

**OMV-SfN**

*Ohio Miami Valley  
Society for Neuroscience*

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# ***Neuroscience Day***

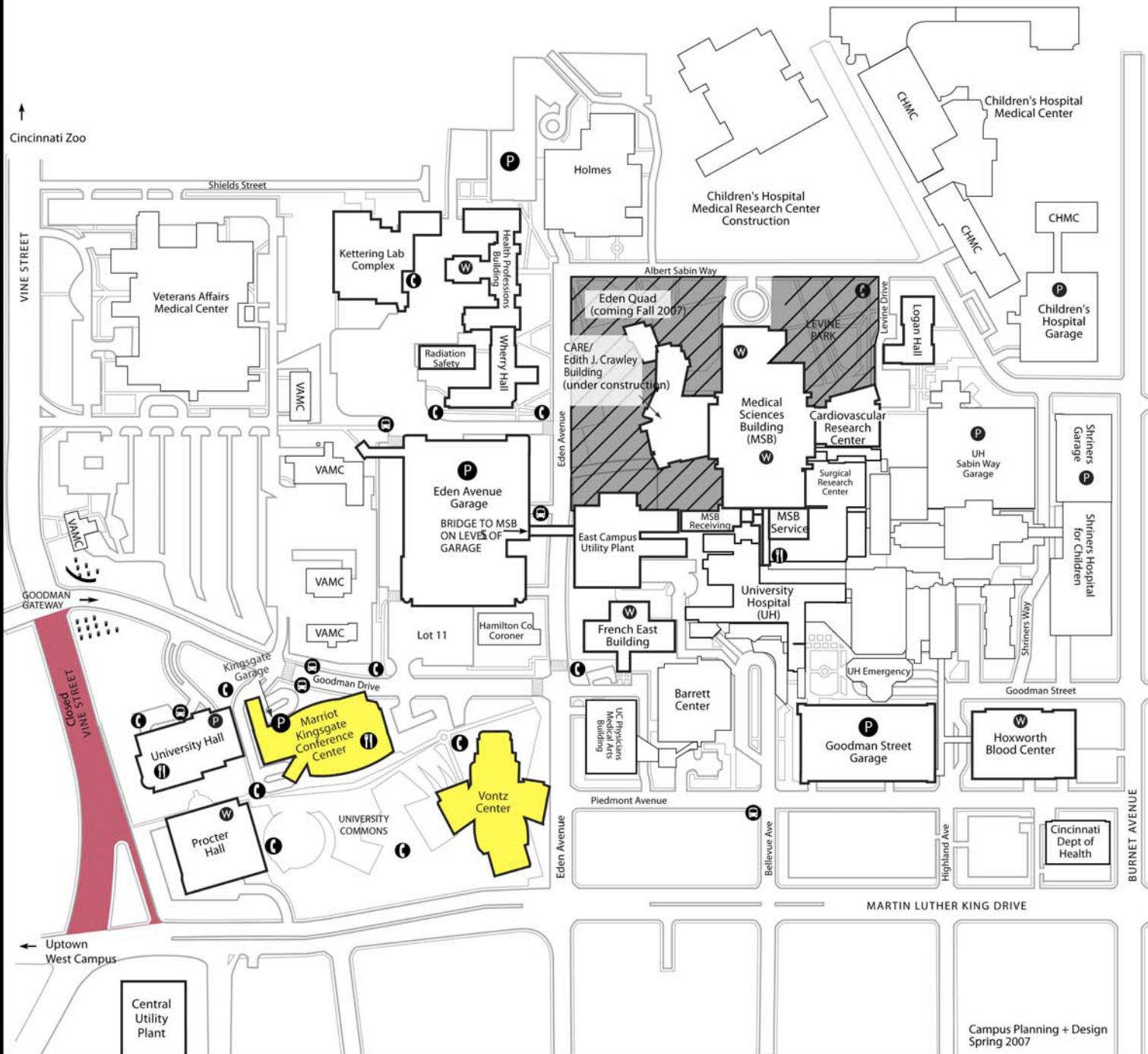
*April 30, 2007*

*University of Cincinnati*

*Cincinnati, OH*

# Uptown East Campus/ Academic Health Center Map

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**Ohio Miami Valley Chapter, Society for Neuroscience  
Officers 2007**

