

# BRAIN WAVES

Volume 4, Issue 2  
March 9, 2007

## A NOTE FROM THE NEW DIRECTOR OF GRADUATE STUDIES



**Dr. Jane Joseph**  
Associate Professor  
Director of Graduate Studies

As the new Director of Graduate Studies (DGS), I welcome the opportunity to serve as the liaison between the Anatomy and Neurobiology graduate program and the Graduate School for the next three years. Together with our newly appointed Associate Director of Graduate Studies, Dr. Diane Snow, we look forward to ensuring that your graduate experience is both successful and enjoyable. As DGS, I will deal with all matters relating to graduate students currently enrolled in the Anatomy and Neurobiology program. These matters include completion of coursework, selection of advisory committee, fulfilling requirements for the PhD, and funding and fellowships. I will keep you updated on any changes in program requirements and will strive to help you keep on track for graduation.

As the Associate DGS, Dr. Diane Snow will deal with all matters relating to the recruitment of students into our graduate program. She will work closely with the Integrated Biomedical Sciences program in the recruitment and admission of IBS students. Dr. Snow will organize the IBS orientation event in the beginning of August. Together with Dr. Jane Harrison, she will also serve an advisory role for first-year IBS students rotating through Anatomy and Neurobiology labs.

During this time of transition, we are very fortunate to have the support of many faculty and staff members. We would like to express our appreciation to Dr. Jennifer Brueckner for her diligence and dedication as former DGS. Her efforts over the last year will make our jobs as DGS and Associate DGS more manageable. We also look forward to working closely with Angel Schumacher who knows the ropes of the Graduate School and has a close working relationship with the graduate students. She will be an invaluable resource for all of us.

In closing, we look forward to helping you navigate the graduate school process on your path to becoming a successful scientist. Our graduate program has much to offer and we hope you will take full advantage of your graduate experience.



**Dr. Diane Snow**  
Associate Professor  
Associate Director  
of Graduate Studies



DON M. GASH, PH.D.  
CHAIR, ANATOMY & NEUROBIOLOGY

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### SPECIAL POINTS OF INTEREST:

- The next Faculty Meeting is scheduled for Friday, April 13 at **4:00pm** in MN 136.
- We need your nominations for Employee of the Quarter. See Page 6.

## GRADUATE CERTIFICATE IN ANATOMICAL SCIENCES INSTRUCTION

The graduate certificate in anatomical sciences instruction will provide a coherent, integrated approach to helping graduate students, postdoctoral scholars, residents and others develop and document the skills needed in order to effectively teach the anatomical sciences.

This 12-credit-hour Certificate, including a required 3-credit-hour supervised practicum experience, provides basic competency in graduate-level anatomical sciences instruction and provides participants with documentation of their abilities. The Certificate is to be accessible to participants from a wide range of disciplines and backgrounds and will provide practical, hands-on anatomy coursework and instructional mentoring.

The Certificate will produce graduates who are highly competitive in the job market, as the numbers of individuals able to provide graduate-level instruction in the anatomical sciences is well below crisis level.

Participants who are pursuing graduate degrees may apply for admission to the Certificate early in their course of graduate studies.



### Graduate Certificate Director:

**Jennifer Brueckner, Ph.D.**

Associate Professor

Department of Anatomy & Neurobiology

Full Member of the Graduate Faculty

MN 224 Chandler Medical Center

(859) 323-3780

[jennifer.brueckner@uky.edu](mailto:jennifer.brueckner@uky.edu)

### Graduate Certificate Associates:

Jennifer Brueckner, Ph.D.

Brian MacPherson, Ph.D.

Bruce Maley, Ph.D.

Pamela Stein, D.M.D.

Anna Bruce-Keller, Ph.D.

**PLEASE NOTE:** Dr. Brueckner will be teaching **ANA 609: Educational Strategies in the Anatomical Sciences**, (a certificate associated course) in the 8-week summer session. The registration window is Tuesday, May 1 through Thursday, June 7 for the Second Summer Session registration. This course is a great step towards enhancing your teaching skills.

