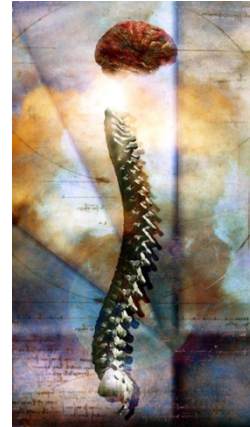




## Graduate Program in Neuroscience

Clinical Sciences North, MC526 – Suite 300 CSN  
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### Meet the Neuroscience Faculty

Neuroscience at the University of Illinois at Chicago has a long and proud history. The tradition of excellence in both basic research and clinical practice continues today. The newly established *Graduate Program in Neuroscience* brings scientists and clinicians from across the campus together to advance our understanding of the brain, provide new treatments, and hope to the community and to train the next generation of neuroscientists. The interdisciplinary program unites faculty from several colleges and academic disciplines within UIC who have long excelled in **cellular and molecular, systems and cognitive, behavioral and applied neuroscience**. The newest addition, the **UIC Imaging Center**, is an internationally renowned resource for functional brain imaging in both animal models and humans.

Here are brief descriptions of the UIC Neuroscience Program's faculty members including their specialties and recent publications.

**Kenneth R. Alexander, Ph.D.**

[kennalex@uic.edu](mailto:kennalex@uic.edu)

Professor of Ophthalmology and Visual Sciences

*Visual neuroscience, visual sensitivity regulation, contrast perception, retinal degenerations, psychophysics, electroretinography*

#### Recent Publications:

- Alexander KR, Barnes CS, Fishman GA, Pokorny J, Smith VC. Contrast sensitivity deficits in inferred magnocellular and parvocellular pathways in retinitis pigmentosa. *Invest Ophthalmol Vis Sci.* 2004 45(12):4510-4519.
- Rotenstreich Y, Fishman GA, Lindeman M, Alexander KR. The application of chromatic dark-adapted kinetic perimetry to retinal diseases. *Ophthalmology* 2004 111(6):1222-1227.
- Alexander KR, Barnes CS, Fishman GA, Pokorny J, Smith VC. Contrast-processing deficits in melanoma-associated retinopathy. *Invest Ophthalmol Vis Sci.* 2004 45(1):305-310.

**Simon Alford, Ph.D.** sta@uic.edu  
Associate Professor of Biological Sciences; Co-Director, Neuroscience Program  
*Receptor-mediated control of neurotransmitter release*

Recent Publications:

- Schwartz EJ, Gerachshenko T, Alford S. 5-HT prolongs ventral root bursting via presynaptic inhibition of synaptic activity during fictive locomotion in lamprey. *J Neurophysiol.* 2005 Feb;93(2):980-8.
- Viana di Prisco G, Alford S. Quantitative investigation of calcium signals for locomotor pattern generation in the lamprey spinal cord. *J Neurophysiol.* 2004 Sep;92(3):1796-806.
- Alford S, Schwartz E, Viana di Prisco G. The pharmacology of vertebrate spinal central pattern generators. *Neuroscientist.* 2003 Jun;9(3):217-28.

**Conwell H. Anderson, Ph.D.** conwell@uic.edu  
Associate Professor of Anatomy & Cell Biology; Director of Graduate Studies, Department of Anatomy & Cell Biology  
*Neuroendocrinology, Hypothalamus, Neuroanatomy*

**Jonathan J. Art, PhD.** jart@uic.edu  
Associate Professor of Anatomy & Cell Biology  
*Biophysical Properties of Cochlear Hair Cells*

Recent Publications:

- Chen L, Kawano T, Bajic S, Kaziro Y, Itoh H, Art JJ, Nakajima Y, Nakajima S. A glutamate residue at the C terminus regulates activity of inward rectifier K<sup>+</sup> channels: implication for Andersen's syndrome. *Proc Natl Acad Sci U S A.* 2002 Jun 11;99(12):8430-5.
- Boyer C, Art JJ, Dechesne CJ, Lehouelleur J, Vautrin J, Sans A. Contribution of the plasmalemma to Ca<sup>2+</sup> homeostasis in hair cells. *J Neurosci.* 2001 Apr 15;21(8):2640-50.
- Jones EM, Gray-Keller M, Art JJ, Fettiplace R. The functional role of alternative splicing of Ca(2+)-activated K<sup>+</sup> channels in auditory hair cells. *Ann N Y Acad Sci.* 1999 Apr 30;868:379-85.

**Alexander S. Aruin, Ph.D.** aaruin@uic.edu  
Associate Professor of Physical Therapy  
*Central motor control mechanisms; Effect of motor action that induces a perturbation, the magnitude of perturbation, and a postural task upon anticipatory postural adjustments in the course of therapy for individuals with neurological impairments and for elderly people*

Recent Publications:

- Aruin AS, Shiratori T. The effect of the amplitude of motor action on anticipatory postural adjustments. *J Electromyogr Kinesiol.* 2004 14(4):455-462.
- Shiratori T, Aruin AS. Anticipatory postural adjustments associated with rotational perturbations while standing on fixed and free-rotating supports. *Clin Neurophysiol.* 2004 115(4):797-806.
- Aruin AS, Hanke TA, Sharma A. Base of support feedback in gait rehabilitation. *Int J Rehabil Res.* 2003 26(4):309-312.

**Verna L. Baughman, MD**

[vbaughma@uic.edu](mailto:vbaughma@uic.edu)

Professor of Anesthesiology, Neuroanesthesia section

*Protective effects of anesthetic agents and other drugs during cerebral ischemia; clinical neuroanesthesia*

Recent Publications:

- Xu HL, Ye S, Baughman VL, Feinstein DL, Pelligrino DA. The role of the glia limitans in ADP-induced pial arteriolar relaxation in intact and ovariectomized female rats. *Am J Physiol Heart Circ Physiol*. 2004 Sep 16
- Xu HL, Wolde HM, Gavriyuk V, Baughman VL, Pelligrino DA. Cyclic AMP modulates cGMP-mediated cerebral arteriolar relaxation in vivo. *Am J Physiol Heart Circ Physiol*. 2004 Jul 22
- Xu HL, Baughman VL, Pelligrino DA. Estrogen replacement treatment in diabetic ovariectomized female rats potentiates postschismic leukocyte adhesion in cerebral venules. *Stroke* 2004 35(8):1974-8.

**Jeffrey R. Bishop, PharmD, BCPP**

[jbishop@uic.edu](mailto:jbishop@uic.edu)

Assistant Professor of Pharmacy Practice and Psychiatry

Psychopharmacology and Pharmacogenomics of antipsychotic and antidepressant medications in psychotic and mood disorders

Recent Publications

- **Bishop JR**, Wang K, Moline J, Ellingrod VL. Association analysis of the metabotropic glutamate receptor type 3 gene (*GRM3*) with schizophrenia. *Psychiatr Genet* (In Press)
- Leckband SG, **Bishop JR**, Ellingrod VL. Pharmacogenomics in Psychiatry. *J Pharm Practice* (In Press).
- Ellingrod VL, **Bishop JR**, Moline J, Miller D. Leptin and leptin receptor gene polymorphisms and increases in body mass index (BMI) from olanzapine treatment in persons with schizophrenia. *Psychopharmacol Bull* 2007; 40:57-62.
- Lin Y-C, Ellingrod VL, **Bishop JR**, Miller D. The relationship between olanzapine and P-glycoprotein (PGP) in schizophrenia. *Ther Drug Monit* 2006; 28:668-672.
- **Bishop JR**, Ellingrod VL, Moline J, Miller D. Association between G-protein beta subunit (*GNB3*) polymorphisms and weight gain and clinical response to olanzapine. *Med Sci Monit* 2006; 12:47-50
- **Bishop JR**, Ellingrod VL, Moline J, Miller D. Association between the polymorphic *GRM3* gene and olanzapine response. *Schizophr Res* 2005; 77:253-260.

**Ernesto Bongarzone, Ph.D.**

[ebongar@uic.edu](mailto:ebongar@uic.edu)

Assistant Professor, Anatomy and Cell Biology

**Scott T. Brady, Ph.D.**

stbrady@uic.edu

Professor and Head of Anatomy & Cell Biology

*Molecular Motors and Mechanisms of Axonal Transport; Neuronal Cytoskeleton; Glial Modulation of Neurons; Effects of Physiological Stress on neurons; Neurodegeneration*

Recent Publications:

- Lazarov O, Morfini GA, Lee EB, Farah MH, Szodorai A, DeBoer SR, Koliatsos VE, Kins S, Lee VM, Wong PC, Price DL, Brady ST, Sisodia SS. Axonal transport, amyloid precursor protein, kinesin-1, and the processing apparatus: revisited. *J Neurosci*. 2005 Mar 2;25(9):2386-95.
- Morfini G, Pigino G, Brady ST. Polyglutamine expansion diseases: failing to deliver. *Trends Mol Med*. 2005 Feb;11(2):64-70.
- Francis F, Roy S, Brady ST, Black MM. Transport of neurofilaments in growing axons requires microtubules but not actin filaments. *J Neurosci Res*. 2005 Feb 15;79(4):442-50.

**Bonnie J. Breitmayer, Ph.D.**

bonnieb@uic.edu

Associate Professor of Public Health, Mental Health, and Administrative Nursing

*Normal Human Development, the Development of Children "at Risk," Child-Caregiver Interaction, Children's Social Competence and Child Adolescent Psychopathology*

Recent Publications:

- Knafel KA, Ayres L, Gallo AM, Zoeller LH, Breitmayer BJ. Learning from stories: parents' accounts of the pathway to diagnosis. *Pediatr Nurs*. 1995 21(5):411-415.
- Gallo AM, Breitmayer BJ, Knafel KA, Zoeller LH. Mothers' perceptions of sibling adjustment and family life in childhood chronic illness. *J Pediatr Nurs*. 1993 8(5):318-324.
- Pizzello L, Breitmayer BJ. Evaluation of treatment integrity on a child psychiatric unit: an illustration. *J Child Adolesc Psychiatr Ment Health Nurs*. 1993 6(3):15-22.

**Steven U. Brint, M.D.**

sbrint@uic.edu

Associate Professor of Neurology and Rehabilitation

*Stroke, neuroimaging, cerebral ischemia*

Recent Publications:

- Fiat D, Hankiewicz J, Liu S, Trbovic S, Brint S. 17O magnetic resonance imaging of the human brain. *Neurol Res*. 2004 26(8):803-808.
- Jao CS, Hier DB, Brint SU. The display of photographic-quality images on the Web: a comparison of two technologies. *IEEE Trans Inf Technol Biomed*. 1999 3(1):70-73.
- Jao CS, Brint SU, Hier DB. Applying wavelet-transform on Internet-based radiologic brain images. *Comput Methods Programs Biomed*. 1999 58(3):239-244.