**President: Kim Seroogy (University of Cincinnati)**

**President-Elect: Timothy Cope (Wright State University)**

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**Past Presidents: Phyllis Callahan (Miami University)  
Robert Fyffe (Wright State University)  
James Herman (University of Cincinnati)**

**OMV-SfN 2007 Neuroscience Day**

**Local Organizing Committee:**

**Kim Seroogy  
Jim Eliassen  
Jim Herman  
Deb Cummins  
Ann Hemmerle  
Jon Dickerson  
Georgette Suidan**

**Poster Judges**

**Miami University: Jim Janik and Lori Isaacson**

**University of Cincinnati: Aaron Johnson and Jim Eliassen**

**Wright State University: Tim Cope, Robert Fyffe, and Jim Olson**

**Ohio Miami Valley Chapter, Society for Neuroscience  
Neuroscience Day – April 30, 2007  
University of Cincinnati**

<p>10:00-10:45 a.m. Vontz Center Lobby</p>	<p><b>Registration &amp; Poster Set-up</b></p>
<p>11:00 a.m.-12:15 p.m. Vontz Center Auditorium</p>	<p><b>Grass Lecture</b> Tomas Hökfelt, M.D., Ph.D. Professor of Neuroscience, Karolinska Institute Title: <i>Three Decades with Three Swedish Neuropeptides: Focus on Pain and Depression</i></p>
<p>12:30-1:30 p.m. Kingsgate Marriot Conference Center</p>	<p><b>Lunch</b> <i>(Please inform the wait staff you are part of the OMV-SfN)</i></p>
<p>1:30-3:00 p.m. Vontz Center Auditorium</p>	<p><b>Student &amp; Post-doc Presentations</b> Zihui (Joy) Deng, Wright State University <i>“SK channels in mammalian spinal motoneurons”</i></p> <p>Nkoli Ukpabi, Wright State University <i>“Vglut 1 expression in physiologically characterized IA afferents”</i></p> <p>Natalia Vergara, Miami University <i>“Retina regeneration in Xenopus: a new approach”</i></p> <p>Kelly Zullig, Miami University <i>“Orphanin FQ/Nociceptin (OFQ/N) mice and the stress response”</i></p> <p>Georgette Suidan, University of Cincinnati <i>“CD8 T cell mediated CNS vascular permeability is dependent on perforin expression”</i></p> <p>Nate Evanson, University of Cincinnati <i>“Fast feedback inhibition of the hypothalamus-pituitary-adrenal axis”</i></p>
<p>3:00-5:00 p.m. Kingsgate Marriot Conference Center</p>	<p><b>Poster Session and Reception</b> <i>(Poster Competition Award Ceremony at 4:45 p.m.)</i></p>

**Ohio Miami Valley Chapter, Society for Neuroscience  
Neuroscience Day – April 30, 2007  
University of Cincinnati**

**Poster Presentations**

**Poster 1**

Presenter: James Olson, Emergency Medicine, Wright State University  
Coauthors: none  
Title: Promoting neuroscience education with Science Olympiad  
Key Words: Education

**Poster 2**

Presenter: James Olson, Emergency Medicine, Wright State University  
Coauthors: Robert W. Putnam, Abdeslem El Idrissi  
Title: Cell swelling-induced neuronal injury mediated by oxidative stress  
Key Words: hippocampus, edema

**Poster 3**

Presenter: F. Javier Alvarez-Leefmans, Pharmacology and Toxicology,  
Boonshoft SOM, Wright State University  
Coauthors: none  
Title: The visit of Ramon y Cajal to the USA: The Clark University  
Decennial Lectures.  
Key Words: history of neuroscience, Cajal, human cortex

**Poster 4**

Presenter: Jane Allendorfer, Neuroscience/Psychiatry, University of  
Cincinnati  
Coauthors: M. Lamy, J. C. Eliassen, J. Adams, N. P. Mills, C. M. Adler, M. P.  
DelBello, J. H. Lee, D. E. Fleck, S. M. Strakowski  
Title: Attentional and emotional networks differ in manic bipolars  
compared to healthy controls.  
Key Words: bipolar, emotion, attention, anterior limbic network

**Poster 5**

Presenter: Prasanna Karunanayaka, PNR, Dept. of Radiology, Cincinnati Children's Hospital Medical Center, University of Cincinnati  
Coauthors: S. K. Holland, M. Mecoli, J. C. Egelhoff, V. J. Schmithorst, M. Altaye, D. Brown, D. I. Choo  
Title: fMRI shows differences in auditory activation between infants with normal hearing and bilateral sensorineural deafness.  
Key Words: fMRI, cochlear implantation, sedation

