Cannabinoids and Endocannabinoids I: Pain and Obesity
Chair: Aron H. Lichtman and Jenny L. Wiley
1Overview. Jenny L. Wiley, Virginia Commonwealth University
Elucidating the role of the endocannabinoid system in stress-induced analgesia. Andrea G. Hohmann, University of Georgia
Endocannabinoid modulation of pain and inflammation. Aron H. Lichtman, Virginia Commonwealth University
Development of the CB1 receptor antagonist rimonabant for the treatment of obesity-associated metabolic syndrome. Gérard Le Fur, Sanofi Aventis
Development of selective FAAH and MGL inhibitors to treat pain and psychiatric disorders. Daniele Piomelli, University of California, Irvine

Higher Order Organization of GPCR Signaling Components: Lipid Rafts and Multimeric Protein Complexes
Chair: Rennolds S. Ostrom
Cyclic AMP compartmentalization; insights from calcium-sensitive adenyl cyclases and key supporting players. Dermot M.F. Cooper, University of Cambridge
GPCR interactions with PDZ scaffolds. Randy A. Hall, Emory University School of Medicine
Localization of GPCR signaling components in caveolin-rich domains. Paul A. Insel, UCSD
Regulation of G protein signaling by cytoskeletal components and membrane microdomains. Mark M. Rasenick, University of Illinois at Chicago College of Medicine
(Abstract 5184) Reciprocal modulation of function between the D1 and D2 dopamine receptors and the Na+/K+-ATPase, a novel member of the dopamine receptor signalplex. Lisa A. Hazelwood, NINDS, NIH
(Abstract 5062) Disruption of lipid rafts enhances coupling of G-proteins to non-raft associated delta opioid receptors in HEK293 cells. Erica Sawyer Levitt, Univ. of Michigan.

Pharmacogenomics: Frontiers to the Future
Chairs: Rochelle M. Long and Richard M. Weinshilboum
Cytochrome P450 pharmacogenomics: Molecular mechanisms. Michel Eichelbaum, Dr. Margarete Fischer-Bosch Institute of Clinical Pharmacology, Stuttgart
Priorities and standards in pharmacogenetics research. David B. Goldstein, Duke University
The future of anti-hypertensive pharmacogenetics. Donna K. Arnett, University of Alabama
Genetically-modified animal models for pharmacogenomics research. Stephen B. Liggett, University of Maryland
Platforms for pharmacogenomics research and clinical applications. Michael S. Phillips, McGill University and Genome Quebec Innovation Center

Nicotine Modulates Adolescent Brain Plasticity: Molecular, Neurochemical and Behavioral Changes
Chair: Shannon G. Matta, Burt M. Sharp, and Frances M. Leslie
Gestational nicotine exposure alters adolescent mesolimbic dopamine release and nicotinic receptor expression. Burt M. Sharp, University of Tennessee Health Science Center
Differential neuroadaptations to nicotine in adolescent and adult rats. Sari Izenwasser, University of Miami School of Medicine
Nicotine interaction with other drugs during sensitive developmental periods. Frances M. Leslie, University of California, Irvine, School of Medicine
Gestational comorbid exposure to nicotine and alcohol alters drug responsiveness in offspring. Shannon G. Matta, University of Tennessee Health Science Center
Sex specific effects of gestational and adolescent exposure to tobacco smoke on auditory and visual attention in adolescents. Leslie K. Jacobsen, Yale University School of Medicine
● Technology Series: Nanotechnology in Disease Therapeutics
  Chair: Shiladitya Sengupta
Nanoparticle assemblies as quantitative molecular rulers and probes of conformational changes. Bjoern M. Reinhard, Boston Univ.
Ligand design for controlling assemblies of biomolecules. Basar Bilgicer, Harvard University
BioMEMS and Bionanotechnology: Integrating life sciences and engineering at the micro and nanoscale. Rashid Bashir, Purdue Univ.
Nanotechnology in drug delivery systems. Shiladitya Sengupta, Harvard Medical School/Brigham and Women’s Hospital
(Abstract 3923) Riboflavin enhances cellular accumulation of N-(2-hydroxypropyl) methacrylamide in breast cancer cells.
Lisa M. Bareford, Univ. of Maryland