**Teresita L. Briones, Ph.D.**

tbriones@uic.edu

Research Assistant Professor of Medical-Surgical Nursing

*Brain plasticity, the overall mechanisms that govern brain flexibility and mutability. Mechanisms of neurodegeneration following cerebral ischemia at the cellular and systems level; Integrated response of the brain following cerebral ischemia; Neurogenesis (formation of new neurons) following cerebral ischemia; Environmental influence on the link between behavior and gene expression*

Recent Publications:

- Briones TL, Suh E, Jozsa L, Rogozinska M, Woods J, Wadowska M. Changes in number of synapses and mitochondria in presynaptic terminals in the dentate gyrus following cerebral ischemia and rehabilitation training. *Brain Res.* 2005 Feb 1;1033(1):51-7.
- Briones TL, Suh E, Hattar H, Wadowska M. Dentate gyrus neurogenesis after cerebral ischemia and behavioral training. *Biol Res Nurs.* 2005 Jan;6(3):167-79.
- Briones TL, Klintsova AY, Greenough WT. Stability of synaptic plasticity in the adult rat visual cortex induced by complex environment exposure. *Brain Res.* 2004 Aug 20;1018(1):130-5.

**Mark S. Brodie, Ph.D.**

mbrodie@uic.edu

Research Associate Professor

*Interactions of neurotransmitters in the central nervous system*

Recent Publications:

- Budygin, E.A., Brodie, M.S., Sotnikova, T.D., Mateo, Y., John, C.E., Cyr, M., Gainetdinov, R.R., Caron, M.G., and Jones, S.R. Dissociation of dopamine transporter-mediated and rewarding properties of amphetamine. *Proceedings of the National Academy of Sciences*, 2004 101 (20): 7781-7786.
- Buck, K.J., Reilly, M.T., Rogers, L.M., Szeliga, K., Grant K., and Brodie, M.S., Serotonin 5-HT2 receptors and alcohol: Reward, withdrawal and discrimination. *Alcoholism: Clinical and Experimental Research*, 2004 28(2): 211-216.
- Appel, S.B., Liu, Z.P., McElvain, M.A. and Brodie, M.S. Ethanol excitation of dopaminergic ventral tegmental area neurons is blocked by quinidine. *Journal of Pharmacology and Experimental Therapeutics*, 2003 306 (2): 437-446.

**Sandy Burgener, Ph.D.**

sburgenr@uic.edu

Associate Professor of Medical-Surgical Nursing

*Examination of variables associated with quality-of-life in persons with dementia (PWD)*

Recent Publications:

- Bakas T, Burgener SC. Predictors of emotional distress, general health, and caregiving outcomes in family caregivers of stroke survivors. *Top Stroke Rehabil.* 2002 9(1):34-45.
- Burgener SC, Twigg P. Interventions for persons with irreversible dementia. *Annu Rev Nurs Res.* 2002 20:89-124. Review.
- Burgener SC, Moore SJ. The role of advanced practice nurses in community settings. *Nurs Econ.* 2002 20(3):102-108.

**Suzann K. Campbell, Ph.D.**

skc@uic.edu

Professor and Head of Physical Therapy

*Development of motor control in infants at risk for CNS dysfunction; efficacy of physical therapy in reducing effects of brain insults in newborns*

Recent Publications:

- Barbosa VM, Campbell SK, Sheftel D, Singh J, Beligere N. Longitudinal performance of infants with cerebral palsy on the Test of Infant Motor Performance and on the Alberta Infant Motor Scale. *Phys Occup Ther Pediatr.* 2003 23(3):7-29.
- Campbell SK. Markers of minor brain damage are associated with developmental performance in preschool children. *Evid Based Ment Health.* 2003 ;6(1):19.
- Campbell SK, Wright BD, Linacre JM. Development of a functional movement scale for infants. *J Appl Meas.* 2002 3(2):190-204.

**C. Sue Carter, Ph.D.**

scarter@psych.uic.edu

Professor of Psychiatry ; Co-director, The Brain-Body Center

*Assessment and development of translational animal models for understanding the possible role of neuropeptide hormones, including oxytocin, vasopressin and CRF, in human disorders such as autism or anxiety*

Recent Publications:

- Carter, C. S., and Altemus, M..Oxytocin, vasopressin and depression. 2005 In: *Current and Future Developments in Psychopharmacology.* Eds: J.A. Den Boer, M.S George, G. J. ter Horst. Amsterdam, Benecke N.I. pp. 201-216
- Yamamoto, Y., Cushing, B.S., Kramer, K.M., Epperson, P.D., Hoffman, G.E., and Carter, C. S. Neonatal manipulations of oxytocin alter expression of oxytocin and vasopressin immunoreactive cells in the paraventricular nucleus of the hypothalamus in a gender-specific manner. 2004 *Neuroscience* 125:947-955.
- Bales, K.L., Kim, A.J., Lewis-Reese, A.D, and Carter, C.S. Both oxytocin and vasopressin may influence alloparental care in male prairie voles. 2004 *Hormones and Behavior* 45:454-361.

**Donald A. Chambers, Ph.D.**

donc@uic.edu

Professor of Biochemistry and Molecular Genetics

*Neuro-immune interactions, molecular medicine*

Recent Publications:

- Jones JM, Cohen RL, Chambers DA. Collagen modulates gene activation of plasminogen activator system molecules. *Exp Cell Res.* 2002 Nov 1;280(2):244-54. Erratum in: *Exp Cell Res.* 2003 Mar 10;284(1):160-161.
- Schauenstein K, Felsner P, Rinner I, Liebmann PM, Stevenson JR, Westermann J, Haas HS, Cohen RL, Chambers DA. In vivo immunomodulation by peripheral adrenergic and cholinergic agonists/antagonists in rat and mouse models. *Ann N Y Acad Sci.* 2000;917:618-27.
- Schauenstein K, Rinner I, Felsner P, Liebmann P, Haas HS, Wolfler A, Stevenson R, Westermann J, Cohen RL, Chambers DA. The dialogue between the brain and immune system involves not only the HPA-axis. *Z Rheumatol.* 2000;59 Suppl 2:II/49-53.

**Neelima B. Chauhan**, Ph.D.

nchauhan@uic.edu

Research Assistant Professor of Anesthesiology

*Preventing and reversing Alzheimer's pathogenesis in transgenic models of Alzheimer's disease by intracerebroventricular passive immunization combined with dietary statins, Propentofylline, or herbal alternatives in reducing cerebral amyloid burden and tau phosphorylation.*

Recent Publications:

- Chauhan NB, Siegel GJ. Efficacy of anti-Abeta antibody isotypes used for intracerebroventricular immunization in TgCRND8. *Neurosci Lett.* 2005 Mar 3;375(3):143-7.
- Chauhan NB, Siegel GJ, Feinstein DL. Propentofylline attenuates tau hyperphosphorylation in Alzheimer's Swedish mutant model Tg2576. *Neuropharmacology.* 2005 Jan;48(1):93-104.
- Chauhan NB, Siegel GJ. Intracerebroventricular passive immunization in transgenic mouse models of Alzheimer's disease. *Expert Rev Vaccines.* 2004 Dec;3(6):717-25.

**Mary Ann Cooper**, M.D.

macooper@uic.edu

Professor of Emergency Medicine and of Bioengineering

*Lightning Injury Research, neurocognitive effects, brain injury, chronic pain*

Recent Publications:

- Cooper MA, Marshburn S. Lightning strike and electric shock survivors, international. *NeuroRehabilitation.* 2005 20(1):43-47.
- Monahan MT, Cooper MA. Chemical peritonitis from champagne. *J. Emerg Med.* 2004 27(3):261-264.
- Bailey DM, Bartsch P, Cooper MA. Electron paramagnetic resonance spectroscopic evidence of increased free radical generation and selective damage to skeletal muscle following lightning injury. *High Alt Med Biol.* 2003 4(3):281-289.

**Daniel M. Corcos**, Ph.D.

dcorcos@uic.edu

Professor of Movement Sciences, of Bioengineering, Physical Therapy and Neurology

*Neural control of human movement in both health and disease; effects of Deep Brain Stimulation on patients with Parkinson's Disease*

Recent Publications:

- Vaillancourt DE, Mayka MA, Corcos DM. Intermittent visuomotor processing in the human cerebellum, parietal cortex, and premotor cortex. *J Neurophysiol.* 2006 95(2):922-931.
- Vaillancourt DE, Prodoehl J, Sturman MM, Bakay RA, Metman LV, Corcos DM. Effects of deep brain stimulation and medication on strength, bradykinesia, and electromyographic patterns of the ankle joint in Parkinson's disease. *Mov Disord.* 2006 21(1):50-58.
- Shapiro MB, Prodoehl J, Corcos DM, Gottlieb GL. Muscle activation is different when the same muscle acts as an agonist or an antagonist during voluntary movement. *J Mot Behav.* 2005 37(2):135-145.

**Yogesh Dwivedi, Ph.D.**

[ydwivedi@uic.edu](mailto:ydwivedi@uic.edu)

Assistant Professor of Pharmacology in Psychiatry

*neurobiological abnormalities associated with suicide and depression and precise mechanism of action of psychoactive drugs at molecular level*

Recent Publications:

- Pandey GN, Dwivedi Y. Focus on protein kinase A and protein kinase C, critical components of signal transduction system, in mood disorders and suicide. *Int J Neuropsychopharmacol.* 2005 Mar;8(1):1-4.
- Dwivedi Y, Mondal AC, Rizavi HS, Shukla PK, Pandey GN. Single and repeated stress-induced modulation of phospholipase C catalytic activity and expression: role in LH behavior. *Neuropsychopharmacology.* 2005 Mar;30(3):473-83.
- Dwivedi Y, Mondal AC, Payappagoudar GV, Rizavi HS. Differential regulation of serotonin (5HT)<sub>2A</sub> receptor mRNA and protein levels after single and repeated stress in rat brain: role in learned helplessness behavior. *Neuropharmacology.* 2005 Feb;48(2):204-14.

**Herbert H. Engelhard, M.D., Ph.D.**

[hengel@uic.edu](mailto:hengel@uic.edu)

Associate Professor of Neurosurgery, Molecular Genetics and Bioengineering

*Treatment of operable single brain metastasis with chemotherapy and irradiation; innovative brain tumor therapies*

Recent Publications:

- Jho DH, Engelhard HH, Gandhi R, Chao J, Babcock T, Ong E, Espat NJ. Ciliary neurotrophic factor upregulates ubiquitin-proteasome components in a rat model of neuronal injury. *Cytokine.* 2004 27(6):142-151.
- Engelhard HH, Stelea A, Mundt A. Oligodendroglioma and anaplastic oligodendroglioma: clinical features, treatment, and prognosis. *Surg Neurol.* 2003 60(5):443-456.
- Jho DH, Engelhard HH, Juarez A, Espat NJ. Simplified surgical placement and stabilization methods for intracerebroventricular cannulas in rat lateral ventricles. *Lab Anim (NY).* 2003 32(9):43-48.

**Christopher Engeland, Ph.D.**

[engeland@uic.edu](mailto:engeland@uic.edu)

Research Assistant Professor of Periodontics in Dentistry

*Understanding the roles of stress, depression, gender and aging on immune function (e.g., wound healing, inflammation), and the mechanisms underlying immune impairments in both humans and animals.*

Recent Publications

- **Engeland CG**, Bosch JA, Cacioppo JT and Marucha PT. (2006) Mucosal wound healing: The roles of age and gender. *Archives of Surgery*, 141 (12), 1193-1197; Invited critique 1198.
- Eijkelkamp N, **Engeland CG**, Gajendrareddy PK and Marucha PT. (2007) Restraint stress impairs early wound healing in mice via a-adrenergic but not b-adrenergic receptors. *Brain, Behavior, and Immunity*, 21 (4), 409-412.
- Hawkey LC, Bosch JA, **Engeland CG**, Marucha PT and Cacioppo JT. (2007) Loneliness, dysphoria, stress, and immunity: A role for cytokines. In: Plotnikoff NP, Faith RE, Murgu AJ and Good RA (Eds.), *Cytokines: Stress and Immunity*, 2<sup>nd</sup> Edition. Boca Raton, FL: CRC Press, pp. 67-85.

