

PROGRAM

WEDNESDAY, MARCH 10

6:00 - 7:15 PM OPENING RECEPTION
(Registrants and Guests)

Flagstaff/Prescott Rooms

7:15 - 7:30 PM Welcome: Paul Mermelstein/Bob Yeziarski

7:30 - 8:30 PM KEYNOTE ADDRESS

Phoenix Room



THE NEUROBIOLOGY OF EMOTION: CLASSICAL AND NOVEL MOLECULAR CANDIDATES

Huda Akil, University of Michigan
President, Society for Neuroscience

THURSDAY, MARCH 11

6:30 AM - Continental Breakfast

Flagstaff/Prescott Rooms

7:00 - 8:00 AM PLENARY SESSION I

Phoenix Room

TAUOPATHIES AND SYNUCLEINOPATHIES, THE TWO LARGEST GROUPS OF HUMAN ADULT- ONSET NEURODEGENERATIVE DISEASES

Organizer: Michael L. Hutton, Ph.D., Mayo Clinic, Jacksonville, FL

- 1.1 Dennis Dickson, Mayo Clinic, Jacksonville, FL
- 1.2 Matthew Farrer, Mayo Clinic, Jacksonville, FL
- 1.3 Michael Hutton, Ph.D., Mayo Clinic, Jacksonville, FL

8:00 - 9:30 AM PLENARY SESSION II

Phoenix Room

SYNAPTIC MODULATION BY EXTRACELLULAR IONS

Organizer: Stephen Smith, Oregon Health and Science University

- 2.1 A nonselective cation channel activated by decreases in extracellular calcium facilitates neurotransmission at cortical synapses, Stephen Smith, Oregon Health and Science University
- 2.2 Synaptic cleft acidification after exocytosis, Henrique von Gersdorff, Vollum Institute
- 2.3 ASIC3 as a trigger for ischemic pain, Edwin McCleskey, Vollum Institute

9:30 - 11:00 PLENARY SESSION III

Phoenix Room

MECHANISMS OF RECOVERY AND NOVEL REPARATIVE STRATEGIES FOLLOWING TRAUMATIC BRAIN INJURY

Organizer: Douglas Smith, Southern Illinois University

- 3.1 Endogenous and exogenous reparative processes after traumatic brain injury. Dalton Dietrich, University of Miami
- 3.2 Metabolic crisis following traumatic brain injury, David Hovda, University of California, Los Angeles
- 3.3 An emerging role for myelin inhibitors in the treatment of axonal pathology following traumatic brain injury, Niklas Marklund, University of Pennsylvania

11:00 - 12:30 PLENARY SESSION IV

Phoenix Room

GENETIC APPROACHES TO NEUROLOGICAL DISEASES

Organizer: Katherine Woodbury-Harris, NINDS

- 4.1 Genetics of Parkinson's disease and the PROGENI study, Tatiana Foroud, Indiana University
- 4.2 Relationship between family history of stroke and neurological deficit, brain infarct size and 90-day functional outcomes in probands with ischemic stroke, James Meschia, Mayo Clinic, Jacksonville
- 4.3 Ion channels and episodic disorders of the nervous system, Louis Ptacek, University of California, San Francisco
- 4.4 A national repository for neurological gene discovery, Katrina Gwinn-Hardy, NINDS

Deli Lunch Served at 11:30 AM

Flagstaff/Prescott Rooms

Afternoon - Free Time

7:30 - 9:00 PM - BUSINESS MEETING

Flagstaff/Prescott Rooms

Buffet Deli Dinner Served During Meeting

Flagstaff/Prescott Rooms

(Everyone is encouraged to attend.)

FRIDAY, MARCH 12

6:30 AM - Continental Breakfast

Flagstaff/Prescott Rooms

7:00 - 8:30 AM PLENARY SESSION V

Phoenix Room

DYSLEXIA AND BRAIN

Organizers: Glenn Rosen, Harvard University

- 5.1 Toward a cognitive neuroscience of reading, Laurie Cestnick, Massachusetts Institute of Technology
- 5.2 Neural mechanisms of reading and sensorimotor integration, Thomas Zeffiro, Georgetown University Medical Center
- 5.3 Animal models of developmental dyslexia: If rodents could read, these ones couldn't. Glenn Rosen, Harvard University

8:30 - 10:00 AM PLENARY SESSION VI

Phoenix Room

GLIA, AN ESSENTIAL ELEMENT OF THE SYNAPSE

Organizer: Eric Newman, University of Michigan

- 6.1 Glial cell regulation of synaptic transmission in the retina, Eric Newman, University of Michigan
- 6.2 Identification of two proteins involved in astrocyte-induced synaptogenesis, Erik Ullian, Sanford University
- 6.3 Synaptic signaling between neurons and glia, Dwight Bergles, Johns Hopkins University