SUNDAY, April 29, 3:00 – 5:30 PM

Cannabinoids and Endocannabinoids II: Response to Pathogenic Processes
  Chairs: Ben A. Bahr and Somnath Mukhopadhyay
1 Activation of CB1 cannabinoid receptor: Structural studies. Alexandros Makriyannis, Northeastern University
3 Endocannabinoid anandamide in neuroprotection and angiogenesis: Interplay between CB1R and anandamide receptor.
   Somnath Mukhopadhyay, North Carolina Central University
4 The endocannabinoid system in neurodegenerative disorders: Beneficial or noxious? Vincenzo Di Marzo, Institute of Biomedical Chemistry, Pozzuoli, Italy
5 Cellular and functional protection through dual modulation of the endocannabinoid system. Ben A. Bahr, University of Connecticut
2 Behavioral and neurobiological significance of cannabinoid action. Sam Deadwyler, Wake Forest University School of Medicine
6 Novel role of cannabinoid in the regulation of inflammation. Prakash Nagarkatti, University of South Carolina School of Medicine

● Genetic Regulation of GPCR/G-Protein/Adenylyl Cyclase Signaling: Implication in Pathobiology and Therapeutics
  Chair: Ross D. Feldman
Genetic variants of GPCRs linked to adenylyl cyclase activation. Paul A. Insel, UCSD
GRK genetic variants: Pathophysiological implications. Pedro A. Jose, Georgetown University
G-protein genetic variants. Wilfred Siffert, University of Essen
Adenylyl cyclase genetic variants: Physiological and pathophysiological implications. Ross D. Feldman, Robarts Research Institute

Pharmacogenomics 101: Incorporating the Current Issues into the Curriculum
  Chair: Jack W. Strandhoy
Introduction. Jack W. Strandhoy, Wake Forest University School of Medicine
Basic pharmacogenetics and molecular modeling. Russ B. Altman, Stanford University School of Medicine
Therapeutic implications of pharmacogenomics: An overview. Alan R. Shuldiner, University of Maryland School of Medicine
Ethical and legal implications of pharmacogenomics. Paul R. Wolpe, University of Pennsylvania School of Medicine
Incorporating pharmacogenomics into the professional and graduate curricula. Daniel A. Brazeau, University of Buffalo - SUNY

● No Time to Be “Bad To the Bone:” Osteoporosis and Bone Research in 2007
  Chairs: Henry U. Bryant and Laura K. Nisenbaum
Current status of osteoporosis: The disease, and outlook. K. Harper, Eli Lilly and Company
Important signal transduction pathways in the osteoblast. Paula H. Stern, Northwestern University Medical School
Effect of PTH on osteoblast differentiation. Nicola C. Partridge, UMDNJ-Robert Wood Johnson Medical School
Stromal cell differentiation and their role in the aging skeleton. Pamela G. Robey, NIDCR, NIH

Toxicology of Nanomaterials
  Chairs: Nancy A. Monteiro-Riviere and Marc W. Fariss
Nanostructures and health - Nanochemistry perspectives. Kevin D. Ausman, Oklahoma State University
Dermal toxicity of nanomaterials Nancy A. Monteiro-Riviere, North Carolina State University
Respiratory toxicity of single-walled carbon nanotubes. Anna A. Shvedova, NIOSH, Morgantown, WV
Peripheral microvascular effects of pulmonary exposure to ultrafine particles. Timothy R. Nurkiewicz, West Virginia University
Cardiovascular Gene Therapy
Chair: Paul L. Hermonat
Cardiovascular gene therapy. Joseph C. Glorioso, University of Pittsburgh School of Medicine
Gene therapy against atherosclerosis. Jawahar L. Mehta, University of Arkansas for Medical Sciences
Gene therapy for lung and cardiovascular disease. Arthur L. Beaudet, Baylor College of Medicine
Adenylyl cyclase gene transfer in heart failure. H. Kirk Hammond, UCSD

- A junior speaker will be selected from the contributed abstracts to give a short talk in this symposium
  - Pharmacogenomics Theme
  - Developmental Pharmacology Theme

MONDAY, April 30, 9:30 AM – 12:00 PM

- Child and Adolescent Depression: Why Do Kids and Adults Respond Differently to Antidepressants?
  Chair: David B. Bylund
  Introduction. David B. Bylund, University of Nebraska Medical Center
  Comparison of major depressive disorder and its treatment in children and adults. Christopher J. Kratochvil, University of Nebraska Medical Center
  Behavioral neuropharmacology of adolescent brain development. Linda P. Spear, SUNY-Binghamton
  (Abstract 1378) The forced-swim test and learned helplessness paradigm in juvenile rats model the lack of efficacy of tricyclic antidepressants in childhood and adolescent depression. A.L. Reed, Univ. of Nebraska Med. Ctr.
  Animal models of juvenile depression. Kevin H. Happe, Creighton University School of Medicine

