Neuroscience Day

June 5, 2009
Miami University
Oxford, OH
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<th>Time</th>
<th>Event</th>
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<tr>
<td>9:45 a.m.-10:45 a.m.</td>
<td>Registration &amp; Poster Set-up</td>
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<tr>
<td>11:00 a.m.-12:15 p.m.</td>
<td>Keynote Lecture</td>
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<tr>
<td>Carol A. Barnes, Ph.D.</td>
<td>Regents' Professor of Psychology and Neurology, University of Arizona</td>
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<tr>
<td>Cognitive Changes in Aging: Neural Correlates in Rats and Monkeys</td>
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<td>12:30 p.m-1:45 p.m.</td>
<td>Luncheon</td>
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<td>2:00-3:00 p.m.</td>
<td>Student &amp; Postdoc Presentations</td>
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<tr>
<td>Patrick Sonner, Ph.D., Wright State University</td>
<td>Differences in firing properties between V1-derived Renshaw and non-Renshaw cells</td>
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<td>Sarah Oross, University of Dayton</td>
<td>Dorsal eye selector, pannier (pnr), interacts with the retinal determination gene network during Drosophila eye development</td>
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<td>Loren Hoffmann, Miami University</td>
<td>Hippocampal modulation of cerebellar learning</td>
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<td>Eric Krause, Ph.D., University of Cincinnati</td>
<td>Inhibition of central angiotensin receptor signaling: drinking less and reducing stress</td>
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<td>3:00-5:00 p.m.</td>
<td>Poster Session and Reception</td>
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<td>5:00 p.m.</td>
<td>Announcement of Poster Competition Awards</td>
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**Listing of Posters**

**Poster 1**
Presenter: Brian Tucker, NCBP, Wright State University  
Coauthors: James E. Olson, PhD  
Title: The role of glutamate in hippocampal tissue swelling during oxidative stress  
Key Words: Glutamate, Oxidative Stress, ROS

**Poster 2**
Presenter: Brian Murphy, Anesthesia, Cincinnati Children's Medical Center  
Coauthors: Cynthia Walter, Steve C. Danzer  
Title: Dendritic translocation as a novel mechanism of hippocampal granule cell dysmorphogenesis in epilepsy  
Key Words: dentate gyrus, granule cell dispersion, recurrent basal dendrite, epilepsy

**Poster 3**
Presenter: Kathleen Broomall, Zoology, Miami University  
Coauthors: Krista Hardin, Matt Seifert, Souyma Banerjee, Meredith Dorr, Camilo Molina, Joyce Fernandes  
Title: Ultrastructural analysis of nerve structure in H99 mutants  
Key Words: Drosophila, nerves, TEM

**Poster 4**
Presenter: Patrick Sonner, Neuroscience, Cell Biology & Physiol, Wright State University  
Coauthors: Maria C. Berrocal, Martyn Goulding, Francisco J. Alvarez  
Title: Differences in firing properties between V1-derived Renshaw and non-Renshaw cells  
Key Words: Firing properties, V1, Renshaw cells, spinal cord

**Poster 5**
Presenter: Nicholas Jury, Neuroscience Graduate Program, University of Cincinnati  
Coauthors: Betsy A. McCormick, Nelson D. Horseman, Karen A. Gregerson  
Title: Alterations in peripheral and central serotonin physiology during lactation  
Key Words: Serotonin, Depression, Lactation, Antidepressant

**Poster 6**
Presenter: Lalitha Madhavan, Neurology, University of Cincinnati  
Coauthors: Brian F Daley, Katrina L Paumier, Timothy J Collier  
Title: Synergistic relationships between endogenous and exogenous neural precursor cells in a parkinsonian rat model  
Key Words: 
Poster 7
Presenter: Anne Christiansen, Psychiatry, University of Cincinnati
Coauthors: Yvonne M. Ulrich-Lai; Annette D. de Kloet; Amanda A. Jones; James P. Herman.
Title: Synaptic plasticity and persistent dampening of the HPA axis after chronic limited sucrose intake
Key Words:

