

# BRAIN WAVES

Volume 1, Issue 3

June 1, 2004

## Holsinger Teaching Awards

The concept for the Holsinger Teaching Awards arose from suggestions made by faculty members during the 2002/2003 Faculty Self Study. Many faculty perceived a need to recognize outstanding teaching in the department with an awards program similar to the Wethington Awards for outstanding research. The Holsinger Awards for Excellence in Teaching in Anatomy and Neurobiology are designed to support and enhance the department's continuing efforts towards becoming a national leader in innovation, research and the scholarship of biomedical education. They are named in honor of Dr. James Holsinger, the last Chancellor of the Medical Center, who retired in the Fall 2003. In addition to being a distinguished administrator and physician, Dr. Holsinger is an exceptionally gifted teacher, who enjoys teaching anatomy. When his current appointment as Secretary of the Cabinet for Health Services for the Commonwealth of Kentucky ends, we are likely to find Dr. Holsinger back in the Gross Anatomy Laboratory, pursuing his love of teaching.

This year, we are pleased to honor the first three Holsinger Award recipients.



**Jennifer Brueckner, PhD – University of Kentucky 1997**—Dr. Brueckner

has been lauded by both her students and colleagues for being a truly dedicated faculty member. She teaches students in all areas of the department—ranging from undergraduate, to graduate and professional students. In addition to her dedication in the classroom, Dr. Brueckner also has developed a number of guides and tutorials that use today's advancements in technology. She has won three Flexner Master Educator Awards and received the Silver Podium Award for the best first-year medical course, ANA 814: Medical Anatomy/Embryology.



**Douglas Gould PhD—Wayne State University 1997**—Dr. Doug Gould has been extensively involved in developing new ways to use computer technology to reach students beyond the classroom setting. His commitment to medical education has earned him all five Flexner Master Educator Awards from his colleagues. With

consistently high evaluations, Dr. Gould has proven that his students have truly benefited from his unique perspective about combining technology that expands upon the lecture model. His research has lead to NIH funded grants to specifically develop his groundbreaking programs for teaching anatomy.



**Brian MacPherson PhD—Memorial University of Newfoundland 1978**—Dr. Brian

MacPherson has focused on combining computer-assisted programs with the traditional classroom setting. Among these programs, he has developed an oral histology program that provides CD-rom tutorials for students not just at the University of Kentucky, but also at a number of institutions across the nation. He currently serves on both the College of Medicine and the College of Dentistry Curriculum Committees along with three others. He has received the 2003 American Student Dental Association (Kentucky Branch) Faculty Award of Excellence and the 2004 UK Great Teacher Award.

Contributions by Avalon Sandoval



Don M. Gash, PhD, Chairman, Anatomy & Neurobiology, Director MRISC

### Inside this issue:

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### Special points of interest:

- **Faculty Meeting** is scheduled for Friday, June 11 at Noon in MN 136.
- **June Mixer** is scheduled for **June 25, 12–1, Cookout**
- **HELP!!!!** - We need your nominations for Employee of the Quarter. **See Page 7**

# Meet the Gash Lab



**Dr. Don Gash is a Professor and the Chairman of Anatomy & Neurobiology.**

He is a native Kentuckian, who completed his undergraduate studies and graduated from the University of Kentucky in 1967. After four years in the Air Force and 18 years at other schools (Dartmouth, University of California, University of Rochester), he came back to the University of Kentucky to Chair the department. His research is directed towards understanding neurodegenerative changes in the brain underlying age-associated changes in motor functions and leading to Parkinson's disease. His group is especially interested in the potential therapeutic role of trophic factors in treating these disorders.

While a bit of a workaholic (his wife would say a large bit), he also enjoys his family and being a grandfather. His hobbies include fishing, reading and traveling. He is very proud of the accomplishments of the faculty and staff in the department over the past ten years.