**Poster 6**

Presenter: Adam Deardorff, Neuroscience, Cell Biology & Physiology, Wright State University  
Coauthors: Fyffe, R.E.W.  
Title: Expression of Calretinin in the MNTB of Normal Hearing and Congenitally Deaf Mice  
Key Words: calcium, deafness, auditory

**Poster 7**

Presenter: Meagan Roddy, Biology, University of Dayton  
Coauthors: Mindy K. Call, Matthew W. Grogg, Mitsumasa Okamoto, Panagiotis Tsonis  
Title: Brain and Inner Ear Hair Cell Regeneration in the Newt  
Key Words:

**Poster 8**

Presenter: Melissa Bautista, Neuroscience, Cell Biology & Physiology, Wright State University  
Coauthors: Deardorff A.S., Fyffe R.E.W.  
Title: Synaptic Ultrastructure of Endbulbs of Held in the AVCN of Normal and Deaf (dn/dn) mice  
Key Words: ultrastructure, synapse, deafness

**Poster 9**

Presenter: Martine Lamy, Neuroscience, University of Cincinnati  
Coauthors: M. Lamy, J. Allendorfer, M. Cerullo, J. C. Eliassen, J. Adams, N. P. Mills, C. M. Adler, M. P. Delbello, J. Lee, S. M. Strakowski  
Title: Pregenual anterior cingulate cortex activation correlates with socioeconomic status in bipolar disorder  
Key Words: anterior cingulate cortex, bipolar disorder, response inhibition, socioeconomic status

**Poster 10**

Presenter: Jennifer Hollyfield, Biochemistry and Molecular Biology, Wright State University  
Coauthors: Nicholas V. Reo, Robert W. Putnam, Jay B. Dean  
Title: Studies of O<sub>2</sub> Toxicity in Rat Cortico-hippocampal Tissue Slices  
Key Words: Oxygen neurotoxicity, Nuclear Magnetic Resonance spectroscopy, Rat tissue slices, Metabolism

**Poster 11**

Presenter: Matthew Loftspring, Neurology, University of Cincinnati  
Coauthors: Shauna Beiler, Christian Beiler, Kenneth R. Wagner  
Title: Plasma proteins in edematous white matter following intracerebral hemorrhage confound immunoblots: an ELISA technique to quantify contamination  
Key Words: stroke, intracerebral hemorrhage, western blot, plasma proteins

**Poster 12**

Presenter: Katherine Eaton, Psychiatry, University of Cincinnati  
Coauthors: JP Herman, FR Sallee, R Sah  
Title: Neuropeptide Receptors in the Amygdala: effects of chronic stress  
Key Words: NPY, CRH, amygdala, stress

**Poster 13**

Presenter: Jonathan Flak, Psychiatry, University of Cincinnati  
Coauthors: Michelle M. Ostrander, Nancy K. Mueller, James P. Herman  
Title: Chronic Stress-Induced Neurotransmitter Plasticity in Stress-Integrative Neurons  
Key Words: stress, CRH, PVN, glutamate, GABA, norepinephrine

**Poster 14**

Presenter: Meera Seshadri, Zoology, Miami University  
Coauthors: Phyllis Callahan, James Janik, Emily Murphree  
Title: Role of Orphanin FQ/Nociceptin in the Neuroendocrine Response to Stress  
Key Words: Stress, OFQ/N

**Poster 15**

Presenter: Kim Seroogy, Neurology, University of Cincinnati  
Coauthors: Mark Dolgas, Kerstin Lundgren, James Herman  
Title: Chronic unpredictable stress exacerbates nigral dopaminergic neuron degeneration in a partial lesion model of Parkinson's disease.  
Key Words: chronic stress, depression, Parkinson's disease

**Poster 16**

Presenter: Deborah S. Maken, Psychology, Wright State University  
Coauthors: Michael B. Hennessy  
Title: Social Buffering of the Plasma Cortisol Response to Novelty in Maturing Guinea Pigs  
Key Words: Hypothalamic-pituitary-adrenal, Cortisol, Attachment, Social Experience, Weaning, Novelty, Guinea Pig

