

ASPET's Preliminary Program for Experimental Biology 2005 in San Diego, CA

SYMPOSIA

Sunday Morning (9:30 AM - 12:00 PM)

Hypocretin (Orexin) and GHB: Molecular Mechanisms to Clinical Therapeutics

(Sponsored by the Division for Behavioral Pharmacology and the Division for Systems and Integrative Pharmacology)

Chairs: Charles P. France and Luis de Lecea

Sleep/wake, energy homeostasis, and orexin/hypocretin neuropeptides. Masashi Yanagisawa, Univ. of Texas Southwestern Med. Ctr.

Narcolepsy and hypocretin. Emmanuel Mignot, Stanford Univ.

Hypocretin, GHB and narcolepsy: Clinical perspectives. Gert J. Lammers, Leiden Univ. Med. Ctr., Leiden, The Netherlands.

Preclinical pharmacology of GHB. Wouter Koek, Univ. of Texas Hlth. Sci. Ctr. at San Antonio.

Glucuronosyl Transferases: Their Role in Drug Interactions and Toxicity

(Sponsored by the Division for Drug Metabolism, the Division for Pharmacology Education and the Division for Toxicology)

Chairs: Rory P. Remmel and Tim S. Tracy

Drug-drug interactions involving glucuronidation: An unrecognized phenomenon. Rory P. Remmel, Univ. of Minnesota Col. of Pharm.

Regulation of UGT's. Robert H. Tukey, UCSD.

Role of UGT polymorphisms in drug and diet effects and cancer risk. Johanna W. Lampe, Fred Hutchinson Cancer Res. Ctr.

Modulation of toxicity via glucuronidation Philip C. Smith, Univ. of North Carolina at Chapel Hill.

Ray Fuller Symposium: Neurotransmitter Transporters: Signaling in Flux

(Sponsored by the Division for Neuropharmacology)

Chair: Randy D. Blakely

Molecular biophysics of amphetamine action. Aurelio A. Galli, Vanderbilt Univ.

Phosphorylation based regulation of biogenic amine transporters. Sammanda Ramamoorthy, Med. Univ. of South Carolina.

Molecules in motion: The multiple mechanisms that regulate GABA transporter function. Michael W. Quick, USC.

Protein-protein interactions during assembly and trafficking of glutamate transporters. Michael B. Robinson, Univ. of Pennsylvania.

Short Course: Introduction to Cardiac Electrophysiology and Implications for Drug Development

Chair: Benedict R. Lucchesi

Cardiac electrophysiology and arrhythmogenesis. Benedict R. Lucchesi, Univ. of Michigan Med. Sch.

Introduction to the electrocardiogram. Peter S. Fischbach, Univ. of Michigan Med. Sch.

Drug-induced malignant ventricular tachycardia (TdP): A major safety pharmacology issue in drug selection, development and registration. Icilio Cavero, Consultant in Safety Pharmacology.

Sunday Afternoon (3:00 PM - 5:30 PM)

Social Structure and Influences on Drug Actions

(Sponsored by the Division for Behavioral Pharmacology, the Division for Neuropharmacology and the Division for Systems and Integrative Pharmacology)

Chairs: Michael A. Nader and Klaus A. Miczek

Epidemiologically based prevention research on drug abuse. Sheppard G. Kellam, American Inst. for Res., Baltimore, MD

The physiology of social dominance: Individual differences in the functions of the HPA axis. Robert M. Sapolsky, Stanford Univ. Sch. of Med.

Individual differences in vulnerability and resilience to early stress effects on adult CSF monamine concentrations, social behavior, and alcohol consumption. Allyson J. Bennett, Wake Forest Univ. Sch. of Med.

Individual differences in dopamine and serotonin receptor function, behavioral and reinforcing effects of drugs in socially housed monkeys. Michael A. Nader, Wake Forest Univ. Sch. of Med.

Aggressive vs. submissive experiences: Differential cocaine self-administration and mesocorticolimbic cellular activation. Klaus A. Miczek, Tufts Univ.

HDL Therapy: The New Frontier for the Treatment of Cardiovascular Diseases

(Sponsored by the Division for Cardiovascular Pharmacology)

Chairs: Charles L. Bisgaier and Roger S. Newton

Structural features and function properties of high density lipoproteins: Relevance to human cardiovascular disease.

H. Bryan Brewer, NHLBI, NIH.

Discovery, history and evolution of Apo A-I Milano: A variant protein with beneficial effects. Cesare R. Sirtori, Univ. of Milan.

HDL: A modulator of inflammation and a therapy for cardiovascular diseases. Prediman K. Shah, Cedars-Sinai Med. Ctr.

Cardioprotective effects of Apo A-I Milano/phospholipid (ETC-216) complexes. Marta Marchesi, Univ. of Milan

Effect of recombinant Apo A-I Milano (ETC-216) on coronary atherosclerosis in patients with acute coronary syndromes. Steven Nissen, Cleveland Clinic Fndn.

Protein Modification During Oxidative Injury

(Sponsored by the Division for Toxicology and the Division for Drug Metabolism)

Chairs: Daniel C. Liebler and Serrine S. Lau

Application of LC-MS methods to identify protein targets of reactive electrophiles generated by lipid peroxidation. Daniel C. Liebler, Vanderbilt Univ. Sch. of Med.