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## CAPITALIZATION POLICY

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When you purchase equipment and it costs above a certain dollar amount the university is required to track the equipment (i.e. property tags). Below are the two categories of capitalized equipment:

### Category I

Equipment costing \$2,000 or more will be capitalized, use a capital equipment GL accounts starting with 55\*\*\*\*.

### Category II

Computer Equipment costing \$ 1000 or more will be capitalized with capital equipment GL account 550010.

# BRAIN INJURY AWARENESS MONTH

March is Brain Injury Awareness Month, which is dedicated to helping the public learn more about brain injury, and to improving the lives of brain-injured individuals, their family and their caregivers. Traumatic brain injuries (TBI) contribute to a substantial number of deaths and permanent disability each year. Annually, at least 1.4 million persons sustain a TBI in the United States, with lifetime costs of TBI totaling \$60 billion in 2000 (direct medical and indirect costs such as lost productivity). The Center for Disease Control (CDC) estimates that 5.3 million Americans – about 2% of the U.S. population – currently require long-term or lifelong aid to cope with the effects of TBI.

**Brain injury:**  
As Diverse as We are.

No two people are alike... No two brain injuries are alike.

**YOU or someone you know?**

- Every 23 seconds a brain injury occurs... It can happen to anyone.
- 1.4 million people in the United States sustain a brain injury every year
- 50,000 die, 235,000 are hospitalized, 1.1 million are treated in emergency departments
- 5.3 million Americans are now living with a disability due to a brain injury

Brain Injury Association of America

Call BIAA's National Brain Injury Information Center's toll-free number for information and individualized help: **1-800-444-6443** or visit our website [www.biausa.org](http://www.biausa.org)

Iraq war veterans are sustaining TBIs – the “signature injury” of the war – at a staggering rate. The Veterans Administration is only beginning to comprehend the “unforeseen costs” of this war. With additional awareness and appropriations from the government, research and rehabilitation can improve the lives of brain-injured patients and soldiers.

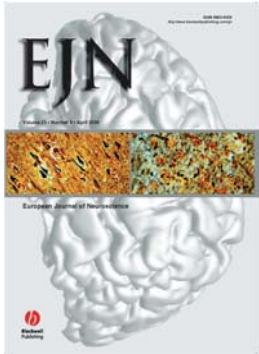


Our colleagues at the Spinal Cord and Brain Injury Research Center (SCoBIRC; <http://www.mc.uky.edu/scobirc>) are dedicated basic scientists, neurosurgeons and rehabilitation specialists working towards understanding, treating and fighting the morbidity associated with TBI. The funding, in part, from the Kentucky Spinal Cord and Head Injury Research Trust (KSCHIRT) and National Institutes of Health, provides them with state-of-the-art open laboratory space to collaborate on various animal models of brain injury. Ongoing experiments are identifying injury-induced molecular and cellular changes and rational therapeutic interventions to blunt the devastating pathology that contributes to post-traumatic morbidity. The SCoBIRC faculty, staff and students welcome your visits, inquiries and participation. Please call or email Dr. Jonathan Lifshitz for additional information [[jlifshitz@uky.edu](mailto:jlifshitz@uky.edu); (859) 323-0696].

To raise awareness and understanding about TBI, active duty service members and veterans, the Defense and Veterans Brain Injury Center, in collaboration with CDC and other organizations and experts, have created a fact sheet and video titled, “Survive, Thrive & Alive: Understanding Traumatic Brain Injury” (<http://www.dvbic.org/cms.php?p=Education>), featuring the recovery journeys of several service personnel and their families. Additionally, the Brain Injury Association has launched their Brain Injury Awareness Month campaign titled, “Brain Injury: As Diverse As We Are” (<http://www.biausa.org/biam.htm#2007>), which highlights the fact that just as no two people are alike, no two brain injuries are alike.