**Dr. Zhiming Zhang currently is an Associate Research Professor.**

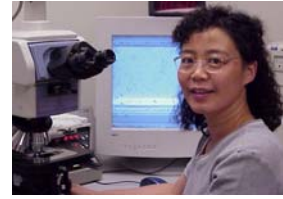
Dr. Zhang is originally from China and came to the United States 15 years ago in 1989 at the invitation of Dr. Don Gash and Rochester University. He moved here to Lexington and the University of Kentucky in 1993 with Dr. Gash. Prior to joining Dr. Gash he was an attending neurosurgeon at the Capital University of Medical Science affiliated with Xuanwu Hospital. Dr. Zhang's research is focused on functional MRI study in aging and Parkinson's disease in MRI-adapted, awake rhesus monkeys. Currently, he and his team are quantifying the changes inside the brain accompanying chronic GDNF infusion by utilizing fMRI techniques developed by his

team. His research goals include developing an un-invasive way to monitor the progression of neurodegenerative diseases and follow up with therapeutic effects by using fMRI techniques. Dr. Zhang has been married to his wife Dr. Yi Ai for 20 years and has a daughter, Amanda Zhang, who will be attending Wake Forest University this fall.



**Dr. Richard Grondin, an Assistant Research Professor,**

was born in Theford-Mines, Quebec, Canada. He graduated from Laval University College of Medicine in Quebec City in December 1997 with a PhD in Neurobiology. His PhD studies focused on better understanding the mechanisms underlying levodopa-induced dyskinesias and to develop pharmacological strategies to reduce or avoid the abnormal involuntary movements in a nonhuman primate model of Parkinson's disease. In 1998, Dr. Grondin moved here to Lexington and UK joining Dr. Gash's lab. He currently is an Assistant Research Professor; and in conjunction with the Morris K. Udall Parkinson's Disease Research Center of Excellence focuses primarily on studying the regenerative potential of glial cell line-derived neurotrophic factor (GDNF) in nonhuman primate models of aging and Parkinson's disease. Using MRI-guided surgical techniques, GDNF is chronically delivered to the brain via programmable pumps and indwelling catheters. This approach is currently being tested in Parkinson's disease patients. Dr. Grondin and his wife, Julie, have been married for over seven years (eight years this August). They are currently building a house in a new Lexington subdivision by Jacobson Park, minutes away from Lakeside Golf Course. Consequently, most of their free time is devoted to shopping for new furniture and keeping up with the construction of the house.



**Dr. Yi Ai** joined our department in 1993, as a Scientist, when she and husband Dr.

Zhiming Zhang came to the University of Kentucky with Dr. Gash. She received her MD degree in 1983 from the Capital University of Medical Science in Beijing, China. Prior to arriving in the US, she was trained as a neurologist at Xuan Wu Hospital in research such as Parkinson's and Alzheimer's diseases. Her current research focuses on cellular and molecular changes occurring in nonhuman primate models of aging and Parkinson's disease following treatment with glial cell line-derived neurotrophic factor (GDNF). She spends the rest of her time with her daughter, Amanda and her husband. She also enjoys gardening, music, traveling, playing with her dog, JJ, and sports like volleyball, basketball and table tennis.



**Ashley Walton** aka "the voice of ready, go" is also a Scientist in the Gash lab. She is a native Lexingtonian and graduated from Centre College in Danville, KY with a BS in Biology. Shortly after college she pursued a lucrative career with the Olive Garden as a hostess

which allowed her to support her research habit and to travel extensively in New York and Arizona. She returned home to Lexington to work at UK in 1999 because she missed the ragweed and wanted to raise her son Benjamin (now five) close to his grandparents. She joined the Gash lab in 2001 where her main focus is the videotaping and testing of the Parkinson's patients in the clinical trial and baking cakes for the lab to ensure job security in her second profession as a leader for Weight Watchers. Her current activities revolve around getting Benjamin successfully through Kindergarten and building her empire of PartyLite candles.

# Meet the Gash Lab



**Eric Forman** is originally from Morehead, KY while he received his BS in Biology from the University of Kentucky.

Eric worked for the Division of Lab Animal Research (DLAR) for four years before joining the Gash lab almost three years ago. He has worked with primates for six years and unfortunately has acquired many of their mannerisms. He has been married for seven years to Jennifer and they have two children, Cory (6) & Emily (3). Another unfortunate item of note—Eric is planning to leave us next fall (Fall 2005) to enter nursing school at Eastern Kentucky University.