**Poster 17**

Presenter: Jennifer McGuire, Molecular and Developmental Biology, University of Cincinnati  
Coauthors: Eaton KL, Sallee FR, Sah R  
Title: Cloning and Expression of the T-cell death-associated gene (TDAG8) receptor in rat brain.  
Key Words: GPCR, glucocorticoids, amygdala

**Poster 18**

Presenter: Georgette Suidan, Neurology, University of Cincinnati  
Coauthors: Yi Chen, Istvan Pirko, Aaron J. Johnson  
Title: CD8 T cell-mediated fatal CNS vascular permeability is dependent of perforin expression  
Key Words: Blood Brain Barrier, Tight junctions, Vascular permeability, CD8 T cells, Perforin

**Poster 19**

Presenter: Loren Hoffmann, Psychology, Miami University  
Coauthors: Mauldin, K.N., and Berry, S.D.  
Title: Impact of hippocampal state on cerebellar physiology during theta-triggered classical conditioning in the rabbit  
Key Words:

**Poster 20**

Presenter: Jim Eliassen, Psychiatry/Ctr. for Imaging Res., University of Cincinnati  
Coauthors: Daniel P. Bullard, Martine Lamy, Jing-Huei H. Lee, Stephen M. Strakowski  
Title: Experience Dependent and Task-Familiarity Dependent Changes in Brain Activation Differ During Visual-Motor Associative Learning  
Key Words: associative learning, fMRI, operant conditioning

**Poster 21**

Presenter: Kristin Mauldin, Psychology, Miami University  
Coauthors: Robin D. Thomas, Stephen D. Berry  
Title: Effects of Anterior Cingulate Cortex Lesions on Interdimensional Transfer and Reversal in a Bilateral Classical Conditioning Task  
Key Words: Reversal, Interdimensional Transfer, Classical Conditioning, Anterior Cingulate Cortex, Rabbit, Categorization

**Poster 22**

Presenter: Timothy Collier, Neurology, University of Cincinnati  
Coauthors: J.W. Lipton, B.F. Daley, S. Palfi, Y. Chu, C.E. Sortwell, R.A.E. Bakay, J.R. Sladek Jr., and J.H. Kordower  
Title: Diminished neural compensatory mechanisms during aging as a prelude to parkinsonism  
Key Words: nonhuman primate, MPTP, aging, dopamine

**Poster 23**

Presenter: Paul Nardelli, Neurosciences, Cell Biology and Physiology, Wright State University  
Coauthors: T.C. Cope and R.K. Powers  
Title: Graded amplification of synaptic inputs: evidence from paired motor axon recordings  
Key Words: motoneuron, dendrite, ion channel

**Poster 24**

Presenter: Wenrui Xie, Anesthesiology, University of Cincinnati  
Coauthors: Hui-Qing Li, Judith A. Strong, Jun-Ming Zhang  
Title: Early nerve blockade reduced axotomy-induced sympathetic sprouting around spontaneously active sensory neurons  
Key Words:

**Poster 25**

Presenter: Nkoli Ukpabi, Neuroscience Cell Biology and Physiology, Wright State University  
Coauthors: Goss L, Zerda R, Alvarez FJ, Cope TC  
Title: Glutamate Transport and GABA Synthesis at Synapses of Physiologically-Characterized Spindle Afferents  
Key Words: glutamate, gaba, vglut, gad65, muscle spindle, primary afferents

**Poster 26**

Presenter: Jennifer O'Malley, Neurology, University of Cincinnati  
Coauthors: Nathan Levine, Timothy Collier, Caryl Sortwell, Kathy Steece-Collier  
Title: Impact of host age on graft-induced dyskinesias in a rat model of parkinsonism  
Key Words:

**Poster 27**

Presenter: Gail Pyne-Geithman, Neurology, University of Cincinnati  
Coauthors: Danielle Caudell, Matthew Loftspring, Joseph F. Clark  
Title: Glutathione Peroxidase Activity in Cerebral Vasospasm After Subarachnoid Hemorrhage  
Key Words: Subarachnoid hemorrhage, stroke, oxidative stress, glutathione, cerebrovascular disease

**Poster 28**

Presenter: Katrina Paumier, Neurology, University of Cincinnati  
Coauthors: Sortwell CE, Daley BF, Johe K., and Collier TJ  
Title: Comparison of Undifferentiated Human Spinal and Midbrain Progenitor Cells and their Ability to Preserve Host Dopamine Neurons in a Rat Model of Parkinson's Disease  
Key Words: Stem cell, progenitor cell, neuroprotection, Parkinson's disease, transplantation