Poster 8
Presenter: Valerie Siembab, NCBP, Wright State University
Coauthors: Dannette Richards, Maria C. Berrocal, Martyn Goulding, Francisco J. Alvarez
Title: Distinct synaptic development in Ia inhibitory interneurons compared to Renshaw cells
Key Words: Renshaw cells, IaINs, V1-derived interneurons, development of interneuronal circuitry, Ia sensory afferents, motor axon recurrent collaterals

Poster 9
Presenter: Ana Benito González, NCBP, WSU
Coauthors: Maria C. Berrocal, Martyn Goulding, Francisco J. Alvarez
Title: Renshaw cells are V1-derived neurons with a very early birthdate
Key Words: Spinal cord, interneurons, Renshaw cells

Poster 10
Presenter: Soumya Banerjee, Zoology, Miami University
Coauthors: Matt Siefert, Meredith Dorr, Joyce J. Fernandes
Title: Role of cell death gene reaper in restructuring the adult abdominal motor system
Key Words: Metamorphosis, cell death gene, terminal nerve trunk, neuron and glial cell

Poster 11
Presenter: Loren Hoffmann, Psychology, Miami University
Coauthors: Stephen D. Berry
Title: Hippocampal modulation of cerebellar learning
Key Words: associative learning, neural oscillations, synchrony, hippocampus, cerebellum, classical conditioning

Poster 12
Presenter: Parama Paul, Zoology, Miami University
Coauthors: R. Durbin, K.A. Killian
Title: Cellular identity of neural precursor cells in the adult cricket brain
Key Words: Adult neurogenesis, GFAP, BrdU, cell culture
Poster 13
Presenter: James Eliassen, Psychiatry, University of Cincinnati
Coauthors: Jane B. Allendorfer, Martine Lamy
Title: Recreational MDMA use reduces fMRI brain activation in serotonin target regions during associative learning
Key Words: MDMA, fMRI, serotonin, 5HT

Poster 14
Presenter: Ryan Walker, Zoology, Miami University
Coauthors: L.G. Isaacson
Title: Changes in ATF-3 immunoreactivity in the superior cervical ganglion following axotomy or crush injury
Key Words: sympathetic neurons, glia, neurotrophin, nerve growth factor, neurotrophin-3, post-ganglionic

Poster 15
Presenter: Stefanie Bronson, Dept of Psychiatry, Prog. in Neuroscience, Univ. of Cincinnati
Coauthors: Rebecca Ahlbrand, Paul S. Horn, Joseph R. Kern, Nicole L. Roenker, Neil M. Richtand
Title: Environmental influence on maternal response in a prenatal immune activation Model with Relevance to Schizophrenia
Key Words: schizophrenia, Poly IC, amphetamine

Poster 16
Presenter: Teresa Morris & Aminata Coulibaly, Zoology, Miami University
Coauthors: Ryan Walker, Lori Isaacson
Title: Characterization of immune cell infiltration into the adult rat superior cervical ganglion following injury
Key Words: OX42, axotomy, deafferentation

Poster 17
Presenter: Ann Hemmerle, Neurology/Neuroscience Graduate Prog, University of Cincinnati
Coauthors: JW Dickerson, BA Packard, KR Jones, CM Dolgas, JP Herman, KB Seroogy
Title: Temporal effects of chronic variable stress on dopaminergic cell degeneration and motor deficits in a partial lesion model of Parkinson’s disease
Key Words: depression, neurodegeneration, stress, behavior, substantia nigra

Poster 18
Presenter: Shweta Nayar, Zoology, Miami University
Coauthors: Emily Murphree, Rainer Reinscheid, James Janik, Phyllis Callahan
Title: Effects of OFQ/N on prolactin receptor expression in postpartum female mice
Key Words: lactation, opiates, stress, corticosterone, choroid plexus, restraint
**Poster 19**