**Michael (Mike) Dunlap** is originally from Winston-Salem, NC. He worked for Wake Forest University for six years in the Physiology/Pharmacology Department for Dr. Jim Rose before

moving to Kentucky. Mike entered employment here at UK with the Division of Lab Animal Research (DLAR) where he worked for two years as he realized it was not the promised land; and joined the Gash lab about 14 months ago. His responsibilities in the lab include surgical procedures, fMRIs, training, anatomical MRIs, videotaping and data collection. Mike and his wife, Sonya, have been married ten years and have three children, Ashley (14), Kaleb (6) and Keely (8); and a cat.



**Naomi Carter** graduated from Berea College with a BA in Biology. While attending Berea she participated in an internship with the USDA in Montpellier, France where

she studied the effect of various concentrations of fungi on termites. She joined the Gash lab in late August where her major responsibilities include performing behavioral testing to assess motor and cognitive functions as well as assisting in preparing for anatomical MRIs and surgeries for non-human primates. She is also the voice of “go junior” in the taping and testing of human subjects. Currently she is working towards her Masters degree in Public Health, while also finding time to retain her sanity by socializing with friends.



**Amy Branham** recently joined the Gash lab in March after having worked four years at the Rood & Riddle Equine Hospital as a Lab Technician. Amy graduated from Morehead State University with an associates degree in Veterinary Technology. Her responsibilities in the lab include videotaping, panel training and video analyzing the non-human primates.



**Yan Chen** is a graduate student working towards her PhD. Prior to beginning her PhD work she earned a BS degree in Biology from Beijing Normal University and a MS degree in Neurobiology from

Peking Union Medical College, both top-ranking schools in China. During that time she gained experience working on rat models of Alzheimer's disease with

different techniques and decided to further her work on neurodegenerative diseases in the United States. Currently, Yan's PhD research is focused on the effects of GDNF, a neurotrophic factor, on stem cell proliferations and differentiation in the adult central nervous system (CNS) with a variety of rat models. In her spare time she loves reading and watching movies.



**Qing Cai** is a visiting Scientist from Beijing China. Qing came to the US and the Gash lab to complete a study of GDNF distribution in the rhesus brain. In China, Qing works as a Senior Research Analyst at

the Capital University of Medical Science, Beijing Institute for Neuroscience. She has more than 20 years of research experience related to Parkinson's disease and aging. She is married and has a 15 year old daughter. In her spare time she enjoys classical music, reading and watching movies. At the end of May she returned to China after being with us for six months.



**Dr. Liming Luan MD** recently joined us as a visiting scholar from the Shandong Provincial Hospital where he has been a practicing neurosurgeon for eighteen years. Dr. Luan is capable of performing

difficult surgery independently on intracranial aneurysms, skull base tumors, hemangioma, acoustic neurofibroma, pituitary adenoma, thalamencephalon and brain stem tumors. His special expertise in neurosurgery is microsurgery, stereotactic surgery and microinvasive approaches. Dr. Luan and his wife, Hong Zhao have two sons, Zichao (13 years old) and Zihao (11 years old). He also enjoys cooking Chinese food (and he is very good).

# Professional Announcements



## Publications

S. Challman & **JK Brueckner** (2004) Faculty Development in Instructional Technology. Best Practices in Dental Education, American Dental Education Association, Center for Educational Policy and Research, Page 61.

**PE Knapp & MA Adams** (2004) Epidermal growth factor promotes oligodendrocyte differentiation and enhances survival and regrowth after injury. *Exp. Cell Res.*, 269 (2): 135-144.



## Presentations

Effects of Menstrual Cycle Phase on Brain Activation & Spatial Cognition. The 23rd Annual University of Kentucky Symposium in Reproductive Sciences—**Christine Corby**

Target Ablation-induced Macrophage Recruitment in *Mip-1α* Knock-out Mice: Restoration of Function by MIP-1α Injection. 26th Annual meeting of the Association for Chemoreception Sciences, Sarasota, FL—**Marilyn Getchell**

Opioid Signaling: Normal and Pathologic Processes Targeting Glia and Neurons, New York Academy of Sciences, Neuro-Immune Interest Group Inaugural Meeting, New York, NY—**Pam Knapp**

Face and Object Processing Across Development: A Structural Similarity Mechanism. Cognitive Neuroscience Society annual meeting, San Francisco, CA—**Ann Gathers**

## Presentations

Performance related cortical activation patterns in object recognition tasks. Cognitive Neuroscience Society annual meeting, San Francisco, CA—**Alison Farley**

Letter-selective activation in left inferior parietal cortex depends on linguistic but not perceptual processing. Cognitive Neuroscience Society annual meeting, San Francisco, CA—**Jane Joseph**



## Grants

**Brian Gold**: "Alzheimer's Disease Research Center—Functional Magnetic Resonance Imaging of Episodic Memory in Mild AD" from NIA, 05/01/04—04/30/05. \$20,960.

