ANATOMY & NEUROBIOLOGY

BRAIN WAVES

Volume 5, Issue 6
August 1, 2008

PLEASE WELCOME OUR NEW GRADUATE STUDENTS

On behalf of the Department, I would like to welcome our new class of graduate students: Garretson Epperly, Catherine (Katie) Werner, Dexter Reneer and Victoria (Tori) Dunlap. Garretson and Katie are in the laboratory of Dr. Greg Gerhardt. Dexter has joined the lab of Dr. James Geddes. Tori will be working with the lab of Dr. Luke Bradley with a focus on biochemistry.

Garretson Epperly

Katie Werner

Dexter Reneer

Tori Dunlap

WELCOME, IBS STUDENTS

With the coming Fall Semester, we welcome new graduate students from the IBS Program as they rotate through our various laboratories. They will join the graduate students currently in our program, and the scores of previous students who have successfully earned their degrees and have moved on to the next stages of their careers.

Graduate and Postdoctoral training lies at the core of our profession. For faculty, the commitment to training the next generation of scientists and teachers is vital – and requires our best efforts. For students, the path to success is difficult and most challenging. Unfortunately, some will fall by the wayside. For to be a student is to simultaneously live in two worlds; it is both the best of times and the worst of times!

The best of times are many, including youth, intellectual freedom and opportunity. The freedom to think and the opportunity to explore are essential for scientific creativity. These educational principles must be protected and remain an integral component of our training program. The graduate and post-doctoral years of study are often the most creative period of one's life. Many of the most important breakthroughs in science have been made by young investigators. Jim Watson was a postdoctoral fellow when he co-discovered the paired helical structure of DNA. Jonas Salk was 33 years old when began his seminal research that led to the development of polio vaccine.

And as all who have survived their student days know, there are the occasional worst of times. Courses can be tedious and exams unfair. Months of research with all of the accompanying hard work can end in a failed experiment. Critics abound and the criticism of one's research can be intense. The anonymous reviewers of manuscripts and grant applications can assume the form of tormentors, raising patently unfair criticisms.

To survive and succeed in our profession, one has to possess an overriding love for learning and a strong work ethic. Integrity, ingenuity, insight and persistence are essential for success. The successes in research and in teaching should be fully enjoyed and appreciated. The vexations have to be met as a student, and then as a professional. Science can be an enormously rewarding career, but only for those up to the challenge.

~ Dr. Don Gash, Chair

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

INSIDE THIS ISSUE:

SPECIAL POINTS OF INTEREST:

- The next **Faculty Meeting** will be held **Monday August 4 at 12pm** in the Markey Cancer Center Boardroom
- The **Annual Ice Cream Social** will be held on **Monday August 25 at 3pm** in the Combs Atrium. Employee of the Second Quarter will also be announced.

FROM THE DIRECTOR OF GRADUATE STUDIES

Dr. Jane Joseph
Director of Graduate Studies (DGS)

I am delighted to welcome the incoming IBS students to the department of Anatomy and Neurobiology. As the new Director of Graduate Studies (DGS) for our department, together with Dr. Diane Snow, the Associate Director of Graduate Studies, we look forward to helping you discover everything that our department has to offer.

We have been one of the top ranked Anatomy departments in the nation with regard to external support such as funding from the National Institutes of Health. In addition, this past year, the department achieved a ranking of 3rd in the nation of all Anatomy departments in terms of faculty productivity, as reported in the *Chronicle of Higher Education*. Our graduate students are an integral force in achieving such rankings by contributing to publications and grants.

Our neuroscience research interests run the gamut of topic and technique, from nanotechnology, to cellular/molecular approaches, to behavioral/cognitive and systems neuroscience. The research resources available to our graduate students are numerous and diverse. In addition, our commitment to education is evidenced by our strong teaching role in the medical center and our continued national prominence as leaders in educational technology development.

Dr. Diane Snow
Associate DGS

Importantly, our support staff is critical in helping the department accomplish its research, teaching and service missions for the university. You will find that the staff are always helpful and make many of the administrative details of graduate school bearable.

We hope that you will enjoy your exploration of our department and know that you will feel the same pride that we do in being a part of the UK College of Medicine no matter which department you eventually join.

IBS EXPERIENCES

I entered the Anatomy and Neurobiology department four years ago after completing my first year in the Integrated Biomedical Sciences program. I ultimately made my decision to join this department because the lab that I had picked to do my graduate work happened to be here. But through my four years in this department I have witnessed time and time again that ultimately, the key to a successful graduate school experience can be highly dependent on the department. After the first year of working in the lab that I had chosen, I realized that it was not a good fit for me. Although I no longer had a lab I still was a part of the Anatomy and Neurobiology department. So through the help of the staff and faculty in Anatomy and Neurobiology I was able to join a new lab that was a better fit with my research interests. Also, like many other students, my ability to continue my graduate work was dependent on the fellowship opportunities available through the department. Providing me with a good lab and funding definitely makes this a good department, but many people in this department have gone out of their way to provide a strong support system. Since I have been here I have had faculty show excitement in teaching me a little extra just because they thought it might help my research. Also, there are staff members that have gone far beyond their job duties to make sure that students' concerns are being addressed. These experiences, as well as many others like it have helped me endure the challenges that go along with being a graduate student.