Chemistry of adduction of proteins by the prototypical electrophiles 4-hydroxynonenal and 4-oxononenal. Lawrence M. Sayre, Case Western Res. Univ.

Nitric oxide-induced protein modifications: Challenges of analysis. Steven R. Tannenbaum, MIT.

Identification of chemical adduction to target proteins and the impact on biological function. Serrine S. Lau, Univ. of Arizona Col. of Pharm.

Functional Selectivity of Receptor Signaling: Epiphenomenon or New Opportunity for Drug Discovery?

(Sponsored by the Division for Neuropharmacology and the Division for Molecular Pharmacology)

Chair: David R. Sibley

Ligand-specific cellular signaling profiles at the 5-HT_{2C} receptor. William P. Clarke, Univ. of Texas Hlth. Sci. Ctr. at San Antonio.

Regulation of GPCRs by endocytic membrane trafficking: Novel mechanisms and potential therapeutic targets. Mark von Zastrow, UCSF.

What is the molecular basis for functional selectivity of drugs at the 5-HT_{2A} receptor? David E. Nichols, Purdue Univ. Sch. of Pharm. & Pharmaceut. Sci.

Functional selectivity of dopamine receptor ligands predict novel behavioral effects: Examples from the lab to the clinic. Richard B. Mailman, Univ. of North Carolina at Chapel Hill Med. Sch.

Ligand specific conformational changes of GPCRs: Consequences for receptor signaling. Brian K. Kobilka, Stanford Univ. Med. Ctr.

Refresher Course: Pharmacokinetics

(Sponsored by the Division for Pharmacology Education)

Chair: Juan J.L. Lertora, Tulane Univ.

So, you're teaching Pharmacokinetics for the first time, or want a refresher of the principles? Dr. Juan Lertora, a clinical pharmacologist from Tulane, will demonstrate tips and techniques for efficiently teaching this topic to medical students. Audience discussion will solicit other successful approaches. Teaching materials will be made available.

Monday Morning (9:30 AM - 12:00 PM)

Role of Neuroinflammation in Neuropathic Pain

(Sponsored by the Division for Drug Development, Discovery and Regulatory Affairs, the Division for Behavioral Pharmacology and the Division for Neuropharmacology)

Chair: Michael R. Brandt

The increasingly recognized role of neuroinflammation in neuropathic pain; an introduction to the symposium. Robert R. Myers, UCSD.

Role of CB2 receptors in conditions of neuropathic pain. T. Philip Malan, Jr., Univ. of Arizona Col. of Med.

Central cytokines as drug targets for the treatment of neuropathic pain. Raymond W. Colburn, Johnson & Johnson Pharmaceut. R&D, LLC

Cytokine polymorphisms and the risk of persistent neuropathic pain: Therapeutic implications. Mitchell B. Max, NIDCR, NIH.

Dynamic changes of dorsal root ganglion gene expression in a rat model of neuropathic pain. Katherine W. Figueroa, UCI.

C-reactive Protein and Cardiovascular Disease: Epiphenomenon or Therapeutic Target?

(Sponsored by the Division for Cardiovascular Pharmacology)

Chairs: Mark B. Pepys and Ben R. Lucchesi

Structure, function and pathobiology of CRP: A therapeutic target in cardiovascular disease? Mark B. Pepys, Royal Free and Univ. Col. Med. Sch., London, U.K.

CRP and cardiovascular disease: A critical review of the epidemiological evidence. Gordon D.O. Lowe, Glasgow Royal Infirmary, Glasgow, U.K.

CRP is a valuable risk marker for cardiovascular disease. Peter Libby, Harvard Med. Sch.

Role of CRP in pathogenesis of atherosclerosis. Edward T.H. Yeh, Univ. of Texas at Houston.

CRP and acute coronary syndromes. Attilio Maseri, Vita-Salute San Raffaele Univ., Milan, Italy.

Role of Xenobiotic Metabolizing Enzymes in the Homeostatic Control of Endogenous Substrates

(Sponsored by the Division for Drug Metabolism)

Chair: Robert L. Haining

Metabolism of endogenous substrates by xenobiotic metabolizing enzymes. Robert L. Haining, West Virginia Univ. Sch. of Pharmacy.

Arachidonic acid metabolism: Bench to bedside. Jorge H. Capdevila, Vanderbilt Univ.

Regulation of cholesterol homeostasis by cytochromes P450. Irina A. Pikuleva, Univ. of Texas Med. Br. at Galveston.

Endogenous ligands of the xenobiotic pregnane X receptor. Joyce J. Repa, Univ. of Texas Southwestern Med. Ctr.

PXR induces CYP27A1 in the intestine: A cross talk between drug metabolism and cholesterol homeostasis. Tiangang Li, Northeastern Ohio Univ. Col. of Med.

Pathways Illuminated: Visualizing Cell Signaling

(Sponsored by the Division for Molecular Pharmacology)

Chair: Alexandra C. Newton

Visualizing signaling by kinases B and C in cells. Alexandra C. Newton, UCSD.

Microanalytical tools to track cellular signaling. Nancy L. Allbritton, UCI.