**Christopher Fall, Ph.D.**

fall@uic.edu

Assistant Professor of Department of Anatomy & Cell Biology, Visiting Research Assistant Professor of Psychiatry

*Experimental and approaches for understanding the neuromodulation of cortical activity patterns; experimental and computational cell biology of intracellular Ca<sup>2+</sup> signaling and related second messengers; mechanisms of cell death in neurodegenerative disease.*

Recent Publications:

- Fall, C.P., Rinzel, J. An intracellular Ca<sup>2+</sup> subsystem as a biologically plausible source of intrinsic bistability in a network model of working memory. *Journal of Computational Neuroscience*. 2006
- Fall, CP, Lewis, T, Rinzel, J. Background activity dependent properties of a network model for working memory that incorporates cellular bistability. *Biological Cybernetics*. 2005 93(2):109-118.
- Fall, CP, Wagner J, Loew, LM. Nuccitelli, R. Cortically restricted production of IP3 leads to propagation of the fertilization Ca<sup>2+</sup> wave along the cell surface in a model of the Xenopus egg. *Journal of Theoretical Biology*. 2004 231(4):487-496.

**David E. Featherstone, Ph.D.**

def@uic.edu

Assistant Professor of Biological Sciences

*Proteins required for synapse development*

Recent Publications:

- Featherstone DE, Rushton E, Rohrbough J, Liebl F, Karr J, Sheng Q, Rodesch CK, Broadie K. An essential Drosophila glutamate receptor subunit that functions in both central neuropil and neuromuscular junction. *J Neurosci*. 2005 Mar 23;25(12):3199-208.
- Chen K, Featherstone DE. Discs-large (DLG) is clustered by presynaptic innervation and regulates postsynaptic glutamate receptor subunit composition in Drosophila. *BMC Biol*. 2005 Jan 8;3(1):1.
- Featherstone D, Broadie K. Response: meaningless minis? *Trends Neurosci*. 2002 25(8):386-387.

**Douglas Feinstein, Ph.D.**

dlfeins@uic.edu

Research Associate Professor of Anesthesiology

*Regulation of gene expression in brain with focus on astrocytes and microglia, and their role in neuroinflammatory diseases including Multiple Sclerosis and Alzheimer's disease, and their associated animal models; molecular analysis of brain specific gene promoters and transcription factors; characterization of inflammatory signaling pathways in brain including NFkB; examination of novel anti-inflammatory approaches towards therapeutics of brain disease.*

Recent Publications:

- Gavriluk V, Kalinin S, Hilbush BS, Middlecamp A, McGuire S, Pelligrino D, Weinberg G, Feinstein DL. Identification of complement 5a-like receptor (C5L2) from astrocytes: characterization of anti-inflammatory properties. *J Neurochem*. 2005 92(5):1140-1149.
- Chauhan NB, Siegel GJ, Feinstein DL. Propentofylline attenuates tau hyperphosphorylation in Alzheimer's Swedish mutant model Tg2576. *Neuropharmacology*. 2005 48(1):93-104.
- Chauhan NB, Siegel GJ, Feinstein DL. Effects of lovastatin and pravastatin on amyloid processing and inflammatory response in TgCRND8 brain. *Neurochem Res*. 2004 29(10):1897-1911.

**Moises Gaviria, M.D.**

[mgaviria@psych.uic.edu](mailto:mgaviria@psych.uic.edu)

Professor of Psychiatry

*Frontal lobe function and dysfunction, vascular dementia, and neuropsychiatric complications of cerebrovascular disease.*

Recent Publications:

- Urresta FL, Medina DA, Gaviria M. Diffusion MRI studies in vascular cognitive impairment and dementia. *Rev Bras Psiquiatr.* 2003 25(3):188-191.
- Agner C, Dujovny M, Gaviria M. Neurocognitive assessment before and after cranioplasty. *Acta Neurochir (Wien).* 2002 144(10):1033-1040;
- Phansalkar S, Stress M, Gaviria M. Psychiatry consultation service in neurosurgery. *Surg Neurol.* 2002 57(3):204-208; discussion 208-9

**Dennis R. Grayson, Ph.D.**

[dgrayson@psych.uic.edu](mailto:dgrayson@psych.uic.edu)

Associate Professor of Molecular Biology and Neuroscience in Psychiatry

*Epigenetics and promoter methylation in schizophrenia*

Recent Publications:

- Grayson DR, Jia X, Chen Y, Sharma RP, Mitchell CP, Guidotti A, and Costa E. Reelin Promoter Hypermethylation in Schizophrenia. *Proc Natl Acad Sci USA.* 2005 **102**: 9341-9346.
- Dong E, Agis-Balboa RC, Simonini MV, Grayson DR, Costa E, Guidotti A Reelin and glutamic acid decarboxylase67 promoter remodeling in an epigenetic methionine-induced mouse model of schizophrenia. *Proc Natl Acad Sci USA.* 2005 **102**: 12578-12583.
- Sharma RP, Grayson DR, Guidotti A, Costa E Chromatin, DNA methylation and neuron gene regulation- the purpose of the package. *J Psychiatry Neurosci.* 2005 **30**: 257-263.
- Grayson, DR, Chen Y, Costa E, Dong E, Guidotti A, Kundakovic M, and Sharma RP. Regulation of the human reelin gene: transcription factors, repressors and the methylation switch in schizophrenia. *Pharmacol Ther.* **111**: 272-286.

**Alessandro Guidotti, M.D.**

[aguidotti@psych.uic.edu](mailto:aguidotti@psych.uic.edu)

Professor of Biochemistry in Psychiatry

*Neurosteroids and depression, Reelin in schizophrenia, cocaine reinforcement pharmacology*

Recent Publications:

- Tremolizzo L, Doueiri MS, Dong E, Grayson DR, Davis J, Pinna G, Tueting P, Rodriguez-Menendez V, Costa E, Guidotti A. Valproate corrects the schizophrenia-like epigenetic behavioral modifications induced by methionine in mice. *Biol Psychiatry.* 2005 Mar 1;57(5):500-9.
- Veldic M, Guidotti A, Maloku E, Davis JM, Costa E. In psychosis, cortical interneurons overexpress DNA-methyltransferase 1. *Proc Natl Acad Sci U S A.* 2005 Feb 8;102(6):2152-7.
- Pinna G, Costa E, Guidotti A. Changes in brain testosterone and allopregnanolone biosynthesis elicit aggressive behavior. *Proc Natl Acad Sci U S A.* 2005 Feb 8;102(6):2135-40.

**Ziaul Hasan, Ph.D.**

zhasan@uic.edu

Professor of Physical Therapy

*Neural control and biomechanics of multijoint movements; kinematic redundancy; role of proprioceptors in motor control, arm movement in spinal cord injury*

Recent Publications:

- Thomas JS, Corcos DM, Hasan Z. Kinematic and kinetic constraints on arm, trunk, and leg segments in target-reaching movements. *J Neurophysiol.* 2005 93(1):352-364.
- Thomas JS, Corcos DM, Hasan Z. Effect of movement speed on limb segment motions for reaching from a standing position. *Exp Brain Res.* 2003 148(3):377-387.
- Pfann KD, Corcos DM, Moore CG, Hasan Z. Circle-drawing movements at different speeds: role of inertial anisotropy. *J Neurophysiol.* 2002 88(5):2399-2407.

**Ian D. Hentall, Ph.D.**

ianh@uic.edu

Associate Professor of Biomedical Science, Rockford

*Repair of spinal cord injury; neurophysiology of cell transplants; voltammetric measurement of monoamines; electronic instrumentation R&D*

Recent Publications:

- Hargraves WA, Hentall ID. Analgesic effects of dietary caloric restriction in adult mice. *Pain.* 2005 Apr;114(3):455-61.
- Hentall ID. Detection of abnormal cerebral excitability by coincident stimulation and recording. *Clin Neurophysiol.* 2004 Nov;115(11):2502-10.
- Noga BR, Pinzon A, Mesigil RP, Hentall ID. Steady-state levels of monoamines in the rat lumbar spinal cord: spatial mapping and the effect of acute spinal cord injury. *J Neurophysiol.* 2004 Jul;92(1):567-77.

**Ellen Herbener, Ph.D.**

eherbener@psych.uic.edu

Assistant Professor of Clinical Psychology

*Abnormalities in emotional functioning and affect regulation in individuals with schizophrenia and other major psychiatric disorders*

Recent Publications:

- Herbener ES, Harrow M, Hill SK. Change in the relationship between anhedonia and functional deficits over a 20-year period in individuals with schizophrenia. *Schizophr Res.* 2005 (1):97-105.
- Harrow M, Herbener ES, Shanklin A, Jobe TH, Rattenbury F, Kaplan KJ. Followup of psychotic outpatients: dimensions of delusions and work functioning in schizophrenia. *Schizophr Bull.* 2004 30(1):147-161.
- Pavuluri MN, Herbener ES, Sweeney JA. Psychotic symptoms in pediatric bipolar disorder. *J Affect Disord.* 2004 80(1):19-28.

**John R. Hetling, Ph.D.**

jhetli1@uic.edu

Associate Professor of Bioengineering

*Phototransduction; Retinal Prosthetics; Central Pattern Generators*

Recent Publications:

- Hetling JR, Baig-Silva MS, Comer CM, Pardue MT, Samaan DY, Qtaishat NM, Pepperberg DR, Park TJ. Features of visual function in the naked mole-rat *Heterocephalus glaber*. *J Comp Physiol A Neuroethol Sens Neural Behav Physiol*. 2005 Apr;191(4):317-30.
- Kang Derwent JJ, Derlacki DJ, Hetling JR, Fishman GA, Birch DG, Grover S, Stone EM, Pepperberg DR. Dark adaptation of rod photoreceptors in normal subjects, and in patients with Stargardt disease and an ABCA4 mutation. *Invest Ophthalmol Vis Sci*. 2004 Jul;45(7):2447-56.
- Hetling JR, Baig-Silva MS. Neural prostheses for vision: designing a functional interface with retinal neurons. *Neurol Res*. 2004 Jan;26(1):21-34.

**Daniel B. Hier, M.D.**

dhier@uic.edu

Professor of Neurology and Rehabilitation

*Alzheimer's Disease, Stroke, Health Informatics, Neurorehabilitation, Forensic Neurology*

Recent Publications:

- Hier DB, Rothschild A, LeMaistre A, Keeler J. Differing faculty and housestaff acceptance of an electronic health record one year after implementation. *Medinfo*. 2004 2004:1300-1303.
- Jao C, Hier DB, Wei W. Simulating a problem list decision support system: can CPOE help maintain the problem list? *Medinfo*. 2004 2004(CD):1666.
- Hier DB, Ashour Y, Jao CS, Su J. Mental Status Expert: an expert system for scoring and reporting the mental status examination. *Neurol Res*. 2004 26(3):316-319.