ADVICE FROM NEW ANATOMY GRADUATE STUDENTS

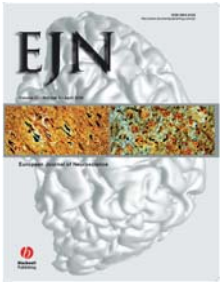
Be sure to get to know everyone in your class, you can make new friends and help each other out by sharing information. ***~ Garretson Epperly***

Make sure that you take time to look over old exams that the course directors post on Blackboard. The old exams are extremely helpful for figuring out what material to focus on and also for helping new students to understand what kinds of questions professors like to ask. ***~ Katie Werner***

It can be difficult to balance class work and lab work, but just remember that for the first year, classes come first. Your rotation advisors understand this. ***~ Tori Dunlap***

PROFESSIONAL ANNOUNCEMENTS

PUBLICATIONS



Ding F, Luan L, Ai Y, Walton A, **Gerhardt GA**, **Gash DM**, **Grondin R**, **Zhang Z**. Development of a stable, early stage unilateral model of Parkinson's disease in middle-aged rhesus monkeys. Exp Neurol. 2008 Aug;212(2):431-9.

Santos RM, Lourenço CF, Piedade AP, Andrews R, **Pomerleau F**, **Huettl P**, **Gerhardt GA**, Laranjinha J, Barbosa RM. A comparative study of carbon fiber-based microelectrodes for the measurement of nitric oxide in brain tissue. Biosens Bioelectron. 2008 Jul 1. [Epub ahead of print].

Yu CG, **Joshi A**, **Geddes JW**. Intraspinal MDL28170 Microinjection Improves Functional and Pathological Outcome following Spinal Cord Injury. J Neurotrauma. 2008 Jul;25(7):833-40.

Gao X, Deng-Bryant Y, Cho W, Carrico KM, **Hall ED**, **Chen J**. Selective death of newborn neurons in hippocampal dentate gyrus following moderate experimental traumatic brain injury. J Neurosci Res. 2008 Aug 1;86 (10):2258-70.

Ansari MA, Roberts KN, **Scheff SW**. Oxidative stress and modification of synaptic proteins in hippocampus after traumatic brain injury. Free Radic Biol Med. 2008 Aug 15;45(4):443-52.

Guseva MV, Hopkins DM, **Scheff SW**, Pauly JR. Dietary Choline Supplementation Improves Behavioral, Histological, and Neurochemical Outcomes in a Rat Model of Traumatic Brain Injury. J Neurotrauma. 2008 Jul 29. [Epub ahead of print]

Nasr P, **Sullivan PG**, Smith GM. Mitochondrial imaging in dorsal root ganglion neurons following the application of inducible adenoviral vector expressing two fluorescent proteins. J Neurosci Methods. 2008 Jul 30;172(2):185-94.

ANNOUNCEMENTS

Congratulations to **Yiqin Xiong** on the successful defense of her thesis on July 22, 2008. Dr. Xiong served in the lab of Dr. Hall. We wish you the best of luck in your future career, DR. XIONG!

ANNOUNCEMENTS

Congratulations to **Dr. Hans Büeler** who recently received a $50,000 grant from the American Parkinson's Disease Association.

Verda Davis from Dr. Gerhardt's lab was recently inducted into the National Scholars Honor Society. Well done, Verda!

Congratulations to **Dr. Jonathan Lifshitz** who was elected as the Secretary/ Treasurer of the National Neurotrauma Society for 2009-2010.

Members of **Dr. Jane Joseph's** Brain, Cognition, and Development Lab presented information concerning fMRI and neurodevelopmental research specific to autism at the 2nd annual Missing Piece March to benefit the Autism Society of the Bluegrass. The Missing Piece March, held at Keeneland Race course, provides an opportunity for greater public awareness of autism and gives the community an outlet to learn about local resources.

Graduate Student **Jonathan Clark** displays a brain to attendees of the Missing Piece March.

PRESENTATIONS

Dr. Marilyn Duncan participated in a workshop, "Neurobiological Basis of Circadian Rhythms Interaction with Complex Behaviors, sponsored by the National Institute of Mental Health, on July 22-23, 2008, in Bethesda, MD. As part of the workshop, she presented a seminar entitled "Age-related deficits in circadian rhythms: role of changes in serotonergic neurotransmission".

PRESENTATIONS

The following posters were presented at the Annual Meeting of the American Association of Clinical Anatomists in Toronto, CA on July 17, 2008:

- **Brueckner, J. K.,** Gould, D., Guttmann, G., **MacPherson, B., Maley, B., Gash, D**. Recruiting the next generation of educators through creation of a graduate certificate in anatomical sciences instruction.
- Fleming, J. and **BRUECKNER, J.K**. Philosophical viewpoint of the notion of cadaver as the student's first patient. Purdy, L., Blackey, C., Brueckner, J.K. A novel approach to teaching and learning embryology through origami.
- **Johnson, N., Richardson, A., BRUECKNER, J.K.** Online learning: bringing the teacher to the student using Camtasia Studio software.
- **Richardson, A., Johnson, N., MacPherson, B., Brueckner, J.K.** Comparison of podcasting as a learning tool for cross-sectional anatomy among populations of medical professional students.
- Gould, D.J., Hartsfeld, A., Ballard, J., Norton, J., **Davis, L., Gilmer, L., BRUECKNER, J.K.** The effectiveness of the anatomy component of a summer program for disadvantaged kids desiring a career in the health professions.
- Guttmann, G. and **BRUECKNER, J.K.** The assessment of study skills in the anatomical sciences for dental students.

