

the Central Sulcus

Emory Women In Neuroscience

By Meera Modi and Rebecca Roffman

It is a major, recognized problem in the field of neuroscience today that, although many young, female scientists obtain a PhD, very few of them successfully attain assistant professorships and even fewer of them are promoted to tenured associate and full professorships. Currently, the Neuroscience Program consists of 87 graduate students, 63 of whom are women (72%). This dichotomy is not reflected in our program faculty, of which only 16 of 96 professors are women (16%). The Emory Women in Neuroscience group was started this fall as a way to not only explore this disparity here at Emory, but also to address it and the different ways by which men and women function in the world of academia.

The Emory Neuroscience Program is not unique in these skewed sex ratios of both our student body and our faculty population, and we felt that this was a problem that needed to be addressed at a local level. Currently, the Society for Neuroscience maintains a Committee for Women in Neuroscience (C-WIN), established in 2005, that is charged with “increasing awareness of women’s issues in the field,” “advancing interests of women in neuroscience,” and “fostering networking and mentoring opportunities for young women pursuing neuroscience.” This organization primarily functions at national and international levels and as a result, has a greater impact for women further along in their careers, rather than students. A local organization was needed to develop a strong network of female scientists, including female Ph.D. and post-doctoral candidates here at Emory.

It has been hypothesized that the lack of female promotion in academia is due to the shortage of female role models and mentors. We propose to assuage this problem here at Emory by organizing the Emory Women in Neuroscience Collaboration (E-WIN). The purpose of this organization is to establish relationships between the female students in the Neuroscience Graduate Program (the majority of whom work for male PIs) and the female faculty members associated with the program. From the professors, the students will learn how to deal with issues relevant to women in academia, like career advancement, balancing work and family commitments, and achieving academic success. We also hope that these informal mentoring relationships will assist our students throughout their careers. Through

these mentorships and the programming offered by E-WIN, we hope to provide young scientists with the tools to be successful and productive in their chosen field, whether it be academia, industry, teaching, or something else