to identify drug safety problems

Sir Alasdair M. Breckenridge, *Medicines and Healthcare Products Regulatory Agency, London, U.K.*

Development of informatics to support post-marketing surveillance in the United States

Kenneth D. Mandl, *Harvard-MIT*

Monday, April 7

2:30 - 5:00 pm



Development of Inhibitors of the Soluble Epoxide Hydrolase as a Novel Treatment for Hypertension, Vascular Inflammation and End Organ Damage

(Division for Toxicology)

Chairs: **Bruce D. Hammock** and **John D. Imig**

Epoxide hydrolases, from xenobiotic metabolism to pharmaceutical target

Michael Arand, *University of Zurich, Switzerland*

Stabilization of epoxyeicosanoids by inhibitors of the soluble epoxide hydrolase as treatments for hypertension, vascular inflammation and end organ damage

John D. Imig, *Medical College of Wisconsin*

Genetic polymorphisms of the soluble epoxide hydrolase are associated with risk of stroke and vascular disease

Darryl C. Zeldin, *NIEHS, NIH*

Biochemistry, structure and the design of inhibitors for the soluble epoxide hydrolase

Bruce D. Hammock, *University of California - Davis*

Translation of soluble epoxide hydrolase inhibitors to the clinic

Heather Webb, *Arête Therapeutics*

The impact of research on epoxide hydrolases and epoxyeicosanoids on human health

William B. Campbell, *Medical College of Wisconsin*



New Concepts in an Old System - Renin-Angiotensin System Blockade as Therapy for General Cardiovascular Disease (Division for Cardiovascular Pharmacology)

Chair: **Mariana Morris and Carlos M. Ferrario**

Renin angiotensin system - A historical perspective.

Ronald D. Smith, *Merck, Inc.*

Renin inhibition and renin receptors.

Genevieve Nguyen, *INSERM U833, Collège de France, Paris*

ACE2 as a new target in the RAS.

Mark C. Chappell, *Wake Forest University School of Medicine*

RAS and the cardiovascular pathologies associated with diabetes.

Khalid M. Elased, *Wright State University*

RAS and inflammation in cardiovascular disease.

Lisa A. Cassis, *University of Kentucky College of Pharmacy*

Contribution of tissue RAS inhibition to therapeutic effectiveness.

Michael Bader, *Max-Delbrück-Centrum, Berlin*

Neuroplasticity in Addiction: Picking up the Pieces

(Sponsored by the Divisions for Neuropharmacology, Behavioral Pharmacology, Systems & Integrative Pharmacology)

Chair: **Peter W. Kalivas**

Role of animal models in understanding cellular neuroplasticity

George F. Koob, *Scripps Research Institute*

Role of nucleus accumbens CREB in addiction and depression: Implications for co-morbidity

William A. Carlezon, *Harvard Medical School/McLean Hospital*

Long-term changes in synaptic efficiency by drugs of abuse

Antonello Bonci, *UCSF*

How molecular plasticity in corticolimbic circuitry translates into novel therapeutics

Peter W. Kalivas, *Medical University of South Carolina*

Neural encoding of negative affect and its relationship to drug seeking

Robert A. Wheeler, *University of North Carolina*

Tuesday, April 8

9:00 - 11:00 am



ABC Transporters: From Drug Resistance to Drug Response (Division for Clinical Pharmacology, Translational Medicine, & Pharmacogenomics)

Chair: **Richard B. Kim**

ABC transporters: Historical perspective and importance in drug disposition

Susan P.C. Cole, *Queen's University*

ABC transporters and cancer chemotherapy

Susan E. Bates, *NCI, NIH*

From Mdr1 to Bcrp knockout mice: Relevance to xenobiotic toxicity

Alfred H. Schinkel, *The Netherlands Cancer Institute*

Interplay between ABC transporters and cytochrome P450 enzymes

Erin G. Schuetz, *St. Jude's Children's Research Hospital*

ABC transporters, where do we go from here?