10:00 - 11:30 AM PLENARY SESSION VII

Phoenix Room

NEUROIMAGING IN NORMAL AGING, MCI, AND ALZHEIMER'S DISEASE

Organizer: Molly Wagster, NIA

- 7.1 Magnetic resonance techniques for aging and age-related disease, Dae-Shik Kim, Boston University
- 7.2 Vascular mild cognitive impairment, Charles DiCarli, University of California, Davis
- 7.3 Normal aging results in an overall reduction of white matter but relatively little loss of gray matter on MRI scans of the human brain, Ron Killiany, Boston University
- 7.4 Neurophysiological correlates of changes in forebrain white matter in the aged Rhesus monkey, Douglas L. Rosene, Boston University

11:30 - 12:30 PM PLENARY SESSION VIII

Phoenix Room

DEVELOPMENTAL SPECIALIZATION OF AUDITORY SIGNALLING

Organizer: Lance Zirpel, University of Minnesota

- 8.1 Developing a rapidly-desensitizing calcium-permeable AMPA receptor for auditory neurons, Thomas Parks, University of Utah
- 8.2 Activity-dependent modification of inhibitory synapse gain, Dan Sanes, New York University

12:30 - 1:30PM POSTER SESSION

Tucson/Flagstaff Rooms

(Poster Abstracts follow Plenary Speaker Abstracts in Program Book)

Deli Lunch Provided During Poster Session

Tucson/Flagstaff Rooms

- P1 BIDIRECTIONAL EFFECTS OF ESTRADIOL ON CREB PHOSPHORYLATION IN THE HIPPOCAMPUS, M.B. Iden, B. Becklund and P.G. Mermelstein, Department of Neuroscience, University of Minnesota, 6-145 Jackson Hall, 321 Church St S.E., Minneapolis, MN 55455.
- P2 SEXUAL EXPERIENCE ALTERS ADENYLATE CYCLASE AND pERK2 ACTIVITY IN THE NUCLEUS ACCUMBENS OF FEMALE HAMSTERS. K. C. Bradley¹, A. J. Mullins¹, R. L. Meisel^{1,2} and V. J. Watts^{1,3}
¹Neuroscience Prog, Purdue Univ, West Lafayette, IN, USA 47907; ²Dept of Psychol Sci, Purdue Univ, West Lafayette, IN, USA 47907; ³Medicinal Chem & Mol Pharmacol, Purdue Univ, West Lafayette, IN
- P3 MAP OF CEREBELLAR CORTEX ACTIVITY IN THE CAT DURING STEPPING, Poppele, RE¹, Valle, M.S^{1,2}, Eian, J.N¹. and Perciavalle, V.²
¹Department of Neuroscience, University of Minnesota, Minneapolis, MN 55455
²Department of Physiological Science, University of Catania, Catania, ITALY
- P4 REGULATION OF ALTERNATIVE SPLICING OF TAU EXON 10 OF TAU BY NUMEROUS FACTORS. Andrew Grover^{1,2}, Julie Taylor¹, Michael Hutton¹.
1: Mayo Clinic, Jacksonville 32224 FL, 2: SunHealth Research Institute, Sun City 85351 AZ.
- P5 THE EFFECTS OF IgG-192-SAPORIN LESIONS OF LIMBIC FOREBRAIN ON RAT COCAINE SELF-ADMINISTRATION C. Co, X. Yin, W.E. Johnson, T.J. Martin, J.E. Smith, Dept Physiol/ Pharmacol, Wake Forest University Sch of Med, Winston-Salem, NC
- P6 NEUROMICE.ORG: A NEW RESOURCE FOR NEUROLOGICAL MUTANT MICE, Dan Goldowitz and the Tennessee Mouse Genome Consortium, the Jackson Laboratory Neuroscience Mutagenesis Facility, and the Northwestern University Neurogenomics Project.
- P7 KELCH-LIKE 1 PROTEIN AND THE NEURONAL P/Q-TYPE Ca²⁺ CHANNEL, Kelly A. Savoie, Loyola University

- P8 ESTROGEN REGULATION OF SPINOPHILIN PROTEIN AND MRNA, Susan J. Lee, Rockefeller University
- P9 PRESENCE OF AN APOE4 ALLELE RESULTS IN SIGNIFICANTLY EARLIER ONSET OF PARKINSON DISEASE, Nathan Pankratz, Indiana University
- P10 RESTRAINT-INDUCED STRESS INCREASES BURST FIRING OF VTA NEURONS IN AWAKE, BEHAVING RATS, Kristin Anstrom, Wake Forest University

2:00-4:00PM SPECIAL SESSION

Sedona Room

FUNDING OPPORTUNITIES AND REVIEW PROCEDURES FOR BRAIN RESEARCH AT NIH

Organizer: Teresa Levitin, Ph.D., NIDA

Representatives from several Institutes at NIH will describe the programs of their Institutes and indicate new directions and opportunities for research support. There will also be a presentation on the review process, including information about how to write a successful grant application. Each speaker will have 15 minutes for the presentation and questions, and there will also be a half hour at the end of the presentations for more questions and discussion. The purpose of the workshop is to provide a greater understanding of the missions of the Institutes that support brain research and of the scientific review process that evaluates grant applications on brain research.