The molecular architecture of signal transduction complexes. John D. Scott, Oregon Hlth. & Sci. Univ.

Spatiotemporal dynamics of intracellular signaling. Atsushi Miyawaki, Riken Brain Science Inst., Saitama, Japan

Visualization of protein kinase C activity in real time in live cells. Lisa L. Gallegos, UCSD.

How to Talk about Pharmacology to the Public

(Sponsored by the Division for Pharmacology Education)

Chair: Patangi K. Rangachari

Teaching about drugs in high schools. Nancy Kellogg, Brawley Union High Sch., Brawley, CA.

The media's role in disseminating information. Bob Carty, CBC Radio One, Toronto.
Out-reach possibilities. Jack W. Strandhoy, Wake Forest Univ. Sch. Med.
Lost in translation: Getting students to think about communication. Patangi K. Rangachari, Univ. of Calgary Med. Sch.

Monday Afternoon (3:00 PM - 5:30 PM)

Heterotrimeric G-proteins in Oncogenesis and Metastasis

(Sponsored by the Division for Molecular Pharmacology)

Chair: Patrick J. Casey

Introduction. Patrick J. Casey, Duke Univ. Med. Ctr.

The role of G12 family of heterotrimeric G proteins in breast cancer metastasis. **Patrick Kelly**, Duke Univ. Med. Ctr.

Regulation of lymphocyte migration by G protein-coupled receptors signaling. John H. Kehrl, NIAID, NIH.

Molecular mechanisms of bone metastases: Rationale for targeting the endothelin axis. Theresa A. Guise, Univ. of Virginia.

Cellular and biological functions of G12/G13. Stefan Offermanns, Univ. of Heidelberg

New Pharmacological Targets in Alzheimer's Therapeutics

(Sponsored by the Division for Neuropharmacology)

Chair: A. Claudio Cuello

Novel therapeutic targets in Alzheimer's disease. A. Claudio Cuello, McGill Univ.

The inhibition of beta-secretase as a therapeutic objective in Alzheimer's disease. Martin Citron, Amgen, Inc.

The inhibition of gamma-secretase as a therapeutic objective in Alzheimer's disease. Michael S. Wolfe, Brigham and Women's Hosp./Harvard Univ.

Nonsteroidal anti-inflammatory drugs in the experimental treatment of Alzheimer's disease. Sascha B. Weggen, Johannes Gutenberg-Univ., Mainz, Germany.

Vaccination versus passive immunotherapy in the treatment of Alzheimer's. David G. Morgan, Univ. of South Florida.

Inference of Biological Regulatory Networks

(Sponsored by the Division for Systems and Integrative Pharmacology, the Division for Molecular Pharmacology and the Division for Toxicology)

Chair: Kenneth S. Ramos

From expression to function: Data integration for the interpretation of 'omics data. John F. Quackenbush, Inst. for Genomic Res., Rockville, MD

Gene-gene interactions regulated by ligands of the aryl hydrocarbon receptor. Kenneth S. Ramos, Univ. of Louisville.

The tumor suppressor functions of tuberin integrate cell cycle regulation and DNA repair. Serrine S. Lau, Univ. of Arizona Col. of Pharm.

Metabolomics to predict physiology and toxicology. Bruce D. Hammock, UCD.

A systems/networks approach to modeling the DNA damage response. Trey G. Ideker, UCSD.

Tuesday Morning (9:30 AM - 12:00 PM)

Developmental Expression of Drug Metabolizing Enzymes and Impact on Pediatric Clinical Pharmacology

(Sponsored by the Division for Drug Metabolism and the Division for Systems and Integrative Pharmacology)

Chair: Jeffrey C. Stevens

FMO developmental expression. Ronald N. Hines, Med. Col. of Wisconsin

Human CYP3A ontogeny. Jeffrey C. Stevens, Pfizer, Inc., St. Louis.

Development and drug clearance: Clinical expression of ontogeny and pharmacogenetics. Gregory L. Kearns, Univ. of Missouri, Kansas City.

UGT development. Christian C. Strassburg, Hannover Med. Sch., Hannover, Germany.

Pharmacogenomics: Perception and Reality

(Sponsored by the Women in Pharmacology Committee)

Chairs: Laura K. Nisenbaum and Joan M. Lakoski

Pharmacogenomics in prescribing and drug development. Alastair J.J. Wood, Vanderbilt Univ. Med. Ctr.
Drug uptake transporters in the intestine and brain: New insights to their expression and function. Richard B. Kim, Vanderbilt Univ. Med. Ctr.
Drug target pharmacogenetics: Focus on beta-blockers. Julie A. Johnson, Univ. of Florida
Applications to drug discovery and development. Sandra Kirkwood, Eli Lilly and Co.
Human genetic variation and complex traits. Kelly A. Frazer, Perlegen Sciences, Inc., Mountain View, CA

G-protein-coupled Receptor Oligomerization: Biology and Drug Discovery

(Sponsored by the Division for Molecular Pharmacology)

Chair: Kendall J. Blumer

G protein-coupled receptor oligomerization and signaling. Kendall J. Blumer, Washington Univ. Sch. of Med.
Cell biology of G protein-coupled receptor oligomerization. Michel Bouvier, Univ. of Montreal Fac. of Med.
Frizzled receptor oligomerization in human disease. Stephane Angers, Univ. of Washington
Chemokine receptor oligomerization and lymphocyte recruitment. Carlos Martinez-A., Univ. of Cantoblanco, Madrid, Spain.
GPCR oligomerization and drug discovery. Susan R. George, Univ. of Toronto.
Olfactory and β_2 -adrenergic receptors form stable cell-surface complexes. Chris Hague, Emory Univ. Sch. of Med.