**Janean E. Holden, Ph.D.**

jeholden@uic.edu

Associate Professor of Medical-Surgical Nursing

*Neurochemistry and neurobehavior of pain modulatory systems in the central nervous system*

Recent Publications:

- Holden JE, Pizzi JA. The challenge of chronic pain. *Adv Drug Deliv Rev*. 2003 Aug 28;55(8):935-48.
- Holden JE, Van Poppel AY, Thomas S. Antinociception from lateral hypothalamic stimulation may be mediated by NK(1) receptors in the A7 catecholamine cell group in rat. *Brain Res*. 2002 Oct 25;953(1-2):195-204.
- Holden JE, Naleway E. Microinjection of carbachol in the lateral hypothalamus produces opposing actions on nociception mediated by alpha(1)- and alpha(2)-adrenoceptors. *Brain Res*. 2001 Aug 17;911(1):27-36.

**Stephen R. Kelso, Ph.D.**

skelso@uic.edu

Associate Professor of Biological Sciences

*Synaptic physiology, particularly glutaminergic mechanisms and role of NMDA receptors in synaptic plasticity.*

Recent Publications:

- Omerovic A, Chen SJ, Leonard JP, Kelso SR. Subunit-specific redox modulation of NMDA receptors expressed in *Xenopus* oocytes. *J Recept Signal Transduct Res*. 1995 Jul;15(6):811-27.
- Omerovic A, Leonard JP, Kelso SR. Effects of nitroprusside and redox reagents on NMDA receptors expressed in *Xenopus* oocytes. *Brain Res Mol Brain Res*. 1994 Mar;22(1-4):89-96.
- Kelso SR, Nelson TE, Leonard JP. Protein kinase C-mediated enhancement of NMDA currents by metabotropic glutamate receptors in *Xenopus* oocytes. *J Physiol*. 1992 Apr;449:705-18.

**Carole Kenner, DNS, RNC, FAAN**

ckenner@uic.edu

Professor of Clinical Nursing, Associate Dean for Academic Advancement

*Transition from hospital to home for mothers and babies; Fetal alcohol syndrome and perinatal substance abuse; Genetics; Neonatal care*

Recent Publications:

- Pravikoff DS, Pierce ST, Tanner A, Bakken S, Feetham SL, Foster RL, Kenner C, Lewis JA, Rantz M, Shaffer F, Sorrell J, Stainton ME, Vessey J, Villarruel A, Wakefield M, Zazworsky DJ; American Academy of Nursing Publication Advisory Committee. Evidence-based practice readiness study supported by academy nursing informatics expert panel. *Nurs Outlook*. 2005 J53(1):49-50.
- Betz CL, Cowell JM, Lobo ML, Craft-Rosenberg M, Bakken S, Feetham SL, Foster RL, Kenner C, Lewis JA, Pravikoff DS, Rantz M, Shaffer F, Sorrell J, Stainton ME, Vessey J, Villarruel A, Wakefield M, Zazworsky DJ; AAN Publication Advisory Committee. American Academy of Nursing Child and Family Expert Panel Health Care Quality and Outcomes Guidelines for Nursing of Children and Families: phase II. *Nurs Outlook*. 2004 52(6):311-316.
- Shin Y, Bozzette M, Kenner C, Kim TI. Evaluation of Korean newborns with the Brazelton Neonatal Behavioral Assessment Scale. *J Obstet Gynecol Neonatal Nurs*. 2004 33(5):589-596.

**Robert A. Kleps, Ph.D.**

kleps@uic.edu

Director of Nuclear Magnetic Resonance Laboratory in Research Resources Center

*Metabolic studies especially pathways using phosphorus NMR. These studies may use perfused tissues or tissue extracts. Analysis of plant extracts.*

Recent Publications:

- Lieggi C, Fortman J, Kleps R, Sethi V, Anderson J, Brown C, Artwohl J. An evaluation of preparation methods and storage conditions of tribromoethanol. *Contemp Top Lab Anim Sci*. 2005 Jan;44(1):11-6.
- Omachi A, Kleps RA, Henderson TO, Labotka RJ. Inhibition of the calcium paradox in isolated rat hearts by high perfusate sucrose concentrations. *Am J Physiol*. 1994 May;266(5 Pt 2):H1729-37.
- Liu KJ, Kleps R, Henderson T, Nyhus L. <sup>13</sup>C NMR study of hepatic pyruvate carboxylase activity in tumor rats. *Biochem Biophys Res Commun*. 1991 Aug 30;179(1):366-71.

**Heidi M. Koenig, M.D.**  
Associate Professor of Anesthesiology

hmkoenig@uic.edu

Recent Publications:

- Messieha ZS, Ananda RC, Hoffman WE, Punwani IC, Koenig HM. Bispectral Index System (BIS) monitoring reduces time to discharge in children requiring intramuscular sedation and general anesthesia for outpatient dental rehabilitation. *Pediatr Dent.* 2004 26(3):256-260.
- Koenig HM, Paisansathan C, Albrecht RF 2nd, Zsigmond EK. Jet injection of local anesthetic decreases pain of arterial cannulation in awake neurosurgical patients. *J Neurosurg Anesthesiol.* 2004 16(2):156-159.
- Xu HL, Koenig HM, Ye S, Feinstein DL, Pelligrino DA. Influence of the glia limitans on pial arteriolar relaxation in the rat. *Am J Physiol Heart Circ Physiol.* 2004 287(1):H331-339.

**Mary Jo LaDu, Ph.D.**

mladu@uic.edu

Associate Professor of Anatomy & Cell Biology

*Alzheimer's disease, structural and functional properties of AD-linked proteins, specifically the amyloid  $\beta$  protein and apolipoprotein E.*

Recent Publications:

- White JA, Manelli AM, Holmberg KH, Van Eldik LJ, and MJ LaDu. Differential effects of oligomeric and fibrillar amyloid- $\beta$ 1-42 on glia-mediated inflammation. *Neurobiol Dis.* 2001 8(3):459-4655.
- Trommer BL, Shah C, Gamkrelidze G, Yun SH, Pasternak ES, Stine B, Manelli A, Sullivan P, Pasternak JF, and MJ LaDu. Apolipoprotein E isoform-specific effects on LTP: blockade by oligomeric amyloid- $\beta$ . *Neurobiol Dis.* 200518(1):75-82.
- Trommer, B.L., Shah, C., Gamkrelidze, G., Yun, S.H., Pasternak, E.S., Ye, G., Sotak, M., Sullivan, P., Pasternak, J.F., and M.J. LaDu. Apolipoprotein E isoform affects LTP in human targeted-replacement mice. *Neuroreport* 2004 15(17):2655-2658.

**John Larson, Ph.D.**

jl Larson@psych.uic.edu

Assistant Professor of Physiology in Psychiatry

*Synaptic plasticity and learning and memory, systems neuroscience, comparative neurobiology, and olfactory system.*

Recent Publications:

- Pappas GD, Kriho V, Liu WS, Tremolizzo L, Lugli G, Larson J. Immunocytochemical localization of reelin in the olfactory bulb of the heterozygous reeler mouse: an animal model for schizophrenia. *Neurol Res.* 2003 Dec;25(8):819-30.
- Larson J, Hoffman JS, Guidotti A, Costa E. Olfactory discrimination learning deficit in heterozygous reeler mice. *Brain Res.* 2003 May 2;971(1):40-6.
- Larson J, Sieprawska D. Automated study of simultaneous-cue olfactory discrimination learning in adult mice. *Behav Neurosci.* 2002 Aug;116(4):588-99.

**Stephen M. Lasley, Ph.D.**

sml@uic.edu

Professor of Pharmacology in Biomedical and Therapeutic Science, Peoria

*Biomedical mechanisms of lead neurotoxicity; signal transduction pathways involved in long-term potentiation, the effects of exposure on neurotrophin activity.*

Recent Publications:

- Lasley SM, Gilbert ME. Rat hippocampal glutamate and GABA release exhibit biphasic effects as a function of chronic lead exposure level. *Toxicol Sci.* 2002 Mar;66(1):139-47.
- Lasley SM, Green MC, Gilbert ME. Rat hippocampal NMDA receptor binding as a function of chronic lead exposure level. *Neurotoxicol Teratol.* 2001 Mar-Apr;23(2):185-9.
- Lasley SM, Gilbert ME. Glutamatergic components underlying lead-induced impairments in hippocampal synaptic plasticity. *Neurotoxicology.* 2000 Dec;21(6):1057-68.

**Charles E. Laurito, M.D.**

sharps@uic.edu

Professor of Anesthesiology and of Anatomy & Cell Biology; Pain management section in Anesthesiology  
*Basic pain research using different rates of skin heating in mice, rats, and monkeys.*

Recent Publications:

- Lu Y, Sweitzer SM, Laurito CE, Yeomans DC. Differential opioid inhibition of C- and A delta- fiber mediated thermonociception after stimulation of the nucleus raphe magnus. *Anesth Analg.* 2004;98(2):414-419
- Yeomans DC, Jones T, Laurito CE, Lu Y, Wilson SP. Reversal of ongoing thermal hyperalgesia in mice by a recombinant herpesvirus that encodes human preproenkephalin. *Mol Ther.* 2004 9(1):24-29.
- Ginsberg B, Sinatra RS, Adler LJ, Crews JC, Hord AH, Laurito CE, Ashburn MA. Conversion to oral controlled-release oxycodone from intravenous opioid analgesic in the postoperative setting. *Pain Med.* 2003 4(1):31-38.

**Orly Lazarov, Ph.D.**

olazarov@uic.edu

Assistant Professor of Anatomy & Cell Biology

*Cellular and molecular mechanisms underlying Alzheimer's disease; Misregulation of neurogenic processes in the AD brain.*

Recent Publications:

- Unger T, Korade Z, Lazarov O, Terrano D, Schor NF, Sisodia SS, Mirnics K. Transcriptome differences between the frontal cortex and hippocampus of wild-type and humanized presenilin-1 transgenic mice. *Am J Geriatr Psychiatry.* 2005 13(12):1041-1051.
- Unger T, Korade Z, Lazarov O, Terrano D, Sisodia SS, Mirnics K. True and false discovery in DNA microarray experiments: Transcriptome changes in the hippocampus of presenilin 1 mutant mice. *Methods.* 2005 37(3):261-273.
- Perez SE, Lazarov O, Koprach JB, Chen EY, Rodriguez-Menendez V, Lipton JW, Sisodia SS, Mufson EJ. Nigrostriatal dysfunction in familial Alzheimer's disease-linked APP<sup>swe</sup>/PS1<sup>DeltaE9</sup> transgenic mice. *J Neurosci.* 2005 25(44):10220-10229.

**John P. Leonard**, Ph. D.

leonard@uic.edu

Professor of Biological Sciences

*Molecular neurobiology of ion channel function; neurotransmitter-sensing and voltage-sensing types of channels*

Recent Publications:

- Jones ML, Leonard JP. PKC site mutations reveal differential modulation by insulin of NMDA receptors containing NR2A or NR2B subunits. *J Neurochem.* 2005 Mar;92(6):1431-8.
- Marusic S, Miyashiro JS, Douhan J 3rd, Konz RF, Xuan D, Pelker JW, Ling V, Leonard JP, Jacobs KA. Local delivery of granulocyte macrophage colony-stimulating factor by retrovirally transduced antigen-specific T cells leads to severe, chronic experimental autoimmune encephalomyelitis in mice. *Neurosci Lett.* 2002 Nov 8;332(3):185-9.
- Liao GY, Wagner DA, Hsu MH, Leonard JP. Evidence for direct protein kinase-C mediated modulation of N-methyl-D-aspartate receptor current. *Mol Pharmacol.* 2001 May;59(5):960-4.