## Professional Announcements

### Publications



Pandya, J.D., Pauly, J.R., **Nukala, V.N.**, Sebastian, Day, K.M., A.H., Korde, A.M., Springer, J.E., Maragos, W.F., **Hall, E.D.**, **Sullivan, P.G.** (2007). Mitochondrial Uncouplers as Possible Therapeutic Interventions following Traumatic Brain Injury. *Journal of Neurotrauma*, (In Press).

Opii, W.O., **Nukala, V.N.**, Sultana, R., Day, K.M., Merchant, M.L., Klein, J.B., **Sullivan, P.G.**, Butterfield, D.A., (2007). Proteomic Identification of Oxidized Mitochondrial Proteins Following Experimental Traumatic Brain Injury. *Journal of Neurotrauma*, (In Press).

McEwen, M.L., Waldmeier, P.C., **Sullivan, P.G.**, Springer, J.E., (2007). Pretreatment with the Cyclosporin Derivative NIM811, improves Mitochondrial Function following Spinal Cord Contusion in Rats. *Journal of Neurotrauma*, (In Press).

Kim, D.Y., **Davis, L.M.**, **Sullivan, P.G.**, Maalouf, M., Simeone, T.A., Brederode, J.V., Rho, J.M., (2007). Ketone Bodies are Protective against Oxidative Stress in Neocortical Neurons. *Journal of Neurochemistry*, (In Press).

**Sullivan, P.G.**, Krishnamurthy, S., Patel, S.P., Pandya, J.D., Rabchevsky, A.G., (2007). Temporal Characterization of Mitochondrial Bioenergetics after Spinal Cord Injury. *Journal of Neurotrauma*, (In Press).

Rabchevsky, A.G., **Sullivan, P.G.**, **Scheff, S.W.** (2007). Temporal-Spatial Dynamics in Oligodendrocyte and Glial Progenitor Cell Numbers throughout Ventrolateral White Matter following Contusion Spinal Cord Injury. *Glia*, (In Press).

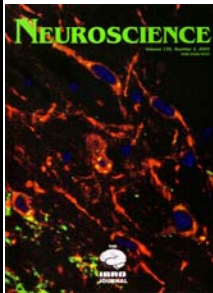
**Sullivan, P.G.**, Krishnamurthy, S., Patel, S.P., Pandya, J.D., Rabchevsky, A.G., (2007). Temporal Characterization of Mitochondrial Bioenergetics after Spinal Cord Injury. *Journal of Neurotrauma*, (In Press).

### Publications

**Lifshitz, J.**, BJ Kelley, JT Povlishock. (2007) Perisomatic Thalamic Axotomy After Diffuse Traumatic Brain Injury is Associated with Atrophy Rather Than Cell Death. *J. Neuropath and Exp. Neurol.* (in press).

Hayden, A., Reed, A., **Joseph, J. E.**, & Bhatt, R. S. (in press). The Development of Expert Face Processing: Are Infants Sensitive to Normal Differences in Second-Order Relational Information? *Journal of Experimental Child Psychology*.

Cecarini V, Gee J, Fioretti E, Amici M, Angeletti M, Eleuteri AM, **Keller JN.** Protein oxidation and cellular homeostasis: Emphasis on metabolism. *Biochim Biophys Acta.* 2007 Feb;1773(2):93-104. Epub 2006 Aug 30.



Joyce BM, Glaser PE, **Gerhardt GA.** Adallerall((R)) produces increased striatal dopamine release and a prolonged time course compared to amphetamine isomers. *Psychopharmacology (Berl).* 2007 Apr;191(3):669-677. Epub 2006 Oct 10.

Paterna JC, Leng A, Weber E, Feldon J, **Bueler H.** DJ-1 and Parkin Modulate Dopamine-dependent Behavior and Inhibit MPTP-induced Nigral Dopamine Neuron Loss in Mice. *Mol Ther.* 2007 Feb 13; [Epub ahead of print]

**Bradley LH,** Wei Y, Thumfort P, Wurth C, Hecht MH. Protein design by binary patterning of polar and nonpolar amino acids. *Methods Mol Biol.* 2007;352:155-66.