Epigenetic Reprogramming of Cancer Cells

(Sponsored by the Division for Toxicology)

Chair: Bernard W. Futscher

Keynote Lecture: Background and historical perspective of epigenetics and cancer treatment. Peter A. Jones, USC
The promise of DNA methylation markers in cancer prognostication. Peter W. Laird, USC
Tumor specific patterns of aberrant DNA methylation. Joseph F. Costello, UCSF
Histone acetylation/deacetylation – Therapeutic opportunities. Bernard W. Futscher, Univ. of Arizona Col. of Pharm.
Epigenetic modification – the clinical experience. Steven D. Gore, Johns Hopkins Univ. Sch. of Med.

Adolescent Drug Abuse: Long-term Effects of Exposure of the Developing Brain to Drugs of Abuse

(Sponsored by the Division for Neuropharmacology, the Division for Behavioral Pharmacology and the Division for Systems and Integrative Pharmacology)

Chairs: Robert N. Pechnick and Kathryn A. Cunningham

Introduction. Robert N. Pechnick, Cedars-Sinai Med. Ctr.
Overview of concepts and issues in the study of the adolescent brain and drugs of abuse. Linda P. Spear, SUNY-Binghamton
The effects of nicotine on adolescent brain. Frances M. Leslie, Univ. of California, Irvine
Adolescent exposure to stimulants. Michela Marinelli, Rosalind Franklin Univ. of Med. & Sci./Chicago Med. Sch.
Teenagers and drug abuse. Uma Rao, Univ. of Texas Southwestern Med. Ctr.

Short Course: Lipid Signaling: Pathways and Paradigms

Chairs: Kathryn E. Meier and Kevin R. Lynch

Phosphatidylcholine metabolism. Andrew J. Morris, Univ. of North Carolina at Chapel Hill
Phosphatidylinositol metabolism: Michael Wakelam, Birmingham Univ. Med. Sch., Birmingham, U.K.
Sphingolipid metabolism. Alfred H. Merrill, Jr., Georgia Inst. of Tech.
Eicosanoid metabolism. Jilly Evans, Merck & Co.

Refresher Course: Pharmacokinetics

(Sponsored by the Division for Pharmacology Education)

Chair: Juan J.L. Lertora, Tulane Univ.

Tuesday Afternoon (3:00 PM - 5:30 PM)

Decisions of Benefit vs Risk: QT Interval Prolongation by Non-cardiac Drugs

(Sponsored by the Division for Drug Discovery, Development and Regulatory Affairs and the Division for Cardiovascular Pharmacology)

Chairs: Alan S. Bass and Peter K. Siegl

Molecular basis for drug-induced torsades de pointes, its relationship to QT prolongation; who is at risk? Dan M. Roden, Vanderbilt Univ. Sch. of Med.

Strategy for the non-clinical testing of new drugs for the potential of eliciting torsades de pointes arrhythmia. Alan S. Bass, Schering-Plough Res. Inst.

Strategies for the clinical evaluation of new drugs for the potential of eliciting torsades de pointes arrhythmia. Borje Darpo, Daiichi Med. Res., London, U.K.

An integrated risk assessment: Benefit vs. risk of progressing a new drug to the marketplace. Peter K. Siegl, Merck Res. Labs.

Drug block of hERG channels: Reconciling pharmacophore and receptophore models. Michael C. Sanguinetti, Univ. of Utah.

Wednesday Morning (8:30 AM - 11:00 AM)

Mechanism of Tissue Selective Drug Action in the Cardiovascular System

(Sponsored by the Division for Systems and Integrative Pharmacology and the Division for Cardiovascular Pharmacology)

Chair: Terry D. Barrett

Selectivity beyond receptor density. Terry D. Barrett, Johnson & Johnson Pharmaceut. R. & D.

Mechanism for the selective action of PDE5 inhibition on the corpus cavernosum. Donald H. Maurice, Queen's Univ. at Kingston.

Ischaemia-selective antiarrhythmic drugs action and antiarrhythmic efficacy. Michael J.A. Walker, Univ. of British Columbia.

Tissue specific actions of structurally divergent calcium channel blocking agents. David J. Triggle, SUNY at Buffalo Sch. of Pharm. and Pharmaceut. Sci.

Short talk from selected abstract.

Lysophosphatidic Acid: From Metabolite to Mediator to Medicine

(Sponsored by the Division for Molecular Pharmacology and the Division for Systems and Integrative Pharmacology)

Chairs: Myron L. Toews and Kathryn E. Meier

Lysophosphatidic acid: A multi-functional lipid mediator. Wouter H. Moolenaar, The Netherlands Cancer Inst.