- Posttranscriptional Regulation of Gene Expression
  Chair: J. David Port
  Posttranscriptional regulation of gene expression: A regulatory paradigm for G-protein coupled receptors. J. David Port, University of Colorado Health Sciences Center
  Role of TTP in modulation of TNF alpha expression. Perry J. Blackshear, NIEHS, NIH, Research Triangle Park, NC
  Cell signaling-regulated phosphorylation of RNA binding proteins controls the expression of select labile transcripts. Roberto Gherzi, National Institute for Cancer Research, Genoa, Italy
  Post-transcriptional regulation of cyclin expression in breast cancer. Rebecca S. Hartley, University of New Mexico Health Science Center

  Pharmacogenomics: From Theory to Practice?
  Chairs: Dan M. Roden and Julie A Johnson
  Genetics and genomics of antiarrhythmic therapy. Dan M. Roden, Vanderbilt University School of Medicine
  Genetic and genomic markers of response to antihypertensive therapy. Julie A. Johnson, University of Florida
  Predicting drug response in hypercholesterolemia. Ronald M. Krauss, Children’s Hospital Oakland Research Institute
  Pre-prescription genotyping in heart failure: a concept whose time is near? Michael R. Bristow, University of Colorado Health Science Center

Ray Fuller Symposium: Promise and Pitfalls in the Search for New Drugs Targeted at Metabotropic Glutamate Receptors
Chair: Darryle D. Schoepp
mGluR5 negative allosteric modulators: In line for multiple clinical proof of concept testing. Vincent Mutel, Addex Pharmaceuticals, Plan Les Ouates, Switzerland
Roles of mGluRs in synaptic plasticity: implications for therapeutic interventions. Graham L. Collingridge, University of Bristol, United Kingdom
Allosteric potentiators of metabotropic glutamate receptors as a novel approach for treatment of CNS disorders. P. Jeffrey Conn, Vanderbilt University
mGlu receptors: Beyond the regulation of synaptic transmission. Ferdinando Nicoletti, University of Catania, Italy

MONDAY, April 30, 3:00 – 5:30 PM

Early Clinical Development Strategies for Monoclonal Antibody Experimental Agents in Non-Oncology Indications
Chair: Mary A. Mascelli
Anti IL-12/23 monoclonal antibody for psoriasis: Biomarker validation of mechanism-of-action and disease pathogenesis. Kevin D. Cooper, Case Western Reserve University and University Hospitals of Cleveland

Immune response analysis for monoclonal antibodies in development: Past experience and new expectations. **Carrie L. Wagner**, Centocor, Inc., Malvern, PA

Regulatory considerations related to the design of early clinical trials of monoclonal antibody experimental agents. **Libero Marzella**, FDA

* Recent Advances in our Understanding of the Flavin-containing Monoxygenases: Role in Disease and Adverse Drug Reactions: In Memory of Daniel Ziegler
  Chairs: Ronald N. Hines and David E. Williams
  Introduction/overview and dedication to Daniel M. Ziegler. **Fred F. Kadlubar**, NCTR, FDA, Jefferson, AR
  FMO1 and FMO3 developmental expression: Mechanisms and variability. **Ronald N. Hines**, Medical College of Wisconsin
  FMO genetic polymorphisms and impact on function. **Elizabeth A. Shephard**, University College London
  FMO and drug hypersensitivity. **Craig K. Svensson**, Purdue University of College of Pharmacy, Nursing and Health Sciences
  Summary and future direction of FMO research. **David E. Williams**, Oregon State University

* Imaging Localized cAMP Signaling Dynamics Organized by AKAP Scaffold Proteins and Phosphodiesterases
  Chair: Mark L. Dell’Acqua
  Cell signaling in space and time. **John D. Scott**, Oregon Health Sciences University
  Coordination of neuronal cAMP and calcium signaling by AKAP scaffolding. **Mark L. Dell’Acqua**, University of Colorado at Denver Health Sciences Ctr.
  Local cAMP signaling regulation of T-cell activation. **Kjetil Taskén**, University of Oslo
  Imaging local cAMP and PKA dynamics in cardiac myocytes. **Manuela Zaccolo**, University of Padua

- A junior speaker will be selected from the contributed abstracts to give a short talk in this symposium

* Pharmacogenomics Theme
* Developmental Pharmacology Theme

**TUESDAY, May 1, 9:30 AM – 12:00 PM**

* Molecular Mechanisms of Chemical Teratogenesis
  Chair: Peter G. Wells
  Oxidative DNA damage and repair in teratogenesis. **Peter G. Wells**, University of Toronto
  Oxidative stress and signal transduction in teratogenesis. **Jason Hansen**, Emory University School of Medicine
  Oxidative stress in diabetic teratogenesis. **Mary R. Loeken**, Harvard University
  Neonatal apoptotic mechanisms of neurodevelopmental deficits. **John W. Olney**, Washington University School of Medicine