Richard B. Kim, *University of Western Ontario, London Health Science Center Hospital*



New Experimental Approaches to Treatment of Schizophrenia: Moving Beyond Monoamine Antagonists (Division for Neuropharmacology)

Chairs: **P. Jeffery Conn** and **Carol A. Tamminga**

Treatments for schizophrenia: Targeting psychosis and cognition

Carol A. Tamminga, *University of Texas Southwestern Medical Center*

Allosteric activators of muscarinic receptors as a novel approach for treatment of schizophrenia

P. Jeffrey Conn, *Vanderbilt University*

Metabotropic glutamate receptors as novel targets for treatment of schizophrenia: Progress, issues, and challenges

Darryle D. Schoepp, *Merck Research Labs*

De novo design of potent GlyT1 inhibitors: *In vitro* and *in vivo* profiles

Craig W. Lindsley, *Vanderbilt University Medical Center*

Integrative Urogenital Pharmacology: Implications to the Treatment of Bladder Disease

(Sponsored by the Divisions for Systems & Integrative, Drug Discovery, Development & Regulatory Affairs)

Chairs: **George J. Christ** and **Karl-Erik Andersson**

K channel modulation of bladder contractility

Mark T. Nelson, *University of Vermont*

Molecular mechanisms of bladder dysfunction

George J. Christ, *Wake Forest University Baptist Medical Center, WFIRM*

Integrative control of bladder function: From the CNS to the urothelium

William C. de Groat, *University of Pittsburgh Medical School*

Modulation of electromechanical coupling in the bladder.

Chris Fry, *University College London*

Pharmacological basis and mechanisms for treatment of overactive bladder

Karl-Erik Andersson, *University of Lund, Sweden/Wake Forest University Baptist Medical Center, WFIRM*

Drug Metabolism, Bioactivation & Chemical-induced Toxicities: Lessons Learned & Contemporary Issues

(Sponsored by the Divisions for Drug Metabolism, Toxicology, Clinical Pharmacology, Translational Medicine & Pharmacogenomics, Systems & Integrative Pharmacology)

Chair: **Terry J. Monks** and **Kenneth E. Thummel**

Drug toxicities - Lessons learned

M.W. Anders, *University of Rochester*

Cytochrome P450 mediated drug bioactivation and idiosyncratic toxicities

B. Kevin Park, *University of Liverpool. UK*

Immune-based drug toxicities

Jack Uetrecht, *University of Toronto*

GSH-conjugate mediated neurotoxicity

Terry J. Monks, *University of Arizona*

Transporters and drug-induced toxicities

Susan P.C. Cole, *Queen's University, Canada*

Wednesday, April 9

8:00 - 10:30 am - NOTE EARLIER TIME!^{3/4}

Inflammation: Early Disease Marker, Drug Response Modifier, Therapeutic Target

(Sponsored by the Divisions for Drug Discovery, Development & Regulatory Affairs, Clinical Pharmacology, Translational Medicine & Pharmacogenomics, Molecular Pharmacology, Toxicology, Systems & Integrative Pharmacology, Drug Metabolism)

Chairs: **Donald W. Miller** and **Daniel S. Sitar**

Omics-based discovery of inflammation markers as diagnostic tools in drug discovery and disease

B. Alex Merrick, *NIEHS, NIH*

Idiosyncratic drug-induced liver injury and inflammatory stress

Patricia E. Ganey, *Michigan State University*

Role of the blood-brain barrier in central nervous system inflammation

Donald W. Miller, *University of Manitoba, Canada*

Emerging anti-inflammatory therapeutics: Perspectives from the laboratory

David E. Szymkowski, *Xencor, Inc.*

Emerging anti-inflammatory therapeutics: Perspectives from the clinic

Robert I. Fox, *Scripps Memorial Hospital & Research Foundation*

Emerging Importance of Allosteric Receptor Modulation in Drug Discovery

Sponsored by the Divisions for Neuropharmacology, Systems & Integrative Pharmacology, Drug Discovery, Development & Regulatory Affairs, Behavioral Pharmacology, Molecular Pharmacology, Clinical Pharmacology, Translational Medicine & Pharmacogenomics

Chair: Guibao Gu

Topography in drug discovery: The challenge of allosteric modulators

Arthur Christopoulos, *Monash University, Australia*

Positive allosteric modulation of GABAB receptors: A novel therapeutic strategy for anxiety and drug dependence