Large and small molecules as probes of LPA biology. Kevin R. Lynch, Univ. of Virginia.

Development of selective ligands for LPA GPCRs. Gabor J. Tigyi, Univ. of Tennessee, Memphis.

A molecular modeling approach to identify LPA and S1P receptor subtype-selective pharmacophores. Abby L. Parrill, Univ. of Tennessee, Memphis.

LPA as a therapeutic target in cancer. Gordon B. Mills, Univ. of Texas Hlth. Sci. Ctr. at Houston.

Novel Insights into Myocardial Preconditioning: From the Clinic to the Proteome

(Sponsored by the Division for Cardiovascular Pharmacology)

Chairs: Steven P. Jones and Garrett J. Gross

Clinical evidence for myocardial preconditioning. Roberto Bolli, Univ. of Louisville Sch. of Med.

Mechanisms of opioid-induced preconditioning. Garrett J. Gross, Med. Col. of Wisconsin.

Proteomic identification of cardioprotective candidate proteins. Jennifer E. van Eyk, Johns Hopkins Univ., Bayview.

Opioid-induced cardioprotection involves cross-talk between K_{ATP} channels and the phosphatidylinositol-3 kinase (PI3k) pathways. Eric R. Gross, Med. Col. of Wisconsin.

Sphingosine 1-phosphate receptors provide protection against in vivo myocardial ischemia-reperfusion injury through regulation of Akt. Christopher K. Means, UCSD.

Molecular Library Approaches to CNS Drug Discovery

(Sponsored by the Division for Neuropharmacology, the Division for Drug Discovery, Development and Regulatory Affairs, and the Division for Molecular Pharmacology)

Chair: Bryan L. Roth

Screening the receptorome reveals validated targets for CNS drug discovery. Bryan L. Roth, Case Western Res. Univ. Med. Sch.

Allosteric potentiators of GPCRs as novel therapeutic agents for treatment of CNS disorders. Jeffrey Conn, Vanderbilt Univ.

Targeting protein-protein interactions: Future or folly? Richard R. Neubig, Univ. of Michigan.

Non-amines: Have we been too aminated? Bertha K. Madras, New England Primate Res. Ctr., Harvard Med. Sch.

Imaging amyloid in humans. William Klunk, Univ. of Pittsburgh.

Drug Metabolism Division Platform Session: Biotransformation and Drug Transport

Room 10

Chairs: Tim S. Tracy and David S. Riddick

James R. Gillette Best Paper Awards and Selected Contributed Paper Presentations

Carrier-mediated Uptake of H₂-receptor Antagonists by the Rat Choroid Plexus: Involvement of Rat Organic Anion Transporter 3. H. Kusuhara, Univ. of Tokyo.

Aerodigestive epithelial cell accumulation of the cancer preventive polyphenol ellagic acid – role of organic anion transporters. Alex C. Whitley, Med. Univ. of South Carolina.

Ontogeny Of Brain Mdr1a Expression: Implications For Cyclosporine A Neurotoxicity In Young Children. Kerry B. Goralski, Dalhousie Univ.

Regulation of the multidrug resistance-associated protein 3 by bile acids. Tanya C. McCarthy, Dalhousie Univ.

Differences in the Inhibition of Cytochromes P450 3A4 and 3A5 by Metabolite-Inhibitor Complex Forming Drugs. Donovan J. McConn, Univ. of Washington.

Identification of 1 α , 25-dihydroxyvitamin D₃ as a novel endogenous substrate for cytochrome P450 3A4. Yang Xu, Univ. of Washington.

Cytochrome P450s metabolize endogenous and exogenous aldehydes. Immaculate Amunom, Univ. of Louisville Sch. of Med.

A polymorphic UGT2B17 gene deletion and its correlation with NNAL glucuronidation phenotype in human liver microsomes. Philip Lazarus, Penn State Col. of Med.

Genetic Susceptibility to Estrogen Carcinogenesis

(Sponsored by the Division for Toxicology and the Committee on Women in Pharmacology)

Room 9

Chairs: Judy L. Bolton and Terrence K. Monks

Findings of the Women's Health Initiative. Sylvia Wassertheil-Smoller, Albert Einstein Col. of Med.

Epigenetic variation in prostate tumorigenesis after phytoestrogen exposure. Dennis B. Lubahn, Univ. of Missouri-Columbia.

Genetic polymorphism in catechol-O-methyltransferase (COMT) and endogenous catechol estrogen exposure: Role in breast cancer risk? James D. Yager, Johns Hopkins Univ.

Catechol-O-methyltransferase (COMT) polymorphism in equine estrogen carcinogenesis. Judy L. Bolton, Univ. of Illinois at Chicago Col. of Pharm.

Pharmacology and Phenotype: Comparing Effects of Drug Antagonists with Gene Knockout In Vivo

(Sponsored by the Division for Behavioral Pharmacology and the Division for Neuropharmacology)

Chairs: S. Barak Caine and Linda A. Dykstra

Functional studies with drugs and knockouts: Regulatory systems beyond the cell surface. Laura M. Bohn, Ohio State Univ.

Drugs and knockouts for 5-HT receptor subtypes: Measures of behavior and neurotransmitter release in vivo. Loren H. Parsons, Scripps Res. Inst.