At the 26th Annual National Neurotrauma Symposium, Dr. Jonathan's Lifshitz's lab presented the following posters:

- DETECTION OF A PERSISTENT BEHAVIORAL SENSORY MORBIDITY AFTER TBI TO EVALUATE REHABILITATIVE INTERVENTIONS IN THE RAT. Katelyn C.S. McNamara, Amanda Lisembee & **Jonathan Lifshitz**.
- NEURONAL LOSS AND ATROPHY EXTENDS INTO THE SOMATOSENSORY BARREL CORTEX AFTER MIDLINE FLUID PERCUSSION BRAIN INJURY. Amanda Lisembee and **Jonathan Lifshitz**.
- THE FENCING RESPONSE AS AN INDICATOR OF TRAUMATIC BRAIN INJURY SEVERITY. **Jonathan Lifshitz**, Ario H. Hosseini & Amanda Lisembee.

Deep summer is when laziness finds respectability.
~Sam Keen~

DEPARTMENTAL BIRTHDAYS

July

Eric Forman ~ 7-1

Dr. Greg Gerhardt ~ 7-3

Dr. Jim Geddes ~ 7-7

Dong Young Choi ~ 7-8

Laurie Davis ~ 7-9

Dr. Pam Stein ~ 7-9

Lisa Boock ~ 7-13

Andrew Sauerbeck ~ 7-15

Dr. Zhiming Zhang ~ 7-28

August

Avalon Sandoval ~ 8-10

Dr. Luke Bradley ~ 8-14

Dr. Anders Andersen ~ 8-14

Randy Hunter ~ 8-26

Kristen Kelps ~ 8-27

Dr. Don Gash ~ 8-27

COMINGS AND GOINGS

Please welcome **Dr. Andrew Deane** and **April Richardson** as our latest Special Title Series Faculty Members. They will be co-directing ANA 209 and joining our Gross Anatomy Team this fall. Welcome to the department!

This month we bid farewell to **Randy Hunter** from Dr. Bing's lab. Randy has taken a great job opportunity at the Stark Neurosciences Research Institute at the IU School of Medicine in Indianapolis, Indiana. We'll miss you, Randy! Good luck!

Congratulations to **Dr. Luke Bradley** and his wife **Julie** on the birth of their third daughter! Eliza "**Izzi**" Magnolia Bradley was born on July 21, weighing 8 lbs. 10 oz. and was 19.75" long.

EMPLOYEE OF THE QUARTER

THE EMPLOYEE OF THE QUARTER COMMITTEE NEEDS YOUR NOMINATIONS!!

Please submit your nominations to either Melissa Jones (melissa.jones@uky.edu) or Joey Rose (joey@uky.edu)

The nomination form is located on the following page.

Employee of the Quarter

Nomination Form

The Quarterly Employee Awards are will be announced in 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 the following January.

Please submit nominations to Joey Rose or Melissa Jones 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 Melissa Jones in 305 Whitney-Hendrickson Bldg. 0098 Phone: 323-5276

ANATOMY & NEUROBIOLOGY

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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 or call 859-257-5036.

The Next Deadline is August 22, 2008

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, postdoctoral scholars and fellows, 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 TBA

Advanced Radiation Safety is only available online.

Fire Extinguisher Use is available online.

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

Corporate Compliance training is **MANDATORY** for employees working in the UK hospital or medical center. All HR Temporary Employment employees are required to view the Corporate Compliance video in orientation. For more information, please visit the UK Corporate Compliance Program website.

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 Rice (305 Whitney-Hendrickson) to be placed in your personnel file.

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

All the world is a laboratory to the inquiring mind.

~ Martin H. Fischer ~

HUMAN RESOURCES DEVELOPMENT COURSE OFFERINGS

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

8-4 ~ Excel 2007 Level 1

8-5 ~ Conducting a SWOT Analysis

8-6 ~ Basics of Diversity

8-7 ~ Basics of Leadership

8-7 ~ Working with Office 2007

8-11 ~ Resolving Workplace Conflict

8-12 ~ Deploying a Policy

8-13 ~ Communicating Across Cultures

8-13 ~ Outlook 2007 Level 1

8-19 ~ Making a Strategic Plan

8-19 ~ PowerPoint 2007 Level 1

8-20 ~ Outlook 2007 Level 2

8-20 ~ Prohibiting Discrimination in the Workplace

8-26 ~ FISH!

8-27 ~ Communicating with Success

8-27 ~ Searching the Web Effectively

8-28 ~ Facing the Challenge of Change