* Regulation of Drug Metabolizing Enzymes and Transporters in Inflammatory Disease States:
  A Symposium in Honor of the Career of Dr. Kenneth W. Renton
  Chair: Edward T. Morgan
  Overview and tribute to the contributions of Dr. Kenneth W. Renton. **Edward T. Morgan**, Emory University
  Inflammation and infection: Hazards for drug safety. **Kenneth W. Renton**, Dalhousie University
  Regulation of cytochrome P450 and UGT enzymes in live and sterile models of infection. **Edward T. Morgan**, Emory University
  Regulation of drug transporters in inflammation. **Micheline Piquette-Miller**, University of Toronto
  Repression of CYP3A4 by inflammation associated with cancer. **Graham Robertson**, University of Sydney
  Regulation of CYP3A metabolism and P-glycoprotein-mediated drug transport during CNS inflammation. **Kerry B. Goralski**, Dalhousie University

* Impact of Pharmacogenomics on the Treatment of Neuropsychiatric Disorders: From Drug Target to Targeted Therapy
  Chair: Laura K. Nisenbaum
  Genetic variants associated with neuropsychiatric disease susceptibility. **David Goldman**, NIAAA, NIH
Current applications of pharmacogenetic testing in antidepressants and antipsychotic treatment: Focusing on CYP2D6 and CY2C19. **Jose de Leon**, University of Kentucky

Genetic variation and response to antidepressants. **Roy H. Perlis**, Harvard Medical School/Massachusetts General Hospital

From genome scan to functional biology for antipsychotic-induced weight gain. **Laura K. Nisenbaum**, Eli Lilly and Company

**TUESDAY, May 1, 3:00 – 5:30 PM**

- **Multiple Calcium Channels in the Vasculature: Regulation of Arterial Tone**
  Chair: Joseph E. Brayden
  Store-operated channels and vascular tone. **Victoria M. Bolotina**, Boston University School of Medicine
  Receptor- and stretch-induced activation of calcium entry channels. **Donald L. Gill**, University of Maryland School of Medicine
  Calcium sparklets in arterial smooth muscle. **Luis F. Santana**, University of Washington School of Medicine
  Mechanisms of Ca\(^{2+}\) regulation mediated by TRP channels in vascular smooth muscle. **Joseph E. Brayden**, University of Vermont College of Medicine

- **Mouse Meets Man: Advanced Murine Models for Use in Cancer Drug Development**
  Chairs: Thomas C. Stover and David Tuveson
  Pathway-specific biomarkers in mouse models of prostate cancer. **Charles L. Sawyers**, Memorial Sloan Kettering Cancer Center
  Modeling the role of BRCA1, BRCA2, and Trp53 loss-of-function in breast cancer. **Jos Jonkers**, Netherlands Cancer Institute
  Mutant EGFR-dependent lung cancer: Lessons from mouse models. **Katerina A. Politi**, Memorial Sloan Kettering Cancer Center

  - A junior speaker will be selected from the contributed abstracts to give a short talk in this symposium

- **Pharmacogenomics Theme**
- **Developmental Pharmacology Theme**

**WEDNESDAY, May 2, 8:30 – 11:00 AM**

- **Perinatal Stress Alters Drug Responses into Adulthood**
  Chair: Mike J. Kuhar
  Maternal separation as a perinatal stressor. **Darlene Francis**, University of California, Berkeley
  Maternal separation affects propensity to abuse drugs. **Mike J. Kuhar**, Emory University
  Effects of maternal separation on brain serotonin systems. **Aleksandra Vicentic**, NIMH, NIH
  Neonatal isolation as a model of stress and its effects on drugs in adulthood. **Therese A. Kosten**, Baylor College of Medicine
  Epigenetic mechanisms as candidates for long term changes in drug effects. **Moshe Szyf**, McGill University

- **Nitric Oxide Deficiency and Cardiovascular Disease**
  Chair: Alex F. Chen
  Nitric oxide deficiency and cardiovascular disease: Lessons from NO synthase knockout and transgenic studies. **Marielle Scherrer-Crosbie**, Massachusetts General Hospital
  Polymorphisms in the eNOS gene and the risk of ischemic heart disease. **Dennis McNamara**, University of Pittsburgh Medical Center
  GTP Cyclohydrolase I and eNOS uncoupling in salt-sensitive hypertension. **Alex F. Chen**, Michigan State University
  Endothelial dysfunction and nitric oxide enhancing therapy: A new approach to the treatment of heart failure. **Anne L. Taylor**, University of Minnesota Medical School
  (Abstract 206) Vascular endothelial growth factor 121 attenuates hypertension, myocardial necrosis and renal injury-induced by N\(^{\omega}\)-nitro-L-arginine methyl ester and angiotensin II in rats. **Ying Zhang**, Amgen

