Neuropharmacology Division Report  (March 2005 to October 2005)

A. Annual Meeting Programming

EB2005 meeting. At the EB2005 meeting the Division of Neuropharmacology sponsored five symposia and co-sponsored one symposium with the Behavioral Pharmacology Division.

Functional selectivity of receptor signaling: epiphenomenon or new opportunity for drug discovery?
Chair: David Sibley
What is the molecular basis for functional selectivity of drugs at the 5-HT2A receptor? David E. Nichols. *Purdue Univ. Sch. Pharm. and Pharm. Sci.*

Adolescent drug abuse: long-term effects of exposure of the developing brain to drugs of abuse.
Chairs: Robert N. Pechnick and Kathryn A. Cunningham
Introduction. Robert N. Pechnick, *Cedars-Sinai Medical Center.*
Overview of concepts and issues in the study of the adolescent brain and drugs of abuse. Linda P. Spear. *Binghamton Univ.*
The effects of nicotine on adolescent brain. Frances M. Leslie, *Univ. of California, Irvine*

Molecular library approaches to CNS drug discovery.
Chair: Bryan L. Roth
Non-amines: have we been too aminated? Bertha Madras. *Harvard Med. Sch.*
New pharmacological targets in Alzheimer’s therapeutics.
Chair: Claudio Cuello

*McGill Univ.*
*Amgen, Inc.*
*Brigham and Women’s Hosp.*
*Univ. California San Diego Sch. Med.*
Vaccination versus passive immunotherapy in the treatment of Alzheimer’s.  
David G. Morgan.  
*Univ. South Florida.*

The Division also presented a symposium for its program slot at EB2005.

The 10 commandments of pharmacology: does functional selectivity/agonist trafficking make nothing sacred?
Chair: Richard B. Mailman.

*Univ. of North Carolina at Chapel Hill.*
Possible structural aspects of GPCR functional selectivity. Harel Weinstein, Ph.D.  
*Weill Medical College of CORNELL University*
Functional selectivity: structural and function of the D₂ receptor” OR “Are dimers a necessary feature for functional selectivity. Jonathan Javitch, M.D., Ph.D.,  
*Columbia Univ.*
Is functional selectivity an artifact of in vitro systems? Bryan Roth, M.D., Ph.D.,  
*Case Western Reserve University.*
Classifying drugs and receptors: Past, present, and future Michael Spedding,  
*Inst. de Recherches Servier, Suresnes, France*
Receptor modeling: whence goeth the three-stage model and its progeny. Arthur Christopoulos, B.Pharm., Ph.D.,  
*University of Melbourne.*
Functional selectivity: is it real and does it affect drug discovery? Keith J. Miller, Ph.D.,  
*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.*

The Division co-sponsored a symposium organized by the Behavioral Pharmacology Division. The symposium,  
*Preclinical assessment of pain and analgesic drugs,* was organized by S.Steve Negus.

**Mixer at EB2005 Meeting.** The mixer hosted jointly by the Neuropharmacology and Behavioral Pharmacology divisions was attended by over 200 attendees.
**B. Symposia for the EB2006 Meeting.**

For the EB2006 meeting in San Francisco, the Division submitted six symposia for consideration to the Programming Committee. From these six, two were chosen for presentation. Those were:

- Novel Actions of Psychotropic Drugs, chaired by D. M. Chuang.
- Multiple Approaches to NGF Antagonism for Novel Pain Drugs, chaired by F.F. Hefti.

The Division solicited proposals for symposia for the EB2006 meeting Division program slot. The Executive Committee voted for the inclusion of the following symposium chaired by Dr. Lakshmi Devi, *Mount Sinai School of Medicine*. The topics to be presented include the following, although exact titles and speakers are still tentative.

**Neuroproteomics of the Synapse and Drug Addiction**

*Chair: Lakshmi A. Devi*

- **Introduction and Overview** Dr. Devi
  - Proteomic techniques used to identify synaptic proteins. B. Jordan, *NYU School of Medicine*
  - Quantitative protein profiling approach. L. Prokai, *Univ. of Florida*

- Changes in the presynaptic active zone protein profile upon chronic morphine administration. N. Abul-Husn, *Mount Sinai School of Medicine*
  - The effect of cocaine administration on the levels of neuropeptides in various regions of the brain. L. Fricker, *Albert Einstein College of Medicine*.

- **Concluding remarks and Discussion:** Dr. Devi

**Ray Fuller Symposium.** In addition, the Division was asked to nominate speakers for the Ray Fuller Lecture/Symposium for the EB2006 meeting. Recommendations were forwarded to the ASPET Scientific Programming Committee. As a result, Dr. Marc Caron was asked to organize and chair this symposium and he enthusiastically agreed.

The Ray Fuller Symposium will become part of the regular Experimental Biology meeting, beginning in 2006. Council has asked the Neuropharmacology Division to organize the Ray Fuller Symposium for the future. The Executive Committee has been polled as to how the choice of speaker will be made in coming years. It was agreed that the nominations for speaker be solicited from the entire Division. The final choice from these nominees will be made by the Executive Committee.