Phenotypes of NR1 knockdown mice: Comparison with effects of NMDA antagonists in C57BL/6J mice. Linda A. Dykstra, Univ. of North Carolina at Chapel Hill.

Drugs and knockouts for dopamine receptor subtypes: Focus on behavioral effects of psychomotor stimulants. S. Barak Caine, McLean Hosp./Harvard Med. Sch.

Effects of dopamine D2/3 ligands on cocaine discrimination in dopamine D3 receptor KO and WT mice. Matthew O'Callaghan, NIDA, NIH.

Alterations in the antinociceptive and conditioned effects of morphine and cocaine in muscarinic acetylcholine receptor 1 (M1) deficient mice. Kelly Carrigan, Univ. of Carolina at Chapel Hill.

DIVISION SESSIONS

Monday Afternoon (3:00 PM - 5:30 PM)

Division for Behavioral Pharmacology Symposium: Preclinical Assessment of Pain and Analgesic Drugs

(Also sponsored by the Division for Neuropharmacology)

Chair: S. Steve Negus

Preclinical models of acute pain. Edward J. Bilsky, Univ. of New England.

Preclinical models of inflammatory pain. Todd W. Vanderah, Univ. of Arizona.

Preclinical models of neuropathic pain. Michael R. Brandt, Wyeth Disc. Res., Princeton, NJ

Targeting pain-suppressed behaviors in preclinical models of pain and analgesia. S. Steve Negus, McLean Hosp., Harvard Med. Sch.

Use of fMRI for drug development in pain and analgesia. David Borsook, McLean Hosp., Harvard Med. Sch.

Division for Cardiovascular Pharmacology Graduate Student and Postdoctoral Scientist Best Abstract Competition

Chair: John C. Kermode

Graduate Student Presentations:

Contribution of cPLA₂ and PLD₂-regulated Akt activation to Ang II-induced vascular smooth muscle cell growth during injury. Fang Li. Univ. of Tennessee Hlth. Sci. Ctr. Advisor: Kafait Malik.

Activation of estrogen receptor alpha protects the in vivo rabbit heart from ischemia-reperfusion injury. Erin A. Booth. Univ. of Michigan Med. Sch. Advisor: Ben R. Lucchesi.

Mn-SOD deficient mice exhibit increased oxidative stress and vascular dysfunction with aging. Kathryn A. Brown. Univ. of Iowa Col. of Med. Advisor: Frank M. Faraci.

Cloning and identification of the porcine A1 adenosine receptor mediating a novel mitogenic action of adenosine in coronary artery smooth muscle cells. Jianzhong Shen. Univ. of Missouri-Columbia. Advisors: Michael Sturek (now Indiana Univ. Sch. of Med.) and Peter Wilden.

Postdoctoral Presentations:

Role of sphingosine kinase in endothelial barrier protection. Melissa L. Brannen. Univ. of Illinois at Chicago. Advisors: Denise Goodman, Children's Memorial Hosp. and Dolly Mehta, Univ. of Illinois at Chicago.

Epoxyeicosatrienoic acid-dependent TRPV4 activation increases spontaneous transient outward current frequency in cerebral arterial smooth muscle. Scott Earley. Univ. of Vermont Col. of Med. Advisor: Joseph Brayden.

Antioxidant N-acetylcysteine (NAC) attenuates PKC-β2 and connective tissue growth factor (CTGF) overexpression and myocardial hypertrophy in diabetic rats. Zhengyuan Xia. Univ. of British Columbia. Advisor: John H. McNeill.

Division for Drug Discovery, Development and Regulatory Affairs Symposium: Therapeutic Agent-device Combinations

Chair: Tom J. Parry

Preclinical development of drug-coated stents. Gregory A. Kopia, Cordis Corp., Warren, NJ.

Clinical development of drug-coated stents. Pedro A. Lemos, Univ. of Sao Paulo, Brazil.

Stem cell therapy for cardiac diseases. Guilherme Silva, Texas Heart Inst., Houston.

Regulation of combination device products. Mirjam van Werven, Cordis, Corp., Miami Lakes, FL

Division for Drug Metabolism Session: Pharmacogenetics and Pharmacogenomics Knowledge Base (PharmGKB) & the Scientific Community: An Interactive Workshop

Chairs: Tim S. Tracy and Davis S. Riddick

Navigating PharmGKB: Hands-on experience. Teri E. Klein, Stanford Univ.

PharmGKB: What can it do for me? Russell B. Altman, Stanford Univ. Med. Ctr.

Pharmacogenetics of CYP2C9 inhibition and activation. Timothy S. Tracy, Univ. of Minnesota.

Pharmacogenetics of FMO1 and FMO3. Ronald N. Hines, Med. Col. of Wisconsin.

N-acetyltransferase pharmacogenetics and adverse reactions to sulfonamides. Craig K. Svensson, Univ. of Iowa Col. of Pharm. & Hlth. Sci.

Tuesday Afternoon (3:00 PM - 5:30 PM)

Division for Molecular Pharmacology Postdoctoral Award Finalists

Chair: Susan F. Steinberg

The power of mentoring. Joanne S. Ingwall, Brigham and Women's Hosp., Harvard Med. Sch.