- **Genetic Variations in Regulatory Factors Affecting Drug Metabolism/Disposition**
  Chair: Erin Schuetz
PPARG (peroxisome proliferator activated receptor gamma) variation may underlie response to TZD (troglitazone) therapy in women at risk for type 2 diabetes. Richard M. Watanabe, University of Southern California
Pharmacogenetics of constitutive androstane receptor (CAR). Jatinder K. Lamba, St. Jude Children’s Research Hospital (Abstract 1568) CAR2 displays unique ligand binding and RXRα heterodimerization characteristics. Joshua G. Dekeyser, Penn State
FXR: Interindividual polymorphisms and variation in FXR expression. Richard B. Kim, University of Western Ontario
PXR: Genetic variants of PXR (NR1I2) and their implications in drug metabolism and pharmacogenetics. Erin Schuetz, St. Jude Children’s Research Hospital

- Pharmacology and Signal Transduction of Taste
  Chair: R. Kyle Palmer
  Coding of taste signaling from receptor to brain. Robert F. Margolskee, Mount Sinai School of Medicine
  Behavioral assessment of taste function in rodent models. Alan C. Spector, University of Florida
  Transient receptor potential (TRP) channels in taste signaling. Robert W. Bryant, Linguagen Corporation
  Effects of therapeutic drugs on taste and their impact on compliance and nutritional status. Susan S. Schiffman, Duke University Medical Center

Mechanisms of Idiosyncratic Drug Reactions
  Chairs: Cynthia Ju and Dennis R. Petersen
  1 Cellular consequences of drug bioactivation. B. Kevin Park, University of Liverpool
  2 Role of cytokines and other factors in determining susceptibility to drug-induced liver injury. Lance R. Pohl, NHLBI, NIH
  3 Animal models of idiosyncratic drug reactions. Jack Uetrecht, University of Toronto Faculty of Pharmacy and Medicine
  4 Vaccine-induced cellular immunity: Integrating innate and adaptive signaling pathways. Ross M. Kedl, National Jewish Medical and Research Center, Denver
  5 How do systemically administered drugs provoke reactions in the skin? Craig K. Svensson, Purdue University College of Pharmacy, Nursing and Health Sciences

- A junior speaker will be selected from the contributed abstracts to give a short talk in this symposium
  Pharmacogenomics Theme
  Developmental Pharmacology Theme

**DIVISION SESSIONS**

SUNDAY, April 29, 9:30 AM – 12:00 PM

Division for Pharmacology Education Symposium: Pharmacological Characterization of Modified Genotypes: The Fundamentals
  Chair: William B. Jeffries
  Introduction. William B. Jeffries, Creighton Univ.
  4 The use of transgenic animals in drug discovery. Bryan F. Cox, Abbott Laboratories
  2 Assessing cardiovascular phenotypes in the whole animal. Joseph R. Haywood, Michigan State University
  1 Measurement of behavior modifications in genetically altered animals. Sam J. Enna, University of Kansas Medical Center
  3 Measurement of drug metabolism and pharmacokinetics in genetically modified mice. Denis M. Grant, University of Toronto

MONDAY, April 30, 9:30 AM – 12:00 PM

  Chair: Richard H. Alper
  Cellular and molecular mechanisms contributing to substance abuse and neurotoxicity. Annette E. Fleckenstein, University of Utah
  The translation and application of rodent models for abuse liability testing. Andy Mead, Pfizer, Ltd., Sandwich, U.K.
  Clinical abuse liability assessments. Edward M. Sellers, Ventana Clinical Research Corporation, Toronto
  Regulatory environment in abuse liability assessments. Douglas Throckmorton, FDA.
MONDAY, April 30, 3:00 – 5:30 PM

Division for Behavioral Pharmacology Symposium: Its all the Rave: Behavioral, Neuropharmacological and Toxic Effects of MDMA and Methamphetamine
Chairs: Michael A. Nader and Matthew L. Banks
1 Tolerance to the reinforcing and subjective effects of MDMA in humans. Andrew C. Parrott, University of Wales, Swansea
2 The role of serotonin receptors in the behavioral pharmacology of MDMA. Kathryn A. Cunningham, University of Texas Medical Branch, Galveston
3 MDMA- and MA-induced brain changes: Imaging studies in nonhuman primates and humans. Una D. McCann, Johns Hopkins University School of Medicine
4 Neurochemical alterations and long-term consequences of MA and MDMA abuse. Annette E. Fleckenstein, University of Utah
5 Ambient temperature interactions related to MDMA abuse; MDMA abuse and neurotoxicity as measured by PET. Matthew L. Banks, Wake Forest University School of Medicine

Division for Cardiovascular Pharmacology Programming:

Junior Scientists Competition
Chairs: Emel Songu-Mize, Alyson Miller and Kristina Fetalvero
Graduate Student Presentations:
Diminished MnSOD contributes to endothelial progenitor cell dysfunction, impaired angiogenesis and wound healing in type 2 diabetes. Eric J. Marrotte, Michigan State University (Advisor: Alex Chen)
Molecular characterization of the 8-iso-PGF$_2$α alpha interaction with the thromboxane A$_2$ receptor and its signaling mechanisms in human platelets. Fadi T. Khasawneh, University of Illinois at Chicago (Advisor: Guy Le Breton)
Rosuvastatin provides pleiotropic protection against pulmonary hypertension, right ventricular hypertrophy and coronary endothelial dysfunction in rats. Xiaowei Sun, University of Alabama at Birmingham (Advisor: David D. Ku)

Postdoctoral Scientist Presentations:
ADP stimulates human endothelial cell migration via P2Y1 receptor-mediated MAPK pathways. Jianzhong Shen, Cleveland Clinic Foundation (Mentor: Paul E. DiCorleto)
Caveolin-1 potentiates Src and Akt signaling in isoflurane-induced cardiac protection. Yasuo M. Tsutsumi, UCSD (Mentor: David M. Roth)

Graduate Student runners-up posters:
Ethanol preconditioning is dependent on the activation of 5'-AMP-activated protein kinase. F. Spencer Gaskin, University of Missouri (Advisor: Ronald J. Korthuis)
Overexpression of the inward rectifier K$^+$ current (IK1) accelerates and stabilizes rotors. Sami F. Noujaim, SUNY Upstate Medical University (Advisor: Jose Jalife)
Estrogen decreases mitochondrial ROS production in human brain endothelial cells. Ali Razmara, UCI (Advisor: Sue P. Duckles)

Postdoctoral Scientist runner-up poster:
Basal and ACh-stimulated intracellular Ca$^{2+}$ signals in intact endothelium originate from IP$_3$-sensitive stores. Jonathan Ledoux, University of Vermont (Mentor: Mark T. Nelson)

Division for Cardiovascular Pharmacology Benedict R. Lucchesi Distinguished Lecture
Chair: David D. Ku
A Novel Cardioprotective Paradigm: The CYP450 Pathway of Arachidonic Acid Metabolism. Garrett Gross, Medical College of Wisconsin

Division for Toxicology Symposium: Toxicogenomics Approaches for Evaluating Drug and Chemical Toxicity
Chair: Curt J. Omiecinski
Gene expression profiling in primary human hepatocytes as predictors of interindividual variability in chemical response. Curt J. Omiecinski, Penn State University
Application of toxicogenomics towards idiosyncratic hepatotoxicity. Jeffrey F. Waring, Abbott Laboratories
The Comparative Toxicogenomics Database: Promoting understanding about the mechanisms of chemical actions. Carolyn Mattingly, Mount Desert Island Biological Laboratory, Salisbury Cove, ME
Genetic and genomic approaches to predicting chemical toxicity. Christopher A. Bradfield, University of Wisconsin
Data analytic platforms and methods for mining proteome data and its integration with genomic information. Martin W. McIntosh, Fred Hutchinson Cancer Research Ctr, Seattle
TUESDAY, May 1, 9:30 AM – 12:00 PM

Division for Clinical Pharmacology, Pharmacogenetics, and Translational Medicine Symposium: The Regulatory Approach to Pharmacogenomics: An International Perspective
Chairs: Lawrence J. Lesko and Felix W. Frueh
U.S. FDA regulatory approaches to pharmacogenomics. Felix W. Frueh, FDA
A framework for pipeline efficacy pharmacogenetics. Allen D. Roses, GlaxoSmithKline, Inc., Research Triangle Park
Development of devices for pharmacogenomic testing. Janet A. Warrington, Affymetrix
Drug-test co-development: A real-life perspective. Jeffrey R. Gulcher, deCODE Genetics
Panel discussion. From science to regulation to medical practice: The challenge of implementation. Larry J. Lesko, FDA and Wayne A. Rosenkrans, AstraZeneca and Personalized Medicine Coalition

- A junior speaker will be selected from the contributed abstracts to give a short talk in this symposium
  - Pharmacogenomics Theme
  - Developmental Pharmacology Theme

TUESDAY, May 1, 2:00 – 3:00 PM

Division for Drug Metabolism Early Career Achievement Award Lecture
Chairs: Larry S. Kaminsky and Kenneth E. Thummel
Speaker: Qing Ma, NIOSH, CDC
Title: Xenobiotic-activated receptors: From transcription, to drug metabolism, to disease.