## Seminars

**Monday, June 28**—Vidya Nag Nukala, Graduate Student, Anatomy & Neurobiology, 4:00 p.m., MN 263.

**Tuesday, June 29**—Novel Strategies for Calpain Inhibition. Tomoko Sengoku, Dissertation Defense, Anatomy & Neurobiology, 10:00 a.m., MN 343.

**Monday, July 12**—The Immunoproteasome's Involvement in Inflammation. Janelle Reed, Graduate Student, Anatomy & Neurobiology, 4:00 p.m., MN 263.

For updates and further options please check out the website <http://www.mc.uky.edu/coa/events.asp>.

## NIH FY 2003 Rankings

The UK College of Medicine ranked 36th among public medical schools and eight departments ranked in the top 20.

3rd ... Aging (reported under Other Health Sciences)

8th ... Physiology

10th ... Molecular & Biomedical Pharmacology

**14th ... Anatomy & Neurobiology**

16th ... Surgery

17th ... Public Health/Preventive Medicine

18th ... Microbiology, Immunology & Molecular Genetics

20th ... Molecular & Cellular Biochemistry

Because of UK, Lexington ranks 60th among top cities that compete for NIH grants & contracts

## Seminars

**Monday, June 7**—Markers of Oxidative Damage in a Model of Early Parkinson's Disease. Michael Smith, Graduate Student, Anatomy & Neurobiology, 4:00 p.m., MN 263.



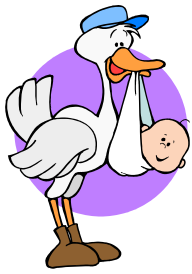
**Monday, June 14**—Investigation of ADHD Drugs on the Dynamics of Dopamine Neuronal Systems. Matt Joyce, Graduate Student, Anatomy & Neurobiology, 4:00 p.m., MN 263.

**Monday, June 21**—Jordan Clark, Graduate Student, Anatomy & Neurobiology, 4:00 p.m., MN 263.

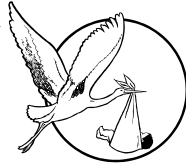
**Monday, June 21**—Differential Subcellular Localization Profile of M-Calpain,  $\mu$ -Calpain, and Calpastatin in the CNS. Matt Garcia, Graduate Student, Anatomy & Neurobiology, 4:00 p.m., MN 263.



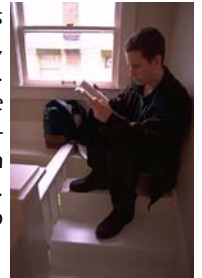
# Comings & Goings



**Jordan Clark**, Graduate Student in Dr. Subbu Apparsundaram's lab, & wife, Sherrie have a baby boy named Riley London Clark. He was born on Mother's Day at 4:45 A.M. He was 8 lbs. 15 oz. and 21 inches long.



**Dong Young Choj**, Sr. Lab Tech in Dr. Guoying Bing's lab and **Radhika Vaishnav**, Pr. Research Analyst in Dr. Marilyn Getchell's lab are leaving us to enter Graduate School here at UK in the Integrated Biological Sciences Program. I'm sure they will be searching out places to study. **Good Luck in your studies!!!!**



## Departmental Birthdays

- 06/01 ~ Dr. Steve Scheff
- 06/06 ~ Adrian Centers
- 06/09 ~ Mary Adams
- 06/16 ~ Jason Oakes
- 06/16 ~ Julie Poole



- 06/18 ~ Dr. Marilyn Duncan
- 06/22 ~ Bobby Haggard
- 06/22 ~ Jackie Huller
- 06/26 ~ Ann Gathers
- 06/28 ~ Dr. Annadora Bruce-Keller



**Dr. William Knisely**, former Chairman of the Department of Anatomy & Neurobiology and one of the original founders of the medical school here at the University of Kentucky, died peacefully surrounded by family May 3, 2004, in Austin, TX.