John F. Cryan, *University College Cork, UK*

Allosteric modulation of serotonin transporters: Lessons learned from the development of escitalopram

Connie Sanchez, *Lundbeck Research USA*

Allosteric modulation of GPCRs as a novel therapeutic direction for the treatment of CNS disorders

Colleen Niswender, *Vanderbilt University Medical Center*

The Promise and Challenges of Pharmacogenetics as a Diagnostic Tool

Sponsored by the Divisions for Clinical Pharmacology, Translational Medicine & Pharmacogenomics, Drug Metabolism, Systems & Integrative Pharmacology, Toxicology

Chair: **Steven Leeder**

The use of pharmacogenetics to optimize cancer chemotherapeutics in children

William E. Evans, *St. Jude Children's Research Hospital*

Predictive tests for asthma exacerbations and short acting response to bronchodilator medication:

Use of whole genome data

Scott T. Weiss, *Brigham and Women's Hospital, Harvard Medical School*

Genetic variation in statin response

Ronald Krauss, *Children's Hosp. Oakland Research Institute*
Pharmacogenetics as a diagnostic tool for psychotic illnesses
Herbert Y. Meltzer, *Vanderbilt University Medical Center*

Mitochondria in Life & Death: From Biogenesis to Autophagy

(Sponsored by the Division for Toxicology)

Chair: **Rick G. Schnellmann**

The mitochondrial proteome

Bradford W. Gibson, *Buck Institute for Age Research*

Protein kinase signaling of mitochondrial function following injury

Grazyna Nowak, *University of Arkansas for Medical Sciences*

Mitochondrial permeabilization in cell death and mitophagy

John J. Lemasters, *Medical University of South Carolina*

Mitochondrial biogenesis following oxidant injury

Rick G. Schnellmann, *Medical University of South Carolina*

A Century of Development of Concepts of Ion Channel Receptors: Past Milestones and Contemporary Development for the Next Decade

(Sponsored by the Divisions for Molecular Pharmacology, Behavioral Pharmacology, Neuropharmacology, and the American Society of Biochemistry and Molecular Biology)

Chair: **Palmer W. Taylor**

The era of chemical characterization of ion channel receptors: The importance of investigating conformation and state changes. **Jean-Pierre Changeux**, *Institut Pasteur, Paris*

The acetylcholine binding protein: A model system for nicotinic acetylcholine receptor selectivity.

Titia Sixma, *The Netherlands Cancer Institute, Amsterdam*

Roles of nicotinic receptors in nicotine addiction and neuroprotection.

Henry A. Lester, *Cal Tech*

Dynamics in structure-guided drug design: Structurally defined receptors as templates for freeze-frame, click chemistry synthesis of novel ligands.

Palmer W. Taylor, *UCSD*

Division Sessions

Sunday, April 6

2:30 - 5:00 PM

Drug Metabolism Division James Gillette Best Paper Award Winners Platform Session

Chairs: **Ken E. Thummel** and **Tom A. Kocarek**

Monday, April 7

2:30 - 5:00 PM

Translational Research in Behavioral Pharmacology - Division for Behavioral Pharmacology

Chairs: **Charles P. France** and **Alice M. Young**

Translational medicine in pain research.

James E. Barrett, *Drexel University College of Medicine*

Challenging the opiates: Concept, target identification and profile of the central analgesic, F 13640.

Francis C. Colpaert, *Centre de Recherche Pierre Fabre, Castres, France*

Use of behavioral pharmacology in rational drug discovery for novel targets in psychiatric disorders.

Darryle D. Schoepp, *Merck and Co.*

Cognitive disturbances in depression: Preclinical targets for antidepressant treatment.

Alan Frazer, *University of Texas Health Science Center at San Antonio*

Ion Channel Therapy & Disease Therapy - Division for Systems & Integrative Pharmacology

Chairs: **Robert S. Kass** and **Mark T. Nelson**

Voltage gated Na channel disorders and excitable tissues.