**Poster 29**

Presenter: Zhihui Deng, NCBP, Wright State University  
Coauthors: S. Romer, T.C. Cope, R.E.W. Fyffe  
Title: Small conductance Ca<sup>++</sup> activated K<sup>+</sup> (SK) channels in mammalian spinal motoneurons  
Key Words: SK channel, motoneuron, afterhyperpolarization (AHP)

**Poster 30**

Presenter: Alessandro Cancelliere, Neuroscience, University of Cincinnati  
Coauthors: K. Somekawa, M. Nakafuku  
Title: Molecular mechanisms underlying the restriction of regenerative responses of neural stem/progenitor cells in the adult mammalian brain  
Key Words: Neurogenesis, ischemia, migration, neural/ stem progenitor cells, IGF-I

**Poster 31**

Presenter: Sriparna Ghosal, Center for Neuroscience / Department of Zoology, Miami University  
Coauthors: Ryan Walker, Lori G. Isaacson  
Title: In Vitro Bioassays to Compare the Growth-Promoting Properties of Mature NGF and ProNGF Species  
Key Words: Neurotrophin, Sympathetic, sensory neurite outgrowth

**Poster 32**

Presenter: Baotong Xie, Development Division, Cincinnati Children's Hospital Medical Center  
Coauthors: none  
Title: Role of Senseless in late color photoreceptor differentiation in Drosophila  
Key Words: Senseless, photoreceptor, Drosophila

**Poster 33**

Presenter: Soumya Banerjee, Zoology, Miami University  
Coauthors: Joyce J. Fernandes  
Title: Remodeling of the Drosophila CNS During Metamorphosis  
Key Words:

**Poster 34**

Presenter: Robert Hufnagel, Developmental Biology, University of Cincinnati and Cincinnati Children's Hospital  
Coauthors: Amy N Riesenberger, Sara M Saul, Nadean L Brown  
Title: Developing visual system revealed: a transgenic study of Math5 regulation  
Key Words: Math5, Math1, Pax6, visual system, optic nerve, cochlear nucleus

**Poster 35**

Presenter: Christian Gutierrez, Zoology, Miami University  
Coauthors: Jason R. Spence, Mayur Madhavan, and Katia Del-Rio Tsonis  
Title: Effects of Shh on Pax6 and Proliferation during Transdifferentiation  
Key Words: retina regeneration, transdifferentiation

**Poster 36**

Presenter: Shihong Mao, Pharmacology and Toxicology, Wright State University  
Coauthors: Hector Rocha and F. Javier Alvarez-Leefmans  
Title: Na<sup>+</sup>,K<sup>+</sup>,2Cl cotransport and other mechanisms determining intracellular Cl<sup>-</sup> in rat primary afferent neurons  
Key Words: NKCC1, Primary afferent depolarization, presynaptic inhibition, Cl<sup>-</sup>, nociceptive processing, DRG.

**Poster 37**

Presenter: Cynthia Walter and Brian Murphy, Anesthesia, Cincinnati Children's Hospital Medical Center, UC Neuroscience Graduate Program  
Coauthors: Raymund Y.K. Pun, Anne L. Spieles-Engemann, and Steve C. Danzer  
Title: Immature, but not Mature, Granule Cells Underlie Hilar Basal Dendrite Formation in Epilepsy  
Key Words: Basal dendrites, Dentate gyrus, Epilepsy, Migration, Neurogenesis, Transplantation

**Poster 38**

Presenter: Tracy Haynes, Zoology, Miami University  
Coauthors: Christian Gutierrez, Juan-Carlos Aycinena, Panagiotis Tsonis, Katia Del Rio-Tsonis  
Title: BMP can induce retinal progenitor cells during retina regeneration  
Key Words: retina, regeneration, BMP, stem/progenitor cells

**Poster 39**

Presenter: Ann Hemmerle, Neurology/Neuroscience Graduate Program, University of Cincinnati  
Coauthors: J.W. Dickerson, N.R. Herring, T.L. Schaefer, C.V. Vorhees, M.T. Williams, K.B. Seroogy  
Title: Increased expression of BDNF and trkB mRNAs in adult rat prefrontal cortex and/or striatum after MDMA administration  
Key Words: neurotrophic factors, MDMA, BDNF, plasticity