Dr. Knisely's older brother, Mel, was a highly regarded scientist in the 1950's studying neural and smooth muscle control of microvasculature and the Chairman of Anatomy at the University of Charleston. Mel strongly recommended his brother, Bill, who was also at the University of Charleston, for the job here at Kentucky. Bill was a great organizer, people like to work with him, and he promoted excellence in medical school teaching. After leaving UK, he went on to serve high administrative positions at Universities in South Carolina, Texas and Oklahoma. He was a combat veteran of WWII in Europe and battled Parkinson's disease for many years.

Our Knisely Award is in honor of his commitment to the education of medical students and recognizes the top student in the first year class who excelled in the three major service courses taught by the Department of Anatomy & Neurobiology. Information provided by Drs. Joe Springer and Harold Traurig



(L to R) Dr. Don Gash, Marla Powers and Laura Peters



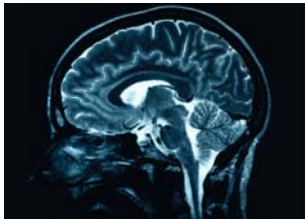
### Employee of the Quarter

Laura Peters has worked at UK since February 1998 and with Anatomy since June 2000. "Laura is one of the top employees I've had in my lab over the last ten years. She is very efficient, productive and dependable. She is always ready to help new people in the lab with their projects or with learning new techniques. Overall, Laura is an excellent lab technician." Dr. Wayne Cass, PhD

### Mixer Themes for the Year

- January**—None
- February**—Keller Lab "Valentines"
- March**—Gerhardt Lab "π in the Sky"
- April**—Gash Lab "Survivor Isle of Reil"
- May**—Duncan/Jennes Lab "Cinco derby Mayo"
- June**—MacPherson/Ginn "Cookout"
- July**—Brueckner/Gould "Fireworks"
- August**—Knapp Lab "Surprise"
- September**—Admin Staff "Tailgate Party"
- October**—Joseph Lab "Halloween"
- November**—Snow Lab "Surprise"
- December**—Departmental Holiday Potluck

# Neuroscience for Kids



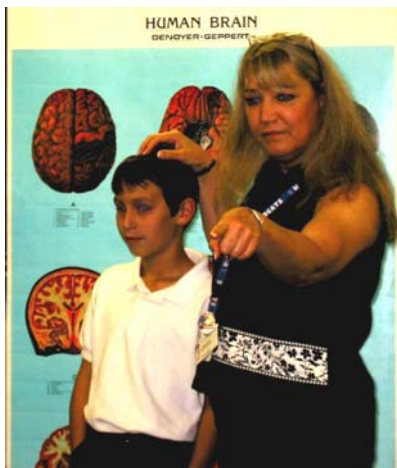
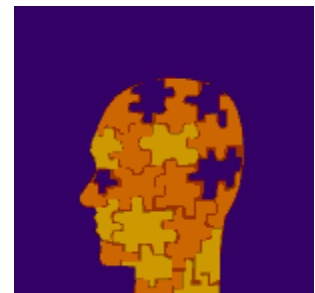
Maybe you caught a glimpse of children wandering the MN corridors or heard

youthful voices echoing in the tunnels under the MRISC on Friday, May 21<sup>st</sup>. But, just in case you missed all the excitement, we wanted to tell you about the opportunity we had to expose 41 bright young minds to the field of neuroscience.

Scott Heydinger, an engineer at Lexmark and volunteer at the Lexington Children's Museum, initiated collaboration this semester between Dr. Jane Joseph's lab and the 4<sup>th</sup> grade teachers at St. Peter and Paul's Catholic School. This partnership has involved multiple exchanges among UK personnel and the teachers, parents, and children at the school. Members of the Joseph lab created a



involved a wonderful physiology demonstration by the UK Science Outreach Center staff, an imaging experiment session led by David Powell, Christine Corbly, and Xun Liu, and a perception and cognitive neuroscience demonstration by Kate Mier of Dr. Joseph's lab and Dr. Ramesh Bhatt's lab in the Department of Psychology. To fuel the minds of our future, Stephen Foldes led a lunch trip to the local K-Lair Grill.