Alfred L. George, *Vanderbilt University Medical Center*

K channels and the long QT syndrome.

Robert S. Kass, *Columbia University Medical Center*

CRAC channel regulation in health and disease.

Richard S. Lewis, *Stanford University School of Medicine*

Probing the genetic and molecular basis of episodic neurological disease

Louis J. Ptacek, *University of California - San Francisco*

Cellular mechanism of arrhythmogenesis in a murine model of congenital catecholaminergic polymorphic

ventricular tachycardia (CPVT).

Marco Mongillo, *Columbia University College of Physicians and Surgeons*

Tuesday, April 8

9:00 - 11:30 AM

Signal Transduction Bioinformatics: Integrating Pharmacology with Signaling Molecule Discovery - Division for Drug Discovery, Development & Regulatory Affairs

Chair: **Lee E. Eiden**

Introduction: Drug discovery, signaling molecule discovery and integrating pharmacology into bioinformatics tools for signal transduction analysis.

Lee E. Eiden, *NIMH, NIH*

Pathfinder: A static network analysis tool for pharmacological analysis of signal transduction pathways, and other transduction bioinformatics tools.

Babru B. Samal, *NIMH, NIH*

Phosphoproteomics-based kinase substrate discovery in growth factor signaling.

Michael J. Comb, *Cell Signaling Technology, Inc.*

Integrating pharmacology into network analysis of signal transduction.

Ravi Iyengar, *Mount Sinai School of Medicine*

Pathway analysis in bioinformatics-nodal inhibition and its relevance to drug discovery.

Gary D. Bader, *University of Toronto*

Defining drug targets in yeast haploinsufficiency screens: Application to human translational pharmacology.

Michel Roberge, *University of British Columbia Faculty of Medicine*

Roundtable discussion

Nancy R. Gough, *Science's STKE*

Tuesday, April 8
2:30 - 5:00 PM

Neuropharmacology Postdoctoral Scientist Award Finalists

Chair: **David R. Sibley**

Ethanol potentiation of D₁ receptor signaling: The role of PKC

David R. Sibley, *NINDS/NIH*

Postdoctoral Scientist Award Presentations:

Cellular and molecular mechanisms regulating MT₁ and MT₂ melatonin receptor trafficking.

Yahong Zhang, *Northwestern University School of Medicine*

Comparison of dopamine transporter regulation in rat dorsal striatum versus nucleus accumbens

Toni L. Richards, *University of Colorado - Denver*

Sex differences in the corticotropin-releasing factor receptor and its regulation by stress

Debra Bangasser, *Children's Hospital of Philadelphia*

Chronic treatment with paliperidone, like lithium and valproate, induces similar changes in expression and phosphorylation at

the synaptoneurosomal level in rat prefrontal cortex

Maria Corena Mcleod, *Mayo Clinic, Jacksonville*

Role of NOS-NO signaling in clonidine-ethanol evoked synergistic behavioral impairment

Tara S. Bender, *East Carolina University*

Role of Transporters in Prevention and Exacerbation of Toxicity - Division for Toxicology

Chair: **Mary E. Vore**

Characterization of mice null for liver-specific uptake transporter Oatp1b2.

Curtis D. Klaassen, *University of Kansas Medical Center*

Regulation of yeast MRP Ycf1p by protein-protein interaction.

Christian M. Paumi, *John Hopkins School of Medicine*

Glutathione transporters as key regulators of the biological functions of the tripeptide.

Ned Ballatori, *University of Rochester*

Modulation of electrophile-mediated signaling by MRP1, GSH and GST.

Charlie S. Morrow, *Wake Forest University School of Medicine*

Drug Response Predictions: Genotype vs. Phenotype - Division for Clinical Pharmacology, Translational Medicine and Pharmacogenomics Division

Chair: **Richard B. Kim**

Phenotype predictions from genotype: Examples from CYP2D6.

Andrea Gaedigk, *Children's Mercy Hospital, Kansas City, MO*

CYP3A5: How important is this enzyme to drug response?

Evan D. Kharasch, *Washington University*

In vivo probes of MDR1 and BCRP activity in humans.