TUESDAY, May 1, 3:00 – 5:30 PM

Drug Metabolism Division Platform Session: Biotransformation and Drug Transport
Chairs: Larry S. Kaminsky and Kenneth E. Thummel
Division for Molecular Pharmacology Postdoctoral Award Finalists
Chair: Stephen M. Lanier
Along the continuum of G-protein signaling with additional thoughts on CQ and PQ relative to the art of science. S.M. Lanier. Med. Univ. of South Carolina

Postdoctoral Scientist Award Finalists:
The retinoic acid receptor-related orphan receptor (ROR) regulates human CYP2C8. Y. Chen. NIEHS, NIH, Res. Triangle Park, NC. Advisor: J.A. Goldstein
Cellular models of altered base excision repair reveal a differential contribution of reactive oxygen species-induced 7,8-dihydro-8-oxo-2'-deoxyguanosine to the cytotoxic mechanisms of platinum anticancer drugs cisplatin and oxaliplatin. T.J Preston. Univ. of Toronto Fac. of Pharm. Advisor: P.G. Wells
Impaired c-src kinase regulation of muscle contraction during colonic inflammation is due to nitrosylation of Ca<sup>2+</sup> channels. G.R Ross. Virginia Commonwealth Univ. Advisor: H. Akbarali
Vasoactive intestinal peptide transactivates the androgen receptor through a PKA-dependent extracellular signal-regulated kinase pathway in prostate cancer cells. Y. Xie. Creighton Univ. Advisor: Y. Tu

Division for Neuropharmacology Postdoctoral Scientist Award Finalists
Chair: Susan G. Amara
Neurotransmitter transporters: A dance of domains and substrates. Susan G. Amara, University of Pittsburgh School of Medicine
Reciprocal modulation of function between the D1 and D2 dopamine receptors and the Na+/K+-ATPase, a novel member of the dopamine receptor signalplex. Lisa A. Hazelwood, NINDS, NIH
Enhancement of endogenous cannabinoid responses through FAAH inhibition provides cellular and functional protection against excitotoxic brain damage. David A. Karanian, University of Connecticut
Distinct roles of spinal muscarinic receptor subtypes in control of glycinergic input revealed by muscarinic receptor knockout mice. Hong-Mei Zhang, University of Texas, Houston
Alteration in acetylcholinesterase glycosylation of rat brain in memory disorder. Amitava Das, Mayo Clinic College of Medicine
Impaired HPA axis and their feedback regulation in SERT knockout mice. Xue Jiang, University of Texas Medical Branch, Galveston

Division for Systems and Integrative Pharmacology Symposium: Regenerative Pharmacology: Integrative Pharmacology of Engineered Tissues
Chair: George J. Christ
Regenerative pharmacology: An overview. George J. Christ, Wake Forest University
Mechanical and matrix effects on cell phenotype in engineered cardiovascular tissues. Jan P. Stegemann, Rensselaer Polytechnic Institute, Troy, NY
Challenges and opportunities in engineering clinically relevant bladder implants: The importance of pharmacology and phenotype. Tim Bertram, Tengion, Inc, Winston-Salem
Pharmacology of engineered and regenerating tissues. Karl-Erik Andersson, Wake Forest University
Cyclic GMP and vascular smooth muscle cell phenotype. Thomas Lincoln, University of South Alabama College of Medicine

LECTURES AND SPECIAL SESSIONS

SATURDAY, April 28

12:30-3:00 PM
2007 Teaching Institute: Integrated Strategies in Pharmacology Education: Simulation, Case- & Team-Based Approaches
Chairs: Lynn M. Crespo and Jordan E. Warnick
Overview: Multiple approaches to the teaching of pharmacology. Lynn M. Crespo, University of South Florida and Jordan E. Warnick, University of Maryland School of Medicine
Lecture-based approach to pulmonary pharmacology. Jordan E. Warnick, University of Maryland School of Medicine
Case-based approaches in pulmonary disease. Lynn M. Crespo, University of South Florida
Simulators in acute asthma case (albuterol and steroids). John L. Szarek, Ross University School of Medicine

1:00-3:15 PM
Graduate Student-Postdoctoral Colloquium: Pharma Phair
Chairs: Stephanie W. Watts and Walter C. Prozialeck
Trainees will first hear, then interact with professionals from different career paths to view the wide variety of options open to them after their formal training.