Presenter: Rohan Modi, Biology, University of Dayton  
Coauthors: Jaison Nainaparampil  
Title: Drosophila eye model to understand the genetic basis of Alzheimer’s disease  
Key Words: Alzheimer's Disease, Drosophila, eye model

**Poster 20**

Presenter: Manu Kalyani, Zoology, Miami University  
Coauthors: Phyllis Callahan, James Janik, Emily Murphree  
Title: Prolactin receptor expression following stress in post-partum female rats  
Key Words: Lactation, corticosterone, restraint, choroid plexus, HPA-axis

**Poster 21**

Presenter: Kenneth Strauss, Neurosurgery, University of Cincinnati  
Coauthors: Ryan R. Morrison, Gail J. Pyne-Geithman, Kenneth I. Strauss  
Title: Increased cox2 with age and injury in cortex and hippocampus after traumatic brain injury.  
Key Words: Cyclooxygenase-2, aging, neuroinflammation

**Poster 22**

Presenter: Meera Seshadri, Zoology, Miami University  
Coauthors: Kathleen McEwen, Emily Murphree, Phyllis Callahan, James Janik  
Title: Effect of OFQ/N on prolactin receptor expression in the rat choroid plexus following stress.  
Key Words: HPA Axis, restraint, corticosterone, opiate

**Poster 23**

Presenter: Jonathan Dickerson, Neuroscience Program, University of Cincinnati  
Title: Modulated expression of VEGF and its receptors in a novel murine model of vascular permeability  
Key Words: Blood brain barrier, in situ hybridization, VEGF, flk-1, flt-1

**Poster 24**

Presenter: Ajay Kumar Sharma, Pharmacology & Toxicology, Wright State University  
Coauthors: Teresa L. Garrett, Shuzhen Chen, Avik Das, Wenfeng Zhang, Yanfang Chen, James B. Lucot  
Title: Effect of overexpression of human renin and angiotensinogen genes on mouse behavior  
Key Words: Renin-angiotensin system, open field test, elevated plus maze, prepulse inhibition
Poster 25
Presenter: Kumar Vishal, Zoology, Miami University
Coauthors: Krishan Badrinath, Rachel Adams, Joyce Fernandes
Title: Investigating a role for signaling pathways in adult myogenesis in Drosophila
Key Words: Myogenesis, Drosophila, FGF

Poster 26
Presenter: Dhawal Oswal, Pharmacology & Toxicology, Wright State University
Coauthors: Brent Izu, Mariana Morris, James Lucot
Title: Effect of low-dose sarin exposure on the neurochemistry of different brain structures in mice.
Key Words: Sarin, catecholamines, frontal cortex, amygdala, caudate nucleus

Poster 27
Presenter: Meghana Tare, Biology, University of Dayton
Coauthors: Madhuri Kango Singh, Amit Singh
Title: Antagonistic interaction of L and hth to define ventral eye boundary is independent of the exd function
Key Words: organogenesis, eye development, axial patterning, cell survival

Poster 28
Presenter: Jennifer McGuire, Psychiatry, University of Cincinnati
Coauthors: J.P. Herman, F.R. Sallee, R. Sah
Title: Neuropeptide Y (NPY) and posttraumatic stress disorder (PTSD): studies in a rodent model of chronic variable stress
Key Words: Neuropeptide Y, chronic stress, PTSD, rat, behavior

Poster 29
Presenter: Anne Spieles-Engemann, Neurology, University of Cincinnati
Coauthors: Michael M. Behbehani, Timothy J. Collier, Kathy Steece-Collier, Susan L. Wohlgenant, Valerie B. Thompson, Jack W. Lipton, Caryl E. Sortwell
Title: Deep brain stimulation of the subthalamic nucleus in a rodent model: effects on trophic factors
Key words: Parkinson's Disease, BDNF, Deep Brain Stimulation