Ute I. Schwarz, *University of Western Ontario*

Abstract 4856: Prediction of individual variation in thiopurine response phenotypes from genome-wide association studies

Fan Li, *Mayo Clinic College of Medicine*

Abstract 6187: Expression and functional characterization of murine organic anion transporting polypeptide 1b2 (oatp1b2/ oatp4/ Ist-1)

Henriette Meyer zu Schwabedissen, *University of Western Ontario*

Abstract 8836: Dysregulation of intestinal CYP3A4-dependent 1,25-dihydroxyvitamin D₃ catabolism: a potential mechanism for drug-induced osteomalacia

Emily Zheng, *University of Washington*

Molecular Pharmacology Division Postdoctoral Award Finalists

Chair: **T. Ken Harden**

Connecting A to B - and phospholipase C

T. Ken Harden, *University of North Carolina*

Suppression of IgE-mediated allergic responses by Rgs13

Geetanjali Bansal, *NIAID, NIH*. (Advisor: K.M. Druey).

PAR1-mediated stable platelet aggregation requires temporal regulation of Rap1 activity by phosphatidylinositol phosphates (PIPns)

Michael Holinstat, *Vanderbilt University Medical Center*. (Advisor: H.E. Hamm).

[beta]1 adrenergic receptor ([beta]1AR)-epidermal growth factor receptor (EGFR) interaction regulates ERK cellular activity

Douglas G. Tilley, *Duke University Medical Center*. (Advisor: H.A. Rockman).

Unraveling the molecular mechanism by which the L148S mutation of GPR54 causes idiopathic hypogonadotrophic hypogonadism

Jennifer L. Wacker, *University of Washington*. (Advisor: C. Hague).

Regulation of TGF-beta signaling by RGS3

Douglas M. Yau, *University of Chicago*. (Advisor: N. Dulin).

Cardiovascular Pharmacology Division Junior Scientists Competition

Chairs: **John C. Kermode**, **Fadi Khasawneh** and **Jianzhong Shen**

Graduate Student Presentations:

O-GlcNAc signaling attenuates mitochondrial permeability transition

Gladys A. Ngoh, *University of Louisville* (Advisor: Steven P. Jones)

Inhibitory phosphorylation of TASK-1 is associated with atrial fibrillation

Erin Harleton, *Columbia University* (Advisor: Steven J. Feinmark)

Shaker K_v1 channel-MAGUK complexes are down-regulated in cerebral arteries of hypertensive rats

Biny K. Joseph, *University of Arkansas for Medical Sciences* (Advisor: Nancy J. Rusch)

Improvement of cardiac contractility by proteasome inhibition in the overload heart

Nadia Hedhli, *University of Medicine and Dentistry of New Jersey* (Advisor: Christophe Depre)

Postdoctoral Scientist Presentations:

Ca²⁺ pulsars: spatially restricted, IP₃R-mediated Ca²⁺ release important for endothelial function

Jonathan Ledoux, *University of Vermont* (Mentor: Mark T. Nelson)

12- and 15-hydroxyeicosatetraenoic acids may function as endothelium-derived hyperpolarizing factors in the human coronary microcirculation

Brandon T. Larsen, *Medical College of Wisconsin* (Mentor: David D. Gutterman)

Graduate Student Runners-up Posters:

A novel mechanism of angiotensin II-induced cardiac hypertrophy -- The role of soluble epoxide hydrolase

Ding Ai, *University of California at Davis* (Advisor: Yi Zhu)

Soluble epoxide inhibition differentially modulates flow induced vascular remodeling in spontaneously hypertensive stroke prone rats and Wistar Kyoto rats

Alexis N. Simpkins, *Medical College of Georgia* (Advisor: John D. Imig)

Accessory β₃ subunits promote the functional expression of voltage-gated calcium channels in vascular smooth muscle cells

Swapnil Sonkusare, *University of Arkansas for Medical Sciences* (Advisor: Nancy J. Rusch)

Compartmentation of cellular cGMP-signalling: a mechanism for spatial and temporal regulation of cGMP mediated effects

Lindsay S. Wilson, Queen's University (Advisor: Donald Maurice)