**Michael W. Levine**, Ph.D.

mikel@uic.edu

Professor of Psychology

*Higher-level visual processing in the human brain; capabilities of the various visual pathways or channels that process visual information.*

Recent Publications:

- McAnany JJ, Levine MW. A psychoanatomical investigation of the blanking phenomenon. *Vision Res.* 2005 45(2):193-203.
- McAnany JJ, Levine MW. The blanking phenomenon: a novel form of visual disappearance. *Vision Res.* 2004 44(10):993-1001.
- Levine MW. The potential coding utility of intercell cross-correlations in the retina. *Biol Cybern.* 2004 91(3):182-187.

**Susan W. Liebman**, Ph.D.

suel@uic.edu

Distinguished University Professor of Biological Sciences

*Protein as the hereditary material - a yeast model for prion diseases in mammals*

Recent Presentations:

- Bagriantsev S, Liebman SW. Specificity of prion assembly in vivo. [PSI+] and [PIN+] form separate structures in yeast. *J Biol Chem.* 2004 Dec 3;279(49):51042-8. Epub 2004 Sep 30.
- Derkatch IL, Uptain SM, Outeiro TF, Krishnan R, Lindquist SL, Liebman SW. Effects of Q/N-rich, polyQ, and non-polyQ amyloids on the de novo formation of the [PSI+] prion in yeast and aggregation of Sup35 in vitro. *Proc Natl Acad Sci U S A.* 2004 Aug 31;101(35):12934-9.
- Bradley ME, Liebman SW. The Sup35 domains required for maintenance of weak, strong or undifferentiated yeast [PSI+] prions. *Mol Microbiol.* 2004 Mar;51(6):1649-59.

**Anna Lysakowski, Ph.D.**

alysakow@uic.edu

Associate Professor of Anatomy & Cell Biology

*Structure and function in the vestibular system; use of classical neuroanatomical, immunological, and molecular techniques to study vestibular efferents, ion channels, synaptic plasticity, development and regeneration of hair cells.*

Recent Publications:

- Desai SS, Ali H, Lysakowski A. Comparative morphology of rodent vestibular periphery. II. Cristae ampullares. *J Neurophysiol.* 2005 Jan;93(1):267-80.
- Desai SS, Zeh C, Lysakowski A. Comparative morphology of rodent vestibular periphery. I. Saccular and utricular maculae. *J Neurophysiol.* 2005 Jan;93(1):251-66.
- Hess BJ, Lysakowski A, Minor LB, Angelaki DE. Central versus peripheral origin of vestibuloocular reflex recovery following semicircular canal plugging in rhesus monkeys. *J Neurophysiol.* 2000 Dec;84(6):3078-82.

**Mahmood F. Mafee, M.D.**

mfmafee@uic.edu

Medical Director of Radiology, MRI Center

*Clinical neuroradiology, neurootoradiology, neuroophthamology*

Recent Publications:

- Chavez M, Mafee MF, Castillo B, Kaufman LM, Johnstone H, Edward DP. Medulloepithelioma of the optic nerve. *J Pediatr Ophthalmol Strabismus.* 2004 41(1):48-52.
- Mafee MF, Yang G, Tseng A, Keiler L, Andrus K. Fibro-osseous and giant cell lesions, including brown tumor of the mandible, maxilla, and other craniofacial bones. *Neuroimaging Clin N Am.* 2003 13(3):525-540.
- Mafee MF, Mafee RF, Malik M, Pierce J. Medical imaging in pediatric ophthalmology. *Pediatr Clin North Am.* 2003 50(1):259-286.

**Richard L. Magin, Ph.D.**

rmagin@uic.edu

Professor & Head of Bioengineering

*Dermofluorometry, NMR microsensors, Functional MRI, Bioelectromagnetics*

Recent Publications:

- Magin RL. Fractional calculus in bioengineering part 1, 2 ,3 *Crit Rev Biomed Eng.* 2004;32:1-377.
- Othman SF, Williams JM, Sumner DR, Magin RL. MRI heterogeneity of articular cartilage in strong magnetic fields: Dependence on proteoglycan content. *Magnetic Reson Enginrng* 2004 23B(1): 33-43.
- Moresi G, Magin RL. Miniature permanent magnet for Table-top NMR. *Magnetic Reson Enginrng,* 2003 19B(1): 35-43.

**Nadim Mahmud**, M.D., Ph.D.

nadim@uic.edu

Director, Clinical Stem Cell Lab; Research Assistant Professor in Hematology/Oncology

*Behavior of hematopoietic stem cells in vivo; role of aging on hematopoietic stem cells; Hematopoietic potential of skeletal muscle cells; Isolation and characterization of multipotent adult stem cells from primates*

Recent Publications:

- Xu M, Bruno E, Chao J, Ni H, Lindgren V, Nunez R, Mahmud N, Finazzi G, Fruchtman SM, Popat U, Liu E, Prchal JT, Rondelli D, Barosi G, Hoffman R. The constitutive mobilization of bone marrow-repopulating cells into the peripheral blood in idiopathic myelofibrosis. *Blood*. 2005 Feb 15;105(4):1699-705
- Mahmud N, Patel H, Hoffman R. Growth factors mobilize CXCR4 low/negative primitive hematopoietic stem/progenitor cells from the bone marrow of nonhuman primates. *Biol Blood Marrow Transplant*. 2004 Oct;10(10):681-90.
- Mahmud N, Pang W, Cobbs C, Alur P, Borneman J, Dodds R, Archambault M, Devine S, Turian J, Bartholomew A, Vanguri P, Mackay A, Young R, Hoffman R. Studies of the route of administration and role of conditioning with radiation on unrelated allogeneic mismatched mesenchymal stem cell engraftment in a nonhuman primate model. *Exp Hematol*. 2004 May;32(5):494-501.

**R. Paul Malchow**, Ph.D.

paulmalc@uic.edu

Associate Professor of Biological Sciences

*Synaptic mechanisms in the vertebrate retina; neural-glia interactions; transport mechanisms*

Recent Publications:

- Molina AJ, Verzi MP, Birnbaum AD, Yamoah EN, Hammar K, Smith PJ, Malchow RP. Neurotransmitter modulation of extracellular H<sup>+</sup> fluxes from isolated retinal horizontal cells of the skate. *J Physiol*. 2004 Nov 1;560(Pt 3):639-57.]
- Kreitzer MA, Andersen KA, Malchow RP. Glutamate modulation of GABA transport in retinal horizontal cells of the skate. *J Physiol*. 2003 Feb 1;546(Pt 3):717-31.
- Twig G, Malchow RP, Hammar K, Smith PJS, Levy H and Perlman I. A novel turtle retinal preparation for simultaneously measuring light-induced electrical activity and changes in metabolite levels. *Biol Bull*. 2002 Oct;203(2):198-200.

**Hari Manev**, M.D., Ph.D.

hmanev@psych.uic.edu

Professor of Pharmacology in Psychiatry

*Neuroprotection and molecular mechanisms of action of psychoactive drugs*

Recent Publications:

- Manev H, Manev R: Nomen est Omen: do antidepressants increase p11 or S100A10? *J Biomed Discov Collaboration*, 2006 1:5.
- Larson J, Jessen RE, Uz T, Arslan AD, Kurtuncu M, Imbesi M, Manev H: Impaired hippocampal long-term potentiation in melatonin MT2 receptor-deficient mice. *Neurosci Lett*, 2006 393: 23-26.
- Manev H, Uz T: Clock genes: influencing and being influenced by psychoactive drugs. *Trends Pharmacol Sci*, 2006 27(4):186-189..

**Pauline M. Maki, Ph.D.**

pmaki@psych.uic.edu

Associate Professor of Psychiatry and Psychology

*Effects of sex steroid hormones, including estrogen, progesterone, and testosterone on age-related changes in cognition and brain function*

Recent Publications:

- Resnick SM, Maki PM, Rapp SR, Espeland MA, Brunner R, Coker LH, Granek IA, Hogan P, Ockene JK, Shumaker SA. Effects of combination estrogen plus progestin hormone treatment on cognition and affect. *J Clin Endocrinol Metab.* 2006
- Maki PM. Hormone therapy and cognitive function: Is there a critical period for benefit? *Neuroscience.* 2006 138(3):1027-1030.
- Maki PM. Estrogen effects on the hippocampus and frontal lobes. *Int J Fertil Womens Med.* 2005 50(2):67-71. Review.

**Eileen M. Martin, Ph.D.**

emartin@psych.uic.edu

Professor of Psychology and Neurology in Psychiatry

*Human cognitive neuroscience; neurorecognition in drug abuse an HIV/AIDS Effects of HIV disease and drug addiction on brain function and behavior*

Recent Publications:

- Martin EM, Pitrak DL, Weddington W, Rains NA, Nunnally G, Nixon H, Grbesic S, Vassileva J, Bechara A. Cognitive impulsivity and HIV serostatus in substance dependent males. *J Int Neuropsychol Soc.* 2004 10(7):931-938.
- Martin EM, Novak RM, Fendrich M, Vassileva J, Gonzalez R, Grbesic S, Nunnally G, Sworowski L. Stroop performance in drug users classified by HIV and hepatitis C virus serostatus. *J Int Neuropsychol Soc.* 2004 10(2):298-300.
- Bechara A, Martin EM. Impaired decision making related to working memory deficits in individuals with substance addictions. *Neuropsychology.* 2004 18(1):152-162.

**Sergei M. Mirkin, Ph.D.**

mirkin@uic.edu

Professor of Biochemistry and Molecular Genetics

*Trinucleotide repeats and neurodegeneration*

Recent Publications:

- Mirkin EV, Mirkin SM. Mechanisms of transcription-replication collisions in bacteria. *Mol Cell Biol.* 2005 Feb;25(3):888-95.
- Krasilnikova MM, Mirkin SM. Analysis of triplet repeat replication by two-dimensional gel electrophoresis. *Methods Mol Biol.* 2004;277:19-28.
- Krasilnikova MM, Mirkin SM. Replication stalling at Friedreich's ataxia (GAA)<sub>n</sub> repeats in vivo. *Mol Cell Biol.* 2004 Mar;24(6):2286-95.

**Gerardo Morfini, Ph.D.**

gmorfini@uic.edu

Assistant Professor of Anatomy and Cell Biology

**Don Murphy, Ph.D.**

dmurphy@uic.edu

Associate Professor of Biological Sciences

*The organization and modulation of central pattern generators underlying rhythmic behaviors*

Recent Publications:

- Murphy AD. The neuronal basis of feeding in the snail, *Helisoma*, with comparisons to selected gastropods. *Prog Neurobiol.* 2001 Mar;63(4):383-408.
- Quinlan EM, Arnett BC, Murphy AD. Feeding stimulants activate an identified dopaminergic interneuron that induces the feeding motor program in *Helisoma*. *J Neurophysiol.* 1997 Aug;78(2):812-24.
- Quinlan EM, Murphy AD. Plasticity in the multifunctional buccal central pattern generator of *Helisoma* illuminated by the identification of phase 3 interneurons. *J Neurophysiol.* 1996 Feb;75(2):561-74.