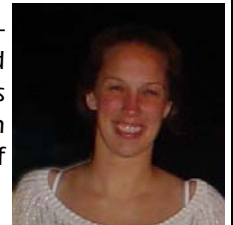
Heron PM, Sutton BM, **Curinga GM,** Smith GM, **Snow DM.** Localized gene expression of axon guidance molecules in neuronal co-cultures. *J Neurosci Methods.* 2007 Jan 30;159(2):203-14. Epub 2006 Aug 28.

### Announcements



**Dr. Zhiming Zhang** was awarded \$1,602,345 for a R01 grant from the National Institute of Neurological Disorders and Stroke. The project is titled: Relationship between BOLD effects on DA degeneration. Congratulations, Dr. Zhang!!

**Erin Rutherford** successfully defended her doctoral thesis on Tuesday, March 6. We are proud of you Dr. Rutherford!!



### Presentations

**Dr. Jennifer Brueckner** was an invited speaker at two recent events:

- University of Nevada at Las Vegas College of Dentistry, "Using Instructional Technology in Dental Anatomical Sciences Instruction: Online Mastery Quizzes to Podcasting," March 2, 2007.
- The Kentucky Speech and Hearing Association Convention, Lexington Convention Center. "The Neurology of Speech, Swallowing and Language Skills." February 28, 2007.

THERE CAME A TIME  
WHEN THE RISK TO  
REMAIN TIGHT IN THE  
BUD WAS MORE PAINFUL  
THAN THE RISK IT TOOK  
TO BLOSSOM.  
~ ANAÏS NIN ~

## TECH TRICKS : ADMINISTRATOR ACCESS



Running Windows 2000 or Windows XP as an administrator makes the system vulnerable to Trojan horses and other security risks. Simply visiting an Internet site can possibly be damaging to your system. An unfamiliar Internet site may have Trojan horse code that can be downloaded to the system and executed. If you are logged on with administrator privileges, a Trojan horse could do things like reformat your hard drive, delete all your files, create a new user account with administrative access, and so on.

Your user account should be added to the Users or Power Users group instead of the Administrators group. When you log on as a member of the Users group, you can perform routine tasks, including running programs, creating documents and visiting Internet sites, without exposing your computer to unnecessary risk. As a member of the Power Users group, you can perform routine tasks and you can also install programs, add printers, and use most Control Panel items. If you need to perform administrative tasks, such as upgrading the operating system or configuring system parameters, then log off and log back on as an administrator.

If you frequently need to log on as an administrator, there is a "run as" command that will let you start programs as an administrator without logging off and back on. Send an email to [joey@uky.edu](mailto:joey@uky.edu) for more information.

Some information courtesy of Microsoft: ([http://www.microsoft.com/resources/documentation/windows/xp/all/proddocs/en-us/windows\\_security\\_whynt\\_admin.mspx?mfr=true](http://www.microsoft.com/resources/documentation/windows/xp/all/proddocs/en-us/windows_security_whynt_admin.mspx?mfr=true))

## FEBRUARY FACULTY MEETING HIGHLIGHTS

- Dr. Karpf announced that the university would be purchasing Samaritan Hospital.
- The College of Medicine may increase the number of medical students in the program. How will this effect us? We will need to evaluate our space requirements for medical courses and our faculty teaching loads.
- The department needs to continue its focus on translational research in order to remain competitive.
- A presentation for upgrading the histology lab will occur this spring. The update will include shifting to a digital format from the current microfiche.
- IBS obligations: should we reformat the interview process to include faculty panels that rotate versus individual interviews that generally occur from the same faculty pool? Should we institute a quota on the minimum number of students each faculty member must see? We will gather the past information on interviews to see who has been consistently meeting with the prospective IBS students.

## MINORS IN LABORATORY SETTINGS

**From Provost Subbaswamy regarding the presence of minors (e.g. high school students) in laboratory settings:**

Engaging high school students and other community members in research at the University of Kentucky can be a wonderful experience for the students, for the research mentors, and for the institution. The University is justifiably proud of the efforts of our faculty and staff that daily enrich the lives of students by hosting and mentoring them.