Postdoctoral Scientist Runner-up Poster:

Platelet growth factor regulates smooth muscle cell migration through an integrin-linked kinase-dependent pathway

Mitra Esfandiarei, Child and Family Research Institute, University of British Columbia (Mentor: Cornelius van Breemen)

Tuesday, April 8

4:30 - 5:30 PM

Cardiovascular Pharmacology Division Paul M. Vanhoutte Distinguished Award Lecture

Chair: **David D. Ku**

Lecturer: Donald D. Heistad, *University of Iowa*

Endothelial function in the time of the giants

Special Sessions

Saturday, April 5

12:30 - 3:00 PM

Implications of Pharmacogenomics for Health Disparities

(Sponsored by the Committee on Diversity)

Chairs: **Sakina E. Eltom** and **Martha I. Davila-Garcia**

Genetics and health disparities in cardiovascular drug therapy.

Dan M. Roden, *Vanderbilt University School of Medical*

Pharmacogenomics and health disparities in cancer disease

Howard L. McLeod, *University of North Carolina School of Pharmacy*

Racial differences in nicotine pharmacology: Implications for disease risk and addiction

Neal L. Benowitz, UCSF

2008 Teaching Institute

How to Teach Graduate Students

Chair: **William B. Jeffries**

Principles of adult learning.

Katie N. Huggett, *Creighton University*

Designing and teaching a graduate course.

Jason C. Bartz, *Creighton University*

Mentoring graduate students.

Stephanie W. Watts, *Michigan State University*

Running a graduate program.

Joey V. Barnett, *Vanderbilt University*
Competency based education in pharmacology graduate programs.
William B. Jeffries, *Creighton University School of Medicine*

Saturday, April 5
3:15 - 5:45 PM

Graduate Student/Postdoctoral Colloquium
Learning from the Past, Training for the Future

Current trends in pharmacology training.

Joey V. Barnett, *Vanderbilt University*

What you need to be a success in regulatory affairs.

Nancy Sevieux, *Proctor and Gamble*

Necessary skills to build a career at the bench in industry.

Lisan L. Parker, *Merck Research Laboratories*

Tuesday, April 8
8:00 - 10:00 AM

ASPET's Women in Pharmacology Committee and APS' Women in Physiology Committee Workshop

Gainfully Employed: From Launching a Job Search to Navigating Negotiations

Chairs: **Sinya Benyajati**, **Colleen Hegg** and **Jelveh Lameh**

This career development symposium will address the needs of early career scientists who will soon transition into a 'new' professional appointment. The workshop will provide information regarding 1) launching a job search, particularly for a dual-career couple, 2) delivering a job talk: formal seminar vs. chalk-talk, 3) the art of interviewing, and 4) negotiation tips.

Launching the "successful" job search.

Colleen Cosgrove Hegg, *Michigan State University*

Delivering a dynamic job talk.

Susan C. McKarns, *NIAID, NIH*

The art of interviewing: winning the job.

Lynn Wecker, *University of South Florida College of Medicine*

Navigating negotiations.

Kim E. Barrett, *UCSD*

Interactive exercises and mock interviews.

Tuesday, April 8
12:00 - 2:15 PM

Poster Discussion
Epoxide Hydrolases

Chairs: **Bruce D. Hammock**, **John D. Imig**, **Curt J. Omiecinski**, and **Christophe Morisseau**

Lectures

Sunday, April 6

1:30 - 2:20 pm

Bernard B. Brodie Award Lecture: Hepatobiliary disposition of xenobiotics

Curtis D. Klaassen, *University of Kansas Medical Center*

Monday, April 7

8:00 - 8:50 am

Ray Fuller Lecture - Broad Spectrum Antidepressants: Variations on a Monoamine Theme

Phil Skolnick, *Dov Pharmaceuticals, Inc.*

Followed immediately by the [Ray Fuller Symposium](#)

[Stream video or download to your iPOD](#)

Monday, April 7

1:30 - 2:20 pm

P. B. Dews Award Lecture: Contributions of behavioral pharmacology to our understanding of the etiology, prevention and treatment of substance abuse

Charles R. Schuster, *Loyola University*