**Yasuko Nakajima, M.D., Ph.D.**

yasukon@uic.edu

Professor of Anatomy & Cell Biology

*Brain neuron culture, Ion channels and Signal transduction studies*

Recent Publications:

- Koike-Tani M, Collins JM, Kawano T, Zhao P, Zhao Q, Kozasa T, Nakajima S, Nakajima Y. Signal transduction pathway for the substance P-induced inhibition of rat Kir3 (GIRK) channel. *J Physiol.* 2005 Apr 15;564(Pt 2):489-500.
- Hoang QV, Zhao P, Nakajima S, Nakajima Y. Orexin (hypocretin) effects on constitutively active inward rectifier K<sup>+</sup> channels in cultured nucleus basalis neurons. *J Neurophysiol.* 2004 Dec;92(6):3183-91.
- Hoang QV, Bajic D, Nakajima S, Nakajima Y. Orexin (Hypocretin) effects on GIRK channels. *J Neurophysiol.* 2003 Aug;90(2):693-702

**Shigehiro Nakajima, M.D., Ph.D.**

shign@uic.edu

Professor of Pharmacology

*Receptors and channels in brain neurons with emphasis on signal transduction mechanisms; dissociated neurons cultured from several brain nuclei; K<sup>+</sup> channel modulation; interaction of the K<sup>+</sup> channels with G proteins and other mediators*

Recent Publications:

- Koike-Tani M, Collins JM, Kawano T, Zhao P, Zhao Q, Kozasa T, Nakajima S, Nakajima Y. Signal transduction pathway for the substance P-induced inhibition of rat Kir3 (GIRK) channel. *J Physiol.* 2005 Apr 15;564(Pt 2):489-500.
- Hoang QV, Zhao P, Nakajima S, Nakajima Y. Orexin (hypocretin) effects on constitutively active inward rectifier K<sup>+</sup> channels in cultured nucleus basalis neurons. *J Neurophysiol.* 2004 Dec;92(6):3183-91.
- Hoang QV, Bajic D, Nakajima S, Nakajima Y. Orexin (Hypocretin) effects on GIRK channels. *J Neurophysiol.* 2003 Aug;90(2):693-702.

**Arye Nehorai, Ph.D.** nehorai@ece.uic.edu  
Professor of Electrical and Computer Engineering  
*Statistical analysis of sensors; signal processing EEG/MEG, dipole location*

Recent Publications:

- Yetik IS, Nehorai A, Lewine JD, Muravchik CH. Distinguishing between moving and stationary sources using EEG/MEG measurements with an application to epilepsy. *IEEE Trans Biomed Eng.* 2005 52(3):471-479.
- Waldorp LJ, Huizenga HM, Nehorai A, Grasman RP, Molenaar PC. Model selection in spatio-temporal electromagnetic source analysis. *IEEE Trans Biomed Eng.* 2005 52(3):414-420.
- von Ellenrieder N, Muravchik CH, Nehorai A. A meshless method for solving the EEG forward problem. *IEEE Trans Biomed Eng.* 2005 52(2):249-257.

**William O'Neill, Ph.D.** WONeill@uic.edu  
Professor of Bioengineering  
*Neuroscience and pupillography; neurological signal and image modeling and processing*

Recent Publications:

- Merritt SL, Schnyders HC, Patel M, Basner RC, O'Neill W. Pupil staging and EEG measurement of sleepiness. *Int J Psychophysiol.* 2004 52(1):97-112.
- O'Neill W, Mercer P, Sheldon S, Kotsos T. Detection of juvenile sleep deprivation by stochastic optimization of pupillographic records. *Methods Inf Med.* 2003;42(3):282-286.
- O'Neill WD, Trick KP. The narcoleptic cognitive pupillary response. *IEEE Trans Biomed Eng.* 2001 48(9):963-968.

**Aris M. Ouksef, Ph.D.** aris@uic.edu  
Associate Professor of Information & Decision Sciences  
*Information technology strategic planning, business process reengineering, organizational learning, and Information Technology Diffusion in Minority and Female-owned businesses*

**Ghanshyam N. Pandey, Ph.D.** Gpandey@psych.uic.edu  
Professor of Pharmacology in Psychiatry  
*Neurobiology of depression and suicide, serotonin and adrenergic receptors, signal transduction and second messengers, mechanisms of action of antidepressants, stress hypothalamo-pituitary-adrenal axis and stress.*

Recent Publications:

- Pandey GN, Dwivedi Y. Focus on Protein kinase A and protein kinase C, critical components of signal transduction system, in mood disorders and suicide. *Int J Neuropsychopharmacol.* 2005 Mar;8(1):1-4.
- Dwivedi Y, Mondal AC, Rizavi HS, Shukla PK, Pandey GN. Single and Repeated Stress-Induced Modulation of Phospholipase C Catalytic Activity and Expression: Role in LH Behavior. *Neuropsychopharmacology.* 2005 Mar;30(3):473-83.
- Pandey GN, Dwivedi Y, Rizavi HS, Ren X, Conley RR. Decreased catalytic activity and expression of protein kinase C isozymes in teenage suicide victims: a postmortem brain study. *Arch Gen Psychiatry.* 2004 Jul;61(7):685-93.

**Subhash C. Pandey, Ph.D.**

scpandey@uic.edu

Associate Professor of Biochemistry in Psychiatry; Assoc. Professor of Anatomy & Cell Biology  
*Molecular and cellular neurobiology of alcoholism and drugs of abuse*

Recent Publications:

- Pandey SC, Chartoff EH, Carlezon WA Jr, Zou J, Zhang H, Kreibich AS, Blendy JA, Crews FT. CREB gene transcription factors: role in molecular mechanisms of alcohol and drug addiction. *Alcohol Clin Exp Res.* 2005 Feb;29(2):176-84.
- Zhou J, Pandey SC, Cohen RS. Estrogen decreases levels of calcineurin in rat amygdala and hippocampus. *Neuroreport.* 2004 Oct 25;15(15):2437-40.
- Pandey SC. The gene transcription factor cyclic AMP-responsive element binding protein: role in positive and negative affective states of alcohol addiction. *Pharmacol Ther.* 2004 Oct;104(1):47-58.

**Neil Pliskin, Ph.D., ABPP-CN**

Npliskin@psych.uic.edu

Professor of Psychiatry and Neurology

*Neuropsychology: neuropsychological sequelae of medical illness, renal disease, multiple sclerosis, dementia, electrical shock injuries.*

Recent Publications:

- Barth JT, Pliskin N, Axelrod B, Faust D, Fisher J, Harley JP, Heilbronner R, Larrabee G, Puente A, Ricker J, Silver C. Introduction to the NAN 2001 Definition of a Clinical Neuropsychologist. NAN Policy and Planning Committee. *Arch Clin Neuropsychol.* 2003 18(5):551-555.
- Martis B, Alam D, Dowd SM, Hill SK, Sharma RP, Rosen C, Pliskin N, Martin E, Carson V, Janicak PG. Neurocognitive effects of repetitive transcranial magnetic stimulation in severe major depression. *Clin Neurophysiol.* 2003 114(6):1125-1132.
- Qu ZX, Pliskin N, Jensen MW, White D, Arnason BG. Etretinate augments interferon beta-1b effects on suppressor cells in multiple sclerosis. *Arch Neurol.* 2001 58(1):87-90.

**Stephen W. Porges, Ph.D.**

sporges@uic.edu

Professor of Psychiatry, and of Psychology; Director of Brain-Body Center

*Neurobiology of social engagement behaviors with a focus on brain-autonomic nervous system-behavior interactions. Clinical disorders including autism, depression, and anxiety.*

Recent Publications:

- Porges SW. Social engagement and attachment: a phylogenetic perspective. *Ann N Y Acad Sci.* 2003 1008:31-47.
- Doussard-Roosevelt JA, Montgomery LA, Porges SW. Short-term stability of physiological measures in kindergarten children: respiratory sinus arrhythmia, heart period, and cortisol. *Dev Psychobiol.* 2003 43(3):230-242.
- Porges SW. The Polyvagal Theory: phylogenetic contributions to social behavior. *Physiol Behav.* 2003 79(3):503-513.

**Haohua Qian, Ph.D.**

hqian@uic.edu

Associate Professor of Ophthalmology and Visual Sciences

*Visual signal processing in vertebrate retina; molecular structure and physiological function of GABA receptors*

Recent Publications:

- Pan Y, Khalili P, Ripps H, Qian H. Pharmacology of GABAC receptors: responses to agonists and antagonists distinguish A- and B-subtypes of homomeric rho receptors expressed in Xenopus oocytes. *Neurosci Lett*. 2005 Mar 7;376(1):60-5.
- Qian H, Chappell RL, Redenti S, Ripps H. Potassium currents distinguish the two subtypes of morphologically distinct skate bipolar cells. *Biol Bull*. 2004 Dec;207(3):191-4.
- Chappell RL, Qian H, Zakevicius J, Ripps H. Histidine suppresses zinc modulation of connexin hemichannels. *Biol Bull*. 2004 Dec;207(3):188-90.

**Miodrag Radulovacki, M.D., Ph.D.**

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Professor of Pharmacology

*Pharmacology of sleep and sleep disorders. Central mechanisms of sleep apnea (cessation of respiration).*

Recent Publications:

- Radulovacki M. Adenosine sleep theory: how I postulated it. *Neurol Res*. 2005 Mar;27(2):137-8.
- Saponjic J, Radulovacki M, Carley DW. Injection of glutamate into the pedunculopontine tegmental nuclei of anesthetized rat causes respiratory dysrhythmia and alters EEG and EMG power. *Sleep Breath*. 2005 Mar 1;
- Radulovacki M, Pavlovic S, Saponjic J, Carley DW. Modulation of reflex and sleep related apnea by pedunculopontine tegmental and intertrigeminal neurons. *Respir Physiol Neurobiol*. 2004 Nov 15;143(2-3):293-306.

**Michael E. Ragozzino, Ph.D.**

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Assistant Professor of Psychology

*Neurobiology of learning and memory*

Recent Publications:

- Kim J, Ragozzino ME. The involvement of the orbitofrontal cortex in learning under changing task contingencies. *Neurobiol Learn Mem*. 2005 Mar;83(2):125-33.
- Palencia CA, Ragozzino ME. The influence of NMDA receptors in the dorsomedial striatum on response reversal learning. *Neurobiol Learn Mem*. 2004 Sep;82(2):81-9.
- Tzavos A, Jih J, Ragozzino ME. Differential effects of M1 muscarinic receptor blockade and nicotinic receptor blockade in the dorsomedial striatum on response reversal learning. *Behav Brain Res*. 2004 Sep 23;154(1):245-53.