**Poster 40**

Presenter: Kaushik Ghosal, Zoology, Miami University  
Coauthors: Priya Kumar, Kathleen A. Killian  
Title: Effects of Social Rank on Cell Proliferation and Maturation in the Adult Brain.  
Key Words: neurogenesis, proliferation, BrdU, social rank, maturation

**Poster 41**

Presenter: Kathleen Dominguez, Dept. of Neuroscience, Cell Biology and Physiology, Wright State University  
Coauthors: Z. Deng, S. Romer, R. Fecher, T. Cope, R.E.W. Fyffe  
Title: Modulation of Kv2.1 Channel Localization on Spinal Motoneurons  
Key Words: Kv2.1, Potassium channel, Motoneurons, Nerve Injury

**Poster 42**

Presenter: Jason Barrera, Psychiatry, University of Cincinnati  
Coauthors: Stephen C. Woods, Randy J. Seeley  
Title: Central GLP-1 Receptor Antagonism Does Not Block Peripheral Exendin-4-Induced Anorexia  
Key Words:

**Poster 43**

Presenter: Tomas Garzon-Muvdi, Pharmacology and Toxicology, Boonshoft SOM, Wright State University  
Coauthors: Shihong Mao, Karin Flues, Eric Delpire, Francisco J. Alvarez, Mauricio DiFulvio, and F. Javier Alvarez-Leefmans.  
Title: Intracellular chloride regulation in somatosensory primary afferent neurons during postnatal maturation  
Key Words: NKCC1, KCCs, Primary afferent depolarization, chloride, presynaptic inhibition, DRG

**Poster 44**

Presenter: Jeremiah McDole, Neurology, University of Cincinnati  
Coauthors: Aaron Johnson  
Title: Axonal Loss in the Theiler's Murine Encephalomyelitis Virus Model of Multiple Sclerosis  
Key Words: Multiple Sclerosis, Theiler's virus, axon

**Poster 45**

Presenter: Guangze Li, Emergency Medicine, Wright State University  
School of Medicine  
Coauthors: James E. Olson  
Title: Potassium and calcium regulated cell death induced by hydrogen peroxide in the human glioblastoma cell line, U-87  
Key Words: Oxidative injury, Apoptosis, Ion channels, LDH release

**Poster 46**

Presenter: Jun-Gang Wang, Anesthesiology, University of Cincinnati  
Coauthors: Judith A. Strong, Wen-ru Xie, Jun-Ming Zhang  
Title: Chronic GRO/KC Exposure Enhances Voltage-Dependent Sodium Currents in Small Diameter Rat Sensory Neurons  
Key Words: dorsal root ganglion, sodium channel, inflammation, pathological pain

**Poster 47**

Presenter: Mark Rich, NCBP, Wright State University  
Coauthors: Gregory Filatov  
Title: Hyperpolarized shift in the voltage dependence of Nav1.4 in an acquired disease of muscle excitability  
Key Words: myopathy, sodium channel, critical illness, action potential

**Poster 48**

Presenter: Mark Rich, NCBP, Wright State University  
Coauthors: Xueyong Wang, Martin J. Pinter, Russell W. Teichert, Baldomero M. Olivera, Kathrin L. Engisch  
Title: Upregulation of fetal type acetylcholine receptors contribute to homeostatic regulation of synaptic strength at the mammalian neuromuscular junction *in vivo*  
Key Words: synapse, acetylcholine, homeostatic, neuromuscular junction

**Poster 49**

Presenter: Brian Terpstra, Neurology, University of Cincinnati  
Coauthors: J.W. Lipton, K.L. Paumier, N.D. Levine, S.L Wohlgenant, K.A. Lynch, and C.E. Sortwell  
Title: The purine nucleoside inosine is neurotrophic for mesencephalic dopamine neurons *in vitro*.  
Key Words: Inosine, Neurodegeneration, Parkinson's Disease

# Notes

**The Ohio Miami Valley Chapter of the  
Society for Neuroscience wishes to thank  
the following for their generous support of  
our 2007 Neuroscience Day:**



Grass Traveling Scientist  
Lecture Program



College of Medicine  
Dean's Office  
The Neuroscience Center  
Department of Neurology  
Department of Neurosurgery  
Department of Psychiatry



Center for Neuroscience and Behavior  
Department of Psychology  
Department of Zoology