Postdoctoral Award Finalists:

Activated Akt translocates to mitochondria and associates with the PT-pore component in cardiomyocytes. Shigeki Miyamoto, UCSD.

A novel multiplex flow cytometric method for measurement of G-alpha/RGS interaction and identification of small molecule inhibitors of RGS. D.L. Roman, Univ. of Michigan Med. Ctr.

Identification of accessory proteins complexing with the third intracellular loop of M2 muscarinic receptors. Violaine A. Simon, Louisiana State Univ. Hlth. Sci. Ctr.

Biochemical analyses of a heterotrimeric G-protein signaling pathway in asymmetric cell division, Francis S. Willard, Univ. of North Carolina at Chapel Hill.

Genomic analysis of cAMP-mediated gene expression indicates PKA regulates the core circadian clock and clock output genes prior to cell cycle arrest. Alexander C. Zambon, UCSF.

Division for Neuropharmacology Symposium: The Ten Commandments of Pharmacology: Does Functional Selectivity/Agonist Trafficking Make Nothing Sacred?

Chair: Richard B. Mailman

Introduction: Are pharmacology's ten commandments still viable? How functional selectivity affects teaching and research. Richard B. Mailman, Univ. of North Carolina at Chapel Hill Med. Sch.

Evidence and mechanisms of ligand-dependent functional selectivity in GPCRs from a structural perspective. Harel Weinstein, Weill Med. Col., Cornell Univ.

Conformational changes at the dimer interface are associated with receptor activation. Jonathan A. Javitch, Columbia Univ. Col. of Physicians and Surgeons

Is functional selectivity an artifact of in vitro systems? Bryan L. Roth, Case Western Reserve Univ. Sch. of Med.

Classifying drugs and receptors: Past, present, and future. Michael Spedding, Inst. de Recherches Servier, Suresnes, France

Message in a model: Receptor theory as a tool for studying functional selectivity. Arthur Christopoulos, Univ. of Melbourne, Parkville, Victoria, Australia

Functional selectivity: Is it real and does it affect drug discovery? Keith J. Miller, Bristol-Myers Squibb

Panelists:

David R. Sibley, NINDS, NIH

William P. Clarke, Univ. of Texas Hlth. Sci. Ctr. at San Antonio

Mark von Zastrow, UCSF

David E. Nichols, Purdue Univ. Sch. of Pharm. & Pharmaceut. Sci.

Richard B. Mailman, Univ. of North Carolina at Chapel Hill Med. Sch.

Brian K. Kobilka, Stanford Univ. Med. Ctr.

Division for Systems and Integrative Pharmacology Symposium: 20 Years of Calcium Imaging: A Revolution in Cell Physiology to Dye For

Chairs: Ismail Laher and Harm J. Knot

Keynote Lecture: Calcium as a master switch. Roger Y. Tsien, UCSD Sch. of Med.

Calcium and striated muscle. W. Jonathan Lederer, Univ of Maryland

Calcium regulates cell secretion. Ole H. Petersen, Univ. of Liverpool

Calcium and smooth muscle contraction. Mark T. Nelson, Univ. of Vermont

Calcium regulates endothelial cell function. Wolfgang F. Graier, Univ. of Graz, Austria

Division for Toxicology Symposium: The Role of Mitochondria in Toxic Oxidative Stress

Chair: Marc W. Fariss

Role of mitochondrial vitamin E in toxic oxidative stress. Marc W. Fariss, Univ. of Colorado Hlth. Sci. Ctr.

Role of mitochondrial DNA in toxic oxidative stress. Ben Van Houten, NIEHS, NIH, Research Triangle Park, NC

Role of cardiolipin in toxic oxidative stress. Sten Orrenius, Karolinska Inst., Stockholm, Sweden

Role of mitochondrial aconitase in toxic oxidative stress. Manisha Patel, Univ. of Colorado Hlth. Sci. Ctr.

Role of mitochondrial uncoupling protein 2 in pathogenesis of type 2 diabetes. Catherine B. Chan, Atlantic Vet. Col., Univ. of Prince Edward Is.

Division for Clinical Pharmacology Symposium: Pharmacological Rationale for COX-2 Adverse Effects: Scientific and Regulatory Lessons Learned?

Chairs: David A. Flockhart and Darrell R. Abernethy

The cardiovascular biology of cyclooxygenase-2. Garret A. Fitzgerald, Univ. of Pennsylvania

COX-2 inhibitors-safety issues. Alastair J.J. Wood, Vanderbilt Univ. Sch. of Med.

SPECIAL SESSIONS

Friday and Saturday

Behavioral Pharmacology Society Meeting (6:00 PM Friday - 7:00 PM Saturday)

(Separate Registration)

For program and registration information, contact Charles P. France

Saturday Afternoon

Graduate Student Colloquium: Drug Development at the Edge: What Every Pharmacologist Should Know About Intellectual Property, Licensing, Startups and Venture Capital

Chairs: Edward J. Bilsky

Introduction. Edward J. Bilsky, Univ. of New England

So you want to start a biotech I. An academic scientist's experience. Robert T. Dorr, Univ. of Arizona

So you want to start a biotech II. Business plans, fundraising and more. Karin Gregory, Esq., Dover Med. Ventures, Boston, MA

Why tech transfer officers are an academic scientist's best friend: Protecting your intellectual property. Mary Louise Trammel, Univ. of Arizona

Big pharma and the licensing process: What you need to know. Elizabeth L. Bachert, Pfizer, Inc.