The Catecholamine Club has suggested establishment of an Axelrod Medal Award each year at Experimental Biology. This would include a plenary speaker and a symposium similar to the Ray Fuller Symposium. It was envisioned there would be an endowment to cover the cost of the awards and travel for speakers. There would be no cost to the Divisions. The details of how this will be organized are not yet determined.

**B. Division Awards at Experimental Biology 2005:**

Support for the awards at EB05 came in part from the contributions from: *Eli Lilly Corporation* in support of the Neuropharmacology Graduate Student Best Abstract Awards and *DOV Pharmaceuticals* in support of the Neuropharmacology Post Doctoral Scientist Awards.

**ASPET Neuropharmacology Graduate Student Best Paper Awards:**

Graduate Student Awardees:

1st: David B. Arthur
ATP enhances NGF-promoted neurite formation in PC12 and dorsal root ganglion cells: a role for P2 receptors in neural development. **David B Arthur**, Katerina Akassoglou, Paul A Insel. **UCSD**

2nd: Yanling Xu

Neuropeptide S: a novel neuropeptide promotes wakefulness and suppresses anxiety behavior. **Yan-Ling Xu**, Rainer K. Reinscheid, Salvador Huitron-Resendiz, Steven J. Henriksen, Luis de Lecea, Olivier Civelli. **UCI**

3rd: Jeffery Neil Talbot

Regulation of Mu Opioid Receptor internalization by the accessory protein RanBPM. **Jeffery Neil Talbot**, Myron L. Toews, L. Charles Murrin. **Univ. of Nebraska Med. Ctr.**

**ASPET Neuropharmacology Post-Doctoral Paper Awards:**

Postdoctoral Scientist Awardees:

1st: Anita Lakatos

CART Receptor is coupled to G/i/o Protein and MAP Kinase Activation in AtT20 Cells. **Anita Lakatos**, Aleksandra Vicentic, Randy A. Hall, Steven Prinster, Michael J. Kuhar. **Yerkes/ Emory Univ**

2nd: Zi-Zhen Wu

Signaling Mechanisms of Inhibition of Voltage-Activated Calcium Channels by TRPV1 Activation in Sensory Neurons. **Zi-Zhen Wu**, Shao-Rui Chen, Hui-Lin Pan. **Penn State Col. of Med.**

3rd: (tie) Anthony J. Baucum

Reactive Oxygen Species Contribute to Dopamine Transporter Oligomerization. **Anthony Jerome Baucum**, Glen A. Cook, Jarom E. Hanson, Glen R. Hanson, Annette E. Fleckenstein. **Univ.of Utah** and **Douglas Jones**

CART expression in the rat nucleus accumbens is regulated by the PKA/CREB pathway. **Douglas Campbell Jones**, Michael J Kuhar. **Yerkes National Primate Rsch Ctr, Emory Univ.**

**Division Awards At Experimental Biology—2006.** There will be competition for Graduate Student and Post-Doctoral paper awards at the EB 2006 meeting.

**C. Nominations for Officers.**

At the Executive Committee meeting in April, 2004, the decision was made to extend the term of elected officers of the division to two years, rather than one year. As a result of this change, no candidates were nominated and no election was held within the Neuropharmacology Division in 2005. David Sibley began his first of 2 years as Division President and Sandra Welch began her first of 2 years as Division Secretary/Treasurer in July, 2005. It was noted that because of the two-year terms for President and Secretary/Treasurer, the Executive Committee would be reduced in size since each year there would be either no President-elect and Secretary/Treasurer-elect or no past-President and past-Secretary/Treasurer. To maintain an Executive Committee of reasonable size, the Executive Committee agreed at the November, 2004, meeting at the Society for Neuroscience Meeting to add two at-large members. These members would be chosen by the Executive Committee. David Sibley reported at the Executive Committee meeting at EB05 that he had asked Mike Kuhar to serve as an at-large member for the coming year and Mike had accepted. This was approved unanimously.

David Sibley established a Nominating Committee and a slate of candidates was presented in July, 2005, to the Executive Committee. Dr. Sibley is in the process of contacting the leading candidates for nomination to verify their willingness to run for office.
D. Non-ASPET Meeting Sponsored.

The Neuropharmacology Division will hold a mixer at the Society for Neuroscience meeting to be held in Washington, D.C, November 12-16, 2005. The mixer will be held on Tuesday evening, November 15, 2005. Arrangements for this are under way.

The Division will hold an Executive Committee meeting in Washington, D.C. on Monday, November 14, 2005.

E. Web-Based Activities. The Division web site remains fully operational and new materials concerning the Division and other pertinent matters are constantly being added.

F. Financial Report. The expenses continue to be within allocated division funds. Therefore, we should be able to continue our previous efforts.

Prepared by Sandra Welch, Ph.D., Division Secretary/Treasurer
September 15, 2005.