**Mark M. Rasenick, Ph.D.**

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Professor of Physiology and Biophysics; Professor of Psychiatry; and Co-Director, Neuroscience Program  
*Regulation of G protein signaling by the synaptic cytoskeleton; molecular basis of antidepressant action and neurodegeneration*

Recent Publications:

- Donati RJ, Rasenick MM. Chronic Antidepressant Treatment Prevents Accumulation of Gas in Cholesterol-Rich, Cytoskeletal-Associated, Plasma Membrane Domains (Lipid Rafts). *Neuropsychopharmacology*. 2005 Jul;30(7):1238-45.
- Allen JA, Yu JZ, Donati RJ, Rasenick MM.  $\beta$ -Adrenergic Receptor Stimulation Promotes Gas Internalization Through Lipid Rafts: A Study in Living Cells. *Mol Pharmacol*. 2005 May;67(5):1493-504.
- Samsonov A, Yu JZ, Rasenick M, Popov SV. Tau interaction with microtubules *in vivo*. *J Cell Sci*. 2004 Dec 1;117(Pt 25):6129-41.

**Stephen Reilly, Ph.D.**

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Associate Professor of Psychology

*Neural mechanisms of learning, memory, and motivation*

Recent Publications:

- Reilly S, Bornovalova MA. Conditioned taste aversion and amygdala lesions in the rat: a critical review. *Neurosci Biobehav Rev*. 2005;29(7):1067-88.
- Reilly S, Bornovalova M, Trifunovic R. Excitotoxic lesions of the gustatory thalamus spare simultaneous contrast effects but eliminate anticipatory negative contrast: evidence against a memory deficit. *Behav Neurosci*. 2004 Apr;118(2):365-76.
- Reilly S, Bornovalova M, Dengler C, Trifunovic R. Effects of excitotoxic lesions of the gustatory thalamus on latent inhibition and blocking of conditioned taste aversion in rats. *Brain Res Bull*. 2003 Dec 15;62(2):117-28.

**Mitchell F. Roitman, Ph.D.**

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Assistant Professor in Psychology

**Janet Richmond, Ph.D.**

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Assistant Professor, Biological Sciences

*Utilization of genetic and molecular approaches with an in vivo electrophysiological assay of synaptic transmission to study the involvement of proteins in exocytosis in the nematode *Caenorhabditis elegans**

Recent Publications:

- Schuske KR, Richmond JE, Signor Matthies D, Davis WS, Runz S, Rube DA, van der Blik AM and Jorgensen EM. Endophilin is required for synaptic vesicle endocytosis by localizing synaptojanin 2003 *Neuron* 40:749-762.
- Richmond JE, Weimer RM and Jorgensen EM An open form of syntaxin bypasses the requirement for UNC-13 in synaptic transmission. 2001 *Nature* 412:338-341.
- Richmond JE, Davis WS and EM Jorgensen UNC-13 is required for synaptic vesicle fusion in *C. elegans*. 1999 *Nature Neuroscience* 2:959-964.

**Harris Ripps, Ph.D.**

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Professor of Ophthalmology and Visual Sciences

*Subcellular basis of inherited retinal disorders; structural and functional properties of retinal neurons and glia, mechanisms of inter-cellular communication via chemical and electrical synapses*

Recent Publications:

- Pan Y, Khalili P, Ripps H, Qian H. Pharmacology of GABAC receptors: responses to agonists and antagonists distinguish A- and B-subtypes of homomeric rho receptors expressed in *Xenopus* oocytes. *Neurosci Lett*. 2005 Mar 7;376(1):60-5.
- Qian H, Chappell RL, Redenti S, Ripps H. Potassium currents distinguish the two subtypes of morphologically distinct skate bipolar cells. *Biol Bull*. 2004 Dec;207(3):191-4.
- Chappell RL, Qian H, Zakevicius J, Ripps H. Histidine suppresses zinc modulation of connexin hemichannels. *Biol Bull*. 2004 Dec;207(3):188-90.

**R. Francis Schlemmer, Ph.D.**

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Associate Professor of Pharmacodynamics in Biopharmaceutical Sciences

*Evaluation of novel antipsychotic candidates in primate social colony screening models; Psychotomimetic-induced behavior in members of primate social colonies: Implications for drug abuse and schizophrenia; Dopamine and serotonin receptor subtype mediation of primate behavior; Development of primate social colony models of behavioral deficit of dementia; Drug-development-induced disruption of memory in monkeys*

Recent Publications:

- Negrusz A, Adamowicz P, Saini BK, Webster DE, Juhascik MP, Moore CM, Schlemmer RF. Detection of ketamine and norketamine in urine of nonhuman primates after a single dose of ketamine using microplate enzyme-linked immunosorbent assay (ELISA) and NCI-GC-MS. *J Anal Toxicol*. 2005 Apr;29(3):163-168.
- Schlemmer RF Jr, Young JE, Davis JM. Primate Social Behaviour and the Psychopharmacology of Schizophrenia. *J Psychopharmacol* 1996 10:64-76.
- Masinde LE, Bertelsen GA, Schlemmer RF Jr, Gulati A, Hickey AJ. Cocaine hydrochloride in poly(L-lactide) microspheres potentiates effects on the locomotion of rats+. *Methods Find Exp Clin Pharmacol*. 1995 17(9):597-600.

**Dan Schonfeld, Ph.D.**

dans@uic.edu

Associate Professor of Electrical and Computer Engineering

*Signal, Image, and Video Processing; Video Communications; Video Retrieval; Video Networks; Image Analysis and Computer Vision; Pattern Recognition; and Genomic Signal Processing.*

Recent Publications:

- V. Pavlovic, G. Friedman, and D. Schonfeld, Stochastic noise process enhancement of Hopfield neural networks. *IEEE Transactions on Circuits and Systems*, 2005 52:213-217.
- N. Bouaynaya and D. Schonfeld, Motion-based particle filtering for head tracking applications (Invited Paper). *Electronic Imaging Newsletter*, 2005 15:8.
- N. Balakrishnan, K. Hariharakrishnan, and D. Schonfeld, A new image representation algorithm inspired by image submodality models, redundancy reduction, and learning in biological vision. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 2005 27:1367-1378.

**Mahnaz Shahidi**, Ph.D. mahnsha@uic.edu  
Professor of Ophthalmology and Visual Science  
*Development of optical imaging systems for quantitative assessment of eye diseases.*

Recent Publications:

- Shahidi M, Yang Y, Rajagopalan AS, Alexander KR, Zelkha R, Fishman GA. A method for differentiating ocular higher-order aberrations from light scatter applied to retinitis pigmentosa. *Optom Vis Sci.* 2005 82(11):976-980.
- Shahidi, M., Wang, Z., Zelkha, R. Quantitative thickness measurement of retinal layers imaged by optical coherence tomography. *American Journal of Ophthalmology.* 2005 139(6):1056-1061.
- Shahidi, M., Yang, Y. Measurements of ocular aberrations and light scatter in healthy subjects. *Optometry and Vision Science* . 2004 81(11):853-857.

**Rajiv P. Sharma M.D.** rsharma@psych.uic.edu

Research Assistant Professor  
*Elucidation of the effects of epigenetic mechanisms on regulation of mRNA and protein levels in neurons, with a priority towards identifying novel therapeutic approaches*

Recent Publications:

- Sharma RP., Grayson, DR, Guidotti, A., Costa E. Chromatin, DNA methylation, and neuron gene regulation - the purpose of the package. *Journal of Psychiatry and Neuroscience* 2005 **30(4)**:263-273.
- Grayson DR., Jia, X., Chen, Y., Sharma RP., Mitchell CP., Guidotti A, Costa E. Promoter Hypermethylation in Schizophrenia *Proc Natl Acad Sci U S A* 2005 **102(26)**: 9341-9346.
- Sharma RP, Rosen CR, Kartan S, Guidotti A, Costa E, Grayson D, Chase K. Valproic acid and chromatin remodeling in schizophrenia and bipolar disorder: preliminary results from a clinical population. *Schizophrenia Research* in press 2006.

**Scott A. Shippy**, Ph.D. sshippy@uic.edu  
Assistant Professor of Analytical Chemistry  
*Developing new analytical instrumentation and methods for monitoring the processes of neurochemical signaling that underlies the function of the brain*

Recent Publications:

- McReynolds JA, Gao L, Barber-Singh J, Shippy SA. Hadamard transform CE-UV detection for biological samples. *J Sep Sci.* 2005 Feb;28(2):128-36.
- Zhao X, Barber-Singh J, Shippy SA. MALDI-TOF MS detection of dilute, volume-limited peptide samples with physiological salt levels. *Analyst.* 2004 Sep;129(9):817-22.
- Merali Z, Khan S, Michaud DS, Shippy SA, Anisman H. Does amygdaloid corticotropin-releasing hormone (CRH) mediate anxiety-like behaviors? Dissociation of anxiogenic effects and CRH release. *Eur J Neurosci.* 2004 Jul;20(1):229-39.

**Konstantin V. Slavin, M.D.**

klslavin@uic.edu

Assistant Professor of Neurosurgery

*Movement disorders; Parkinson's, dystonia, pain management, deep brain stimulation therapy.*

Recent Publications:

- Slavin KV, Baumann TK, Burchiel KJ. Treatment of hemiballismus with stereotactic pallidotomy. Case report and review of the literature. *Neurosurg Focus*. 2004 17(1):E7.
- Slavin KV, Tesoro EP, Mucksavage JJ. The treatment of cancer pain. *Drugs Today (Barc)*. 2004 40(3):235-245.
- Slavin KV, Misra M. Infratentorial intracranial pressure monitoring in neurosurgical intensive care unit. *Neurol Res*. 2003 25(8):880-884.

**Neil R. Smalheiser, M.D., Ph.D.**

Nsmalheiser@psych.uic.edu

Assistant Professor in Psychiatry

*Biochemical, molecular, developmental, and cellular studies of nerve cells; small RNAs and RNA interference in the nervous system; data-mining techniques in medical informatics and bioinformatics*

Recent Publications:

- Smalheiser NR, Torvik VI. A population-based statistical approach identifies parameters characteristic of human microRNA-mRNA interactions. *BMC Bioinformatics*. 2004 5(1):139.
- Torvik VI, Weeber M, Swanson DR, Smalheiser NR. A probabilistic similarity metric for Medline records: a model for author name disambiguation. *AMIA Annu Symp Proc*. 2003 1033.
- Lugli G, Krueger JM, Davis JM, Persico AM, Keller F, Smalheiser NR. Methodological factors influencing measurement and processing of plasma reelin in humans. *BMC Biochem*. 2003 4(1):9.

**Boaz J. Super, Ph.d.**

super@uic.edu, super@cs.uic.edu

Assistant Professor in Computer Science, and Bioengineering

*Computer vision, biological vision, image processing, pattern recognition, bioengineering*

Recent Publications:

- Boaz J. Super Fast Correspondence-based System for Shape Retrieval. *Pattern Recognition Letters* 2004 25(2) 217-225.
- Boaz J. Super Improving Object Recognition Accuracy and Speed through Non-Uniform Sampling, *SPIE Conference on Intelligent Robots and Computer Vision XXI: Algorithms, Techniques, and Active Vision*, Providence, RI, 2003 228-239.
- W. S. Geisler, J. S. Perry, B. J. Super, and D. P. Gallogly Edge Co-Occurrence in Natural Images Predicts Contour Grouping Performance. *Vision Research* 2001 41(6):711-724.