2005 Teaching Institute: Let's Get Integrative: Finding Jobs in Industry

(Sponsored by the Division for Pharmacology Education, the Committee on Graduate Recruitment and Education and the Committee on Public Affairs)

Chairs: Barbara S. Beckman, Edward J. Bilsky and George J. Christ

Attendees will hear from industry representatives about opportunities that exist for those individuals trained in the use of intact organ systems and in vivo animal models. For those scientists with a background in integrative organ system biology, there are good jobs available. Find out what skills and background are needed and what opportunities exist. Industry representatives will visit the breakout groups and discuss what needs and skills they look for and what opportunities exist within their companies.

Academic perspectives on the training of integrative whole organ scientists Edward D. French, Univ. of Arizona

Breakout Sessions

Attendees will meet with each of the industry representatives to learn about the skills and training needed to obtain research positions at their companies looking for scientists with strong integrative and in vivo, whole organ systems background.

Srinivas G. Rao, Cypress Bioscience, Inc., San Diego
Gerald J. Schaefer, WIL Research Labs., Inc., Ashland, OH
Christopher Toombs, Amgen, Inc., Seattle
Bryan F. Cox, Abbott Labs.
D.E. MacIntyre, Merck Res. Labs.

Sunday Morning

Minorities Committee Workshop: Effective Communication for Scientific Success

Chairs: Ashiwel S. Undie and Martha I. Davila-Garcia

Welcome comments on behalf of sponsoring committees and programs. Margarita L. Dubocovich, Northwestern Univ.

Overview of communication modes and media. Ashiwel S. Undie, Univ. of Maryland Sch. of Pharm.

A personal experience with communication. Martha I. Davila-Garcia, Howard Univ.

Communication principles for effective scientific writing. Stephanie W. Watts, Michigan State Univ.

Communication basics practices for effective presentations and teaching. Richard Dalby, Univ. of Maryland Sch. of Pharm.

Communication approaches in steering a mentoring relationship. Joan Y. Reede, Harvard Med. Sch.

Communication techniques for productive networking and collaboration. Floyd E. Bloom, Scripps Res. Inst.

Short Course: Introduction to Cardiac Electrophysiology and Implications for Drug Development

Chair: Benedict R. Lucchesi

Cardiac electrophysiology and arrhythmogenesis. Benedict R. Lucchesi, Univ. of Michigan Med. Sch.

Introduction to the electrocardiogram. Peter S. Fischbach, Univ. of Michigan Med. Sch.

Drug-induced malignant ventricular tachycardia (TdP): A major safety pharmacology issue in drug selection, development and registration. Icilio Cavero, Consultant in Safety Pharmacology.

Sunday Afternoon

Refresher Course: Pharmacokinetics

(Sponsored by the Division for Pharmacology Education)

Chair: Juan J.L. Lertora

So, you're teaching Pharmacokinetics for the first time, or want a refresher of the principles? Dr. Juan Lertora, a clinical pharmacologist from Tulane, will demonstrate tips and techniques for efficiently teaching this topic to medical students.

Audience discussion will solicit other successful approaches. Teaching materials will be made available.

Monday Morning

ASPET Women in Pharmacology and APS Women in Physiology Committees Workshop: Managing a Laboratory

Chairs: Lynn Wecker and Siribhinya Benyajati

Managing a laboratory: Its role in success or failure. Lynn Wecker, Univ. of South Florida

Mentoring vs. supervising. Sue.P. Duckles. UCI.

How to delegate and still stay on top of things. Carol.A. Paronis. McLean Hosp., Harvard Med. Sch.

Conflict management or managing difficult employees. Virginia M. Miller. Mayo Clinic Col. of Med.
Developing a budget. Stephanie W. Watts. Michigan State Univ.

Breakout Sessions

- Interviewing tips
- Performance reviews
- Creating a healthy, competitive environment
- Dealing with conflicts/romance in the lab
- Can a supervisor be a friend?
- Stimulating students
- Small group workshop on creating budgets

Tuesday Morning

Short Course: Lipid Signaling: Pathways and Paradigms

Chairs: Kathryn E. Meier and Kevin R. Lynch

Phosphatidylcholine metabolism. Andrew J. Morris, Univ. of North Carolina at Chapel Hill

Phosphatidylinositol metabolism: Michael Wakelam, Birmingham Univ. Med. Sch., Birmingham, U.K. .

Sphingolipid metabolism. Alfred H. Merrill, Jr., Georgia Inst. of Tech.

Eicosanoid metabolism. Jilly Evans, Merck & Co.

LECTURES

Ray Fuller Lecture in the Neurosciences

Neurotransmitter Transporters on the Rise: Modulation of Synaptic Uptake Systems. Randy D. Blakely, Vanderbilt University.

Torald Sollmann Award Lecture

Pharmacology: Not Just a Job. Kenneth E. Moore, Michigan State University