Of course, in addition to providing a stimulating research experience, the University has a responsibility to provide a safe research environment to all researchers. Special concerns arise when those researchers are minors who are not UK students. A recent minor laboratory accident involving a local high school student, in which our own procedures had not been effectively communicated or followed, highlights the need to address this issue aggressively.

In order to deal appropriately with the safety and responsibility concerns of having minors in our laboratories, Environmental Health and Safety has developed, and appropriate faculty committees have approved, relevant procedures ([http://ehs.uky.edu/Minors\\_in\\_Labs.rtf](http://ehs.uky.edu/Minors_in_Labs.rtf)) The intent of these procedures is to encourage safe, responsible research by students, such as high school students or students involved in supervised special programs, at the University. I realize that this policy will require some additional work on research mentors and some restrictions on current practices, but I think that implementing this sort of policy is critical so that we can continue to engage young scholars in research.

I would very much appreciate your bringing this policy to the attention of all faculty, staff, UK students, and visiting students to whom it may apply. If you have questions about policies or procedures, please direct them to the Office of Environmental Health and Safety. Within that office, this policy will be administered by our Biological Safety Officer, Marcia Finucane. Please note that approval forms, which must include signatures of the mentor, student, and legal guardian, should be filed well before work by the minor begins. And, of course, EHS would be pleased to help you develop safe lab procedures and to train your students in them. Information about training and other matters is available from the EHS website: <http://ehs.uky.edu/>.

## Departmental Birthdays

## Comings and Goings



### March

Kathleen Donoghue ~3/2

Dr. Jadwiga Turchan ~3/6

Dr. Hans Bueler ~3/6

Bin Xing ~3/7

Robin Lindsay ~3/10

Chunmei Wang ~3/14

Dave Peck ~3/18

Dr. Pam Knapp ~3/23

Aashish Joshi ~3/26

Andrew Allen ~3/29

Chris Calulot ~3/29

Katie Werner ~3/30

Lamin Mbye ~3/30

Dr. Jonathan Lifshitz would like us to welcome his new lab member, **Amanda Lisembee**.

Amanda is originally from Hopkinsville, KY. She attended Murray State University where she obtained a B.S.A. in Animal Health Technology and a M.S. in agriculture. She has had much training in the veterinarian field as a technician and has spent many hours as well in the diagnostics of animal health, more specifically hematology, necropsy, and pathology.



She came to UK in March of 2006 where she started out in the Clinical Sciences Department doing olfactory research. She started here at SCoBIRC in late Feb. 2007 conducting research in the area of Traumatic Brain Injury (TBI). She hopes to continue on here at SCoBIRC and help to further the areas of TBI research in the future. Through this I hope to further my knowledge base on the schematics and anatomy of the brain and the continuation of new tests and procedures to find answers to the many questions behind TBI.

We are glad to have you here, Amanda!

## Employee of the Quarter

### THE EMPLOYEE OF THE QUARTER COMMITTEE NEEDS YOU!

We are currently looking for two faculty members and two laboratory staff members to be a part of the award committee.

**JOIN US!**

It is a **TINY** time commitment to help the department honor our hardworking staff!

To volunteer contact **Kim Wilkerson** (kdwil1@email.uky.edu or 3-6926)



# Employee of the Quarter Nomination Form

The Quarterly Employee Awards are will be announced at the Departmental Bashes - May (for nominations submitted January through March); August (April through June); October (July through September) and December (October through December). The Employee of the Year Award will be selected from the winners throughout the year and will be announced annually at the Annual Holiday Potluck. **Due to Joey Rose or Kim Wilkirson ASAP.**

When considering someone for the award, think of the individual who has made your job easier or assisted you in performing your job. To complete the nominations please complete the following questions. Use additional paper or the back of this if necessary.