**John A. Sweeney, Ph.D.**

jsweeney@psych.uic.edu

Professor of Psychiatry, Neurology and Psychology

*Eye movements; autism; schizophrenia; fMRI; cognitive neuroscience*

Recent Publications:

- Nowinski CV, Minshew NJ, Luna B, Takarae Y, Sweeney JA. Oculomotor studies of cerebellar function in autism. *Psychiatry Res*. 2005 137(1-2):11-19.
- Reilly JL, Harris MS, Keshavan MS, Sweeney JA.. Abnormalities in visually guided saccades suggest corticofugal dysregulation in never-treated schizophrenia. *Biol Psychiatry*. 2005 57(2):145-154.
- Herbener ES, Hill SK, Marvin RW, Sweeney JA. Effects of antipsychotic treatment on emotion perception deficits in first-episode schizophrenia. *Am J Psychiatry*. 2005 162(9):1746-1748.

**Janet P. Szlyk, Ph.D.**

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Associate Professor of Ophthalmology

*Methods for assessing vision loss in retinal diseases; relationship between clinical tests of visual function and performance of everyday activities*

Recent Publications:

- Szlyk JP, Mahler CL, Seiple W, Edward DP, Wilensky JT. Driving Performance of Glaucoma Patients Correlates With Peripheral Visual Field Loss. *J Glaucoma*. 2005 Apr;14(2):145-150.
- Szlyk JP, Seiple W, Stelmack J, McMahon T. Use of prisms for navigation and driving in hemianopic patients. *Ophthalmic Physiol Opt*. 2005 Mar;25(2):128-35.
- Stelmack J, Szlyk JP, Stelmack T, Babcock-Parziale J, Demers-Turco P, Williams RT, Massof RW. Use of Rasch person-item map in exploratory data analysis: A clinical perspective. *J Rehabil Res Dev*. 2004 Mar;41(2):233-41.

**Greg Thatcher, Ph.D.**

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Professor of Medicinal Chemistry

*Approaches to neurodegenerative and affective disorders through modulating estrogenic and serotonergic pathways in the CNS and in particular NO/cGMP signaling; Design and synthesis of novel small molecules and botanicals that modulate these pathways is complemented by cell based assays and study in animal behavioral models. One molecule has entered clinical trials for Alzheimer's*

Recent Publications: Bennett BM, Reynolds JN, Prusky GT, Douglas RM, Sutherland RJ, Thatcher GR. Cognitive deficits in rats after forebrain cholinergic depletion are reversed by a novel NO mimetic nitrate ester. *Neuropsychopharmacol*. 2006

- Thatcher GRJ, Bennett BM, Reynolds JN. NO chimeras as therapeutic agents in Alzheimer's disease. *Curr Alzheimer Res*. 2006 3:237-245.
- Thatcher GRJ, Bennett BM, Dringenberg HC, Reynolds JN. Novel nitrates as NO mimetics directed at Alzheimer's disease. *J Alzheimers Dis*. 2004 6:S75-84.
- Reynolds JN, Bennett BM, Boegman RJ, Jhamandas K, Ratz JD, Zavorin SI, Scutaru D, Dumitrascu A, Thatcher GRJ Neuroprotection against ischemic brain injury conferred by a novel nitrate ester. *Bioorg Med Chem Lett*. 2002 12:2863-2866.

**Keith R. Thulborn, M.D., Ph.D.**

[kthulbor@uic.edu](mailto:kthulbor@uic.edu)

Professor of Radiology, Physiology and Biophysics; Co-Director, Neuroscience Program

*Magnetic resonance imaging for functional, physiological and metabolic investigations of the human brain in health and disease*

Recent Publications:

- Buerk BM, Pulido JS, Chiong I, Folberg R, Edward DP, Duffy MT, Thulborn KR. Vascular perfusion of choroidal melanoma by 3.0 tesla magnetic resonance imaging. *Trans Am Ophthalmol Soc*. 2004 102:209-215.
- Little DM, Klein R, Shobat DM, McClure ED, Thulborn KR. Changing patterns of brain activation during category learning revealed by functional MRI. *Brain Res Cogn Brain Res*. 2004 22(1):84-93.
- Chung GW, Thulborn KR, Pulido JS, Merrill PT, Tessler HH. Magnetic resonance imaging of diffuse cerebral vasculitis associated with acute retinal necrosis. *Arch Ophthalmol*. 2004 122(11):1719-1720.

**James R. Unnerstall, Ph.D.**

[jru@uic.edu](mailto:jru@uic.edu)

Associate Professor of Anatomy & Cell Biology; Director of Graduate Studies, Graduate Program in Neuroscience

*Plasticity of locus coeruleus neurons, cellular response to injury during the aging process*

Recent Publications:

- Carlstrom L, Ke ZJ, Unnerstall JR, Cohen RS, Pandey SC. Estrogen modulation of the cyclic AMP response element-binding protein pathway. Effects of long-term and acute treatments. *Neuroendocrinology*. 2001 74(4):227-243.
- Connor B, Kozlowski DA, Unnerstall JR, Elsworth JD, Tillerson JL, Schallert T, Bohn MC. Glial cell line-derived neurotrophic factor (GDNF) gene delivery protects dopaminergic terminals from degeneration. *Exp Neurol*. 2001 169(1):83-95.
- Wang XT, Unnerstall JR, Ibuki T, Wang H, Pappas GD. Comparison of tyrosine hydroxylase and preproenkephalin expression in rat adrenal medullary explants in vitro and transplanted into subarachnoid space. *Exp Neurol*. 2000 161(1):346-360.

**David E. Vaillancourt, Ph.D.**

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Assistant Professor of Movement Sciences

*The role of the cortex, basal ganglia, and cerebellum in healthy and pathological motor control; the effects of treatment interventions such as deep brain stimulation on the motor deficits of Parkinson's disease*

Recent Publications:

- Vaillancourt DE, Mayka MA, Corcos DM. Intermittent visuomotor processing in the human cerebellum, parietal cortex, and premotor cortex. *J Neurophysiol*. 2006 95(2):922-931.
- Vaillancourt DE, Prodoehl J, Sturman MM, Bakay RA, Metman LV, Corcos DM. Effects of deep brain stimulation and medication on strength, bradykinesia, and electromyographic patterns of the ankle joint in Parkinson's disease. *Mov Disord*. 2006 21(1):50-58.
- Vaillancourt, D.E., Mayka, M., Thulborn, K.R., & Corcos, D.M. Subthalamic nucleus and internal globus pallidus scale with the rate of change of force production in humans. *Neuroimage* 2004 23:177-188.

**Tibor Valyi-Nagy, M.D., Ph.D.**

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Assistant Professor of Pathology

*Pathogenesis of nervous system infections, neurovirology, herpes simplex virus pathogenesis*

Recent Publications:

- Milatovic D, Zhang Y, Olson S J, Montine KS, Roberts L J, Morrow JD, Dermody TS, Montine TJ, Valyi-Nagy T. Herpes simplex virus type 1 encephalitis is associated with elevated levels of F2-isoprostanes and F4 neuroprostanes. *Journal of Neurovirology* , 2002 8: 297-307.
- Valyi-Nagy T, Dermody TS. Role of oxidative damage in the pathogenesis of viral infections of the nervous system. *Histology and Histopathology* , 2005 20: 957-967.
- Guzman G, Oh SD, Shukla D, Engelhard HH, Valyi-Nagy T. Expression of entry receptor nectin-1 of Herpes simplex virus 1 and/or Herpes simplex virus 2 in normal and neoplastic human nervous system tissues. *Acta Virologica* , 2006 50: 59-66.
- Valyi-Nagy T, Shukla D, Engelhard HH, Kavouras J, Scanlan P. Latency strategies of alphaherpesviruses: herpes simplex virus and varicella-zoster virus latency in neurons. In: Latency strategies of herpesviruses. Minarovits J, Gonczol E, Valyi-Nagy T (eds), Springer, New York . 2006, in press.

**Peggy Wheeler, M.D.**

pwheel@uic.edu

Assistant Professor of Neuroanesthesiology in Anesthesiology

*Neuroanesthesiology; neurosurgery; cerebral vascular disease, neuroprotective agents surrounding cerebral vascular surgery*

Recent Publications:

- Wheeler P, Hoffman WE, Baughman VL, Koenig H. Response entropy increases during painful stimulation. *J Neurosurg Anesthesiol.* 2005 17(2):86-90.
- Hoffman WE, Edelman G, Wheeler P. Cerebral oxygen reactivity in the dog. *Neurol Res.* 2000 22(6):620-622.
- Hoffman WE, Wheeler P, Edelman G, Charbel FT, Torres NJ, Ausman JI. Hypoxic brain tissue following subarachnoid hemorrhage. *Anesthesiology.* 2000 92(2):442-446.

**Rosemary C. White-Traut, DNSc, RN** rwt@uic.edu

Associate Professor and Head of Maternal-Child Nursing

*Fetal development of the central nervous system*

Recent Publications:

- White-Traut RC, Berbaum ML, Lessen B, McFarlin B, Cardenas L. Feeding readiness in preterm infants: the relationship between preterm behavioral state and feeding readiness behaviors and efficiency during transition from gavage to oral feeding. *MCN Am J Matern Child Nurs.* 2005 30(1):52-9.
- White-Traut R. Providing a nurturing environment for infants in adverse situations: multisensory strategies for newborn care. *J Midwifery Womens Health.* 2004 49(4 Suppl 1):36-41.
- White-Traut RC, Nelson MN, Silvestri JM, Patel M, Berbaum M, Gu GG, Rey PM. Developmental patterns of physiological response to a multisensory intervention in extremely premature and high-risk infants. *J Obstet Gynecol Neonatal Nurs.* 2004 33(2):266-75.

**David R. Wirtshafter, Ph.D.**

davew@uic.edu

Professor of Psychology

*Functional organization of the basal ganglia; Role of dopamine, serotonin and the midbrain raphe nuclei in motivation and learning; Gene expression and behavior.*

Recent Publications:

- Wirtshafter D. The selective m1 muscarinic antagonist MT-7 blocks pilocarpine-induced striatal Fos expression. *Brain Res.* 2006.
- Wirtshafter D, Osborn CV. The atypical dopamine D1 receptor agonist SKF 83959 induces striatal Fos expression in rats. *Eur J Pharmacol.* 2005 528(1-3):88-94.
- Wirtshafter D. Cholinergic involvement in the cortical and hippocampal Fos expression induced in the rat by placement in a novel environment. *Brain Res.* 2005 1051(1-2):57-65.

Z. Jim Wang, Ph.D. [zjwang@uic.edu](mailto:zjwang@uic.edu)

Assistant Professor of Pharmacology and Pharmaceutics

*Molecular mechanism and intervention of neuropathic pain, opioid tolerance, and substance abuse;  
Pharmacogenomics of opioid analgesics*

*Recent Publications:*

- Tang L, Shukla PK, Wang LX, **Wang ZJ**. Reversal of morphine antinociceptive tolerance and dependence by the acute supraspinal inhibition of Ca<sup>2+</sup>/calmodulin-dependent protein kinase II. *J Pharmacol Exp Ther*. 2006 **317**:1-9.
- Tang L, Shukla PK, **Wang ZJ**. Trifluoperazine, an orally available clinically used drug, disrupts opioid antinociceptive tolerance. *Neurosci Lett*. 2006 **397(1-2)**:1-4.
- Lu J, Jeon E, Lee BS, Onyuksel H, **Wang ZJ**. Targeted drug delivery crossing cytoplasmic membranes of intended cells via ligand-grafted sterically stabilized liposomes. *J Control Release*. 2006 **110(3)**:505-513.