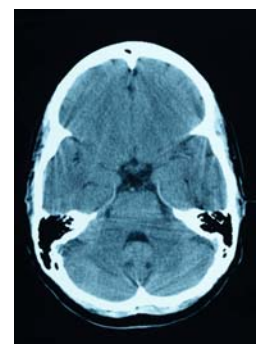


MRI center video for the children and presented the video and an interactive classroom demonstration during Brain Awareness Week. During the school visit, children learned about the scientific method and then used "brain" facts to create hypotheses to be tested in an imaging study on their recent fieldtrip to our MRI center. The visit to UK in-

St. Peter and Paul's visit to our MRI facilities was a finale to our semester's collaboration project but we hope it will continue to be a promising partnership between the university and the Lexington community as well as a catalyst for creating new scientists. We, in the Joseph lab, would like to thank all of the participants and presenters who made this a successful educational experience. By Ann Gathers/Christine Corbly

*"A teacher affects for eternity; he can never tell where his influence stops."*

Henry B. Adams



# Employee of the Quarter Nomination Form

The Quarterly Employee Awards are announced in April (for nominations submitted January through March); July (April through June); October (July through September) and January (October through December). The Employee of the Year Award will be selected from all nominations throughout the year and will be announced annually at the departmental Holiday Luncheon in December. **Due to Kim Wilkirson by June 30, 2004.**

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 = unacceptable 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 Kim Wilkirson in MN 225 Medical Science Bldg, 0298 Phone: 323-6926

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 Dalene Rice at [darice2@email.uky.edu](mailto:darice2@email.uky.edu) or call 859-323-8260.

***Next Deadline is June 21, 2004***

## 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

220 Scovell Hall or [online](#).

June 16 ... Wednesday ... 9:30–10:30

August 17 ... Tuesday ... 9:30–10:30

### Bloodborne Pathogens

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

### Hazardous Waste 220 Scovell Hall or [online](#).

June 16 ... Wednesday ... 10:30–11:30

August 17 ... Tuesday ... 10:30–11:30

**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 Radia-

tion 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 (214 Health Sciences Learning Center)

June 18 ... Friday ... 1:00–4:00

July 15 ... Thursday ... 9:00–12:00

### Advanced Radiation Safety

This class is only available [online](#).

### Fire Extinguisher Use (220 Scovell Hall)

June 16 ... Wednesday ... 11:30–12:00

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

**Corporate Compliance Training** is a **MANDATORY** training for all individuals who receive a paycheck from the UK Medical Center. It is only offered from 3:00–3:30 p.m. during UK Hospital Orientation. Ignoring this requirement can result in dismissal from employment at the University of Kentucky.

### Human Resource Development course offerings

<http://www.uky.edu/HR/HRD/>

<http://www.uky.edu/IS/Training/>

06/02 ~ Managing Staff Conflict

06/03 ~ SuperVision (1-a-week)

06/03 ~ MS Word Quick Start

06/04 ~ Group Problem Solving

06/08 ~ MS Excel Charts & Graphs

06/09 ~ Personality Differences

06/10 ~ MS Outlook Quick Start

06/15 ~ Facilitation

06/15 ~ MS Excel Quick Start

06/16 ~ MS Excel Intermediate

06/17 ~ MS Outlook Intermediate

06/18 ~ Conducting Performance Evaluations

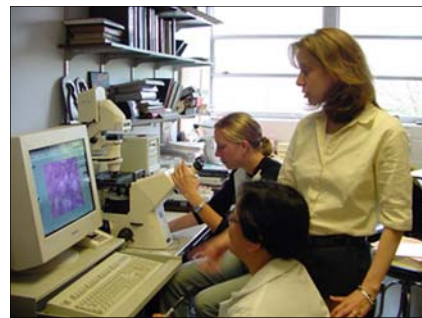
06/18, 06/25, 07/02 ~ 7 Habits of Highly Effective People (Sessions 1–3)

06/22 ~ MS Word Intermediate

06/24 ~ Trip Manager

06/29 ~ Group Problem Solving

For additional details, signing up, location, etc ... please check out the training calendar for Human Resource Development as noted above.



Dr. Annadora Bruce-Keller (standing) with Fe Dimayuga at the computer & Janelle Reed at the microscope.