Date: \_\_\_\_\_ Candidate: \_\_\_\_\_

Nominator: \_\_\_\_\_

Is this individual a regular full-time employee in the Department of Anatomy & Neurobiology? \_\_\_\_\_ Yes \_\_\_\_\_ No

1. What attributes or actions make this individual worthy of your nomination? Give examples.

2. How is this individual an asset to the Department of Anatomy & Neurobiology? Give examples.

3. How have you seen this individual contribute to the UK and/or greater community? Give examples.

4. With 1 = average and 5 = outstanding, please rank the nominee in the following areas:

Quality of work: 1 2 3 4 5

Attitude toward performing job duties: 1 2 3 4 5

Problem solving skills: 1 2 3 4 5

Willingness to help others: 1 2 3 4 5

Service to the department/university: 1 2 3 4 5

Submit to Avalon Sandoval in 305 Whitney-Hendrickson, 0098 Phone: 257-5036

# ANATOMY & NEUROBIOLOGY

MN 225 Medical Sciences Building  
Lexington, KY 40536-0298  
Phone: 859-323-5155  
Fax: 859-257-6700

<http://www.mc.uky.edu/neurobiology/>

Please send comments & submissions to Avalon Sandoval at [asand1@email.uky.edu](mailto:asand1@email.uky.edu) or call 859-257-5036.

**The Next Deadline is March 22, 2007**

## Available Training

### Training for the Labs

The University requires safety training classes to be completed before beginning certain types of work. The requirements apply to all individuals involved in the covered work, including faculty, staff, students, postdocs, visiting researchers and volunteers. To find out what classes you need to take, consult the [Training Checklist](#).

**NOTE:** Anyone who works with chemicals in a laboratory **must** complete the following three classes: Chemical Hygiene Plan/Laboratory Safety, Hazardous Waste, and Fire Extinguisher Use.

### Chemical Hygiene Plan/Lab Safety

This class is available [online](#).

**Bloodborne Pathogens** This class is available upon request and [online](#).

**Hazardous Waste** This class is available [online](#).

**Initial Radiation Safety:** Initial Radiation Safety (~ 15 minutes total) is offered every day at 1:30 pm at the Radiation Safety Office, 102 Animal Pathology Building (other times can be arranged). You must bring two completed forms with you: On-Site Radiation Safety Training Form and Radiation Worker Registration Form, both signed by your Authorized User or unit supervisor. If you have questions, contact Tracy Cayson at 323-6777.

### Basic Radiation Safety

Mar 22 9a-12p Rm. NURS214

**Advanced Radiation Safety** is only available [online](#).

**Fire Extinguisher Use** is available [online](#).

**NOTE:** *Online courses can only be taken using a UK computer.*

### Preventing Sexual Harassment

is also a **MANDATORY** training. This training can be done **online** at (<http://training.newmedialearning.com/psh/ukentucky/index.htm>). Remember to print your certificate when complete; sign it and turn it in to Dalene to be placed in your personnel file.

Ignoring these MANDATORY trainings can result in dismissal from employment at the University of Kentucky

### Human Resources

#### Development course offerings

<http://hr.uky.edu/TandD/welcome.php>

- 33-15 ~ Travel Program
- 3-15 ~ Trip Manager
- 3-22 ~ Perceptions: Is Seeing Believing?
- 3-23 ~ Thinking Critically
- 3-26 ~ Communicating with Success
- 3-29 ~ Providing Exceptional Customer Service
- 4-5 ~ Personality Differences

- 4-6 ~ Leading Effective Teams
- 4-9 ~ Managing Staff Conflict
- 4-11 ~ Facing the Challenge of Change
- 4-11 ~ Coaching your frontline staff
- 4-12 ~ Multi-generational Diversity in the Workplace: Veterans, Boomers, X'ers and Nexters
- 4-13 ~ Gender Styles in Communication
- 4-17 ~ Time Management
- 4-18 ~ Facilitating Meetings and Teams
- 4-20 ~ 21 Indispensable Qualities of a Leader
- 4-23 ~ Thinking Critically
- 4-26 ~ Business Etiquette
- 4-27 ~ Providing Exceptional Customer Service



**All the world is a laboratory to the inquiring mind.**

**~ Martin H. Fischer**