Academicians: Barbara S. Beckman, Tulane University School of Medicine
Biotech: Michael Babich, ImmvaRx
Consultant: Marie T. Rock, Chirality, LLC
Legal: Blair E. Taylor, Venable LLP
NIH: Lance R. Pohl, NIH, NHLBI
Pharmaceutical Industry: Ryan M. Fryer, Abbott Laboratories
Pharmacy: Timothy J. Maher, Massachusetts College of Pharmacy
Public Affairs: James S. Bernstein, ASPET
Science Writer: Jill U. Adams, Albany, NY
Scientific Officer: Christine K. Carrico, ASPET
Teacher: Walter C. Prozialeck, Midwestern University

3:15-5:30 PM
Workshop: Mentoring: How to Find a Good Mentor and How to Be a Good Mentor
Chairs: Martha I. Dávila-Garcia and Gonzalo E. Torres
How to be a good mentor. James G. Townsel, Meharry Medical College

SUNDAY, April 29

8:15-9:15 AM
Julius Axelrod Award Lecture
Phox and Nox and ROS in a box of dopaminergic neurodegeneration: Roles of MMP-3. Tong H. Joh., Cornell University Weill Med College

1:30-2:30 PM
Torald Sollmann Award Lecture
A career in pharmacology: In search of beauty and joy. Sue P. Duckles, University of California, Irvine

MONDAY, April 30

8:00-10:00 AM
ASPET/APS Women’s Committees Workshop: Being Heard: The Microinequities That Tilt the Playing Field
  Chairs: Susan F. Steinberg, Holly H. Brevig and Kathleen H. Berecek
Overview: Women in academic science and engineering - Beyond bias and barriers. Joan A. Steitz, Yale University
Leveling the playing field: A focus on students. Barbara A. Horwitz, University of California, Davis
Institutional strategies to improve the status of women. Jeanine D’Armiento, Columbia University, College of Physicians and Surgeons
Succeeding in a male-dominated environment. Florence P. Haseltine, NICHD, NIH
Breakout sessions.

8:15-9:15 AM
Ray Fuller Lecture in the Neurosciences: Case Study from Bench to Bedside: Modulators of mGlu2 and mGlu3
Receptors to Treat Psychiatric Disorders
  Lecturer: Darryle D. Schoepp, Lilly Res. Labs.

12:45-1:45 PM
EB 2007 Public Policy Session: NIH at the Crossroads: How Diminished Funds Will Impact Biomedical Research and What Scientists Can Do About It
  Chair: Leo T. Furcht
Speakers:
  Elias Zerhouni, NIH Director
  John E. Porter, Hogan & Hartson and former Chair of US House of Representatives Labor/HHS Appropriations Subcommittee
Rep. Porter will provide a legislative overview of the FY 2008 outlook for the NIH. He will discuss how scientists have an obligation as citizens to become politically active and aware and make suggestions for what needs to be done to make an impact. Dr. Zerhouni will provide details on the current state of the NIH enterprise and offer projections based on the FY 2008 budget.

SATELLITE MEETINGS

FRIDAY, April 27 – Saturday, April 28

3RD GPCR Colloquium
(Separate, Advance Registration Required)

Chairs: Kim A. Neve and Olivier Civelli

Day 1
The structural basis for GPCR oligomerization: Implications for activation. Jonathan A. Javitch, Columbia University College of Physicians and Surgeons
Heterooligomerization of Class A GPCRs creates novel signaling units distinct from their constituent GPCR homooligomers. Susan R. George, University of Toronto
GPCR ligand binding and release: Insights and mysteries. David L. Farrens, Oregon Health and Science University
G proteins and their accessory proteins. Stephen M. Lanier, Medical University of South Carolina
Talk selected from abstracts
Interactions between GPCRs and receptor tyrosine kinases. Kevin J. Catt, NICHD
GPCRs, arrestins, and ubiquitination. **Sudha K. Shenoy**, Duke University Medical Center

Talk selected from abstracts

Multiplexing resonance energy transfer approaches to study GPCR signaling complexes in living cells. **Michel Bouvier**, University of Montreal

Use of genetically engineered mice to unravel the functions of dopamine receptors. **Emiliana Borrelli**, University of California, Irvine

**Day 2**

GPCRs in arousal and anxiety. **Rainer K. Reinscheid**, University of California, Irvine

Talk selected from abstracts

The role of GPR30 in estrogen signaling. **Eric R. Prossnitz**, University of New Mexico Health Sciences Center

Therapeutic benefits of inverse agonism at cannabinoid receptors. **Gerard Le Fur**, Sanofi-Aventis

Novel aspects of the melanocortin receptors. **Roger D. Cone**, Oregon Health and Science University

Leucocyte chemoattractant receptors: New molecules and new concepts. **Marc Parmentier**, Free University of Brussels

**Special Lecture:** The function and regulation of G protein coupled glutamate receptors in the neural network. **Shigetada Nakanishi**, Osaka Bioscience Institute

**FRIDAY, April 27 – Saturday, April 28**

**Behavioral Pharmacology Society Meeting**
(Separate, Advance Registration Required)

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