Participants:

Teresa Levitin, Ph.D., NIDA
 Katrina Gwinn-Hardy, Ph.D., NINDS
 Susan Volman, Ph.D., NIDA

Molly Wagster, Ph.D., NIA
 Katherine Woodbury-Harris, NINDS
 Daofen Chen, Ph.D., NINDS

Afternoon - Free Time

FRIDAY EVENING, MARCH 12

Prescott/Flagstaff Rooms

6:00 - 7:00 PM SOCIAL HOUR - WINE & HORS D'OEUVRES

7:00 - 8:00 PM BUFFET DINNER - Registrants and Guests

8:00 - 8:45 PM PLENARY ADDRESS

Phoenix Room

THE PERCEPTION OF SPACE - NOTRE DAME DE PARIS

Henry J. Peter Ralston
 University of California, San Francisco



SATURDAY, MARCH 13

6:30 AM - Continental Breakfast

Flagstaff/Prescott Rooms

7:00 - 8:30 AM PLENARY SESSION IX

Phoenix Room

IMAGES OF ADDICTION

Organizers: Teresa Levitin, NIDA and James Smith, Wake Forest University

- 9.1 Visualizing the effects of prolonged exposure to cocaine, Linda Porrino, Wake Forest University
- 9.2 The effects of cocaine video/audio cues on intrasynaptic dopamine release and cocaine craving, Dean Wong, Johns Hopkins School of Medicine
- 9.3 Imaging the brain substrates of cue-induced drug craving ("Go!"), and its modulation ("Stop!"), Anna Rose Childress, University of Pennsylvania

8:30 - 10:00 AM PLENARY SESSION X

Phoenix Room

CALCIUM HOMEOSTASIS AND NEUROLOGICAL DISEASES

Organizer: Erika Piedras-Renteria, Loyola University

- 10.1 Pharmacology of neuronal calcium channels: prospects and mechanisms, Stefan McDonough, Amgen, Inc.
- 10.2 Effects of familial hemiplegic migraine type 1 mutations on neuronal P/Q-type channel activity and synaptic transmission, Yu-Qing Cao, Sandord University
- 10.3 Compensatory expression of voltage-dependent calcium channel subunits in inherited models of neurological disease, Maureen McEnery, Case Western Reserve University

10:00 - 11:00 AM PLENARY SESSION XI

Phoenix Room

THE $\delta 2$ GLUTAMATE RECEPTOR AND THE LURCHER MUTANT: WHAT HAPPENS WHEN A GOOD RECEPTOR GOES BAD?

Organizer: Michael Vogel, Maryland Psychiatric Research Center

- 11.1 The $\delta 2$ glutamate receptor and the Lurcher mutant: what happens when a good receptor goes bad? Michael Vogel, Maryland Psychiatric Research Center
- 11.2 The $\delta 2$ glutamate receptor—A key molecule controlling synaptic plasticity and structure in Purkinje cells, Michisuke Yuzaki, St. Jude Children's Hospital

STROKE: CLINICAL TRIALS

Organizer: Katherine Woodbury-Harris, NINDS

- 12.1 Evolution of clinical trials for acute ischemic stroke, Susan Fagan, Medical University of Georgia
- 12.2 Phase I and II clinical trials for acute ischemic stroke therapy, Yuko Palesch, Medical University of South Carolina
- 12.3 When time is brain: design challenges and solutions for prehospital phase III trials for neuroemergencies, Jeffrey Saver, University of California, Los Angeles

DELI LUNCH Served at 12:30 AM

Flagstaff/Prescott Rooms

Afternoon - Free Time

Spring Brain Conference Travel Award Recipients

Young Investigator Awards

Dwight Bergles, Johns Hopkins
Stephen Smith, OHSU
Erika Piedras-Renteria, Loyola Univ
Kristin Anstrom, Wake Forest

Trainee Fellowships

Kelly Savoie, Loyola
Laurie Cestnick, MIT
Yu-Qing Cao, Stanford Univ
Nathan Pankratz, Indiana Univ
Susi Lee, Rockefeller Univ
Erik Michael Ullian, Stanford
Katherine Bradley, Univ Minnesota

7:00 PM - Closing Reception and Awards Presentations
(Registrants and Guests)

Flagstaff/Prescott Rooms