Poster 30
Presenter: Oorvashi Roy Puli Gajendranath, Biology, Univ. of Dayton
Coauthors: Shiranee Gunasekera, Madhuri Kango Singh, Amit Singh
Title: A Drosophila model to study the role of the Notch ligand Serrate (Jagged-1) in growth and cancer.
Key Words: Drosophila, hippo signaling, dorso-ventral patterning, loss of function
**Poster 31**  
Presenter: Margaret Wood, Psychiatry, University of Cincinnati  
Coauthors: S. Gao, S.C. Woods, R.J. Seeley  
Title: Hypothalamic malonyl-CoA and mTOR interact to alter ingestive behavior  
Key Words: Obesity, fatty Acid, mTOR

**Poster 32**  
Presenter: Laxmi Iyer, Computer Science, University of Cincinnati  
Coauthors: Divyachapan Padur  
Title: Connectionist models of creativity  
Key Words: working memory, semantic cognition, creativity

**Poster 33**  
Presenter: Sriparna Ghosal, Psychiatry, University of Cincinnati  
Coauthors: Jennifer McGuire, Floyd R. Sallee, James P. Herman, Renu Sah  
Title: The acid sensing T-cell death associated gene (TDAG8) receptor in rodent brain: relevance in fear and panic associated behaviors  
Key Words: pH, anxiety, fear

**Poster 34**  
Presenter: Kaushal Joshi, Pharmacology & Toxicology, Wright State University  
Coauthors: Christine M. Rapp, Kathryn E. Irwin, John J. Schlager, James B. Lucot  
Title: 8-OH-DPAT PROTECTS FROM DEFICITS PRODUCED BY SARIN INDUCED CONVULSIONS  
Key Words: Sarin, CBDP, 8-OH-DPAT

**Poster 35**  
Presenter: Sara Gombash, Neuroscience, University of Cincinnati  
Title: Developmental Expression of Striatal Pleiotrophin: Relevance to Gene Transfer Therapy in a Parkinsonian Rodent Model  
Key Words: Parkinson's disease, neurotrophic factor, 6-Hydroxydopamine, neuroprotection, neurorestoration, striatum, substantia nigra, recombinant adeno-associated virus 2 serotype 1

**Poster 36**  
Presenter: Alex Blair, Zoology, Miami University  
Coauthors: Bridget Hartman, Matt Siefert and Alex Blair, Souyma Banerjee, Joyce J. Fernandes  
Title: Nervous system remodeling: the fate of BarH1 expressing motor neurons.  
Key Words: motor neurons, remodeling, BarH1, Drosophila
Poster 37
Presenter: Jonathan Flak, Psychiatry, University of Cincinnati
Coauthors: M. Ostrander, R. Jankord, M. Solomon, J. P. Herman
Title: Limbic glucocorticoid receptor expression during recovery from chronic stress
Key Words:

Poster 38
Presenter: Matt Siefert, Zoology, Miami University
Coauthors: Souyma Banerjee, Joyce J. Fernandes
Title: A single cell labeling technique to visualize motor neurons in the Drosophila.
Key Words: MARCM, Drosophila, motor neurons

Poster 39
Presenter: Julia Zavada, Zoology, Miami University
Coauthors: Jie Zhu, Katia Del Rio-Tsonis
Title: Canonical Wnt signaling regulates chicken retina regeneration
Key Words: retina, regeneration, stem cells, ciliary marginal zone

Poster 40
Presenter: Jeannine Crum, Pharmacol & Toxicol, Wright State University SOM
Coauthors: M. Di Fulvio, F.J. Alvarez-Leefmans
Title: Gene expression profile of chloride transporters and channels in DRG cells
Key Words: chloride, synaptic signaling, volume regulation

Poster 41
Presenter: Megan Onady, Zoology, Miami University
Coauthors: Tracy Haynes, Katia Del Rio-Tsonis
Title: The role of complement in retina regeneration
Key Words: retina, regeneration, complement
The Miami Valley Chapter of the Society for Neuroscience wishes to thank the following for their generous support of our 2009 Neuroscience Day:

2009 Chapter Grant Award

The College of Arts and Science
The Graduate School
The Department of Psychology
The Department of Zoology

Special thanks to Kim Hagler, Wright State University, for her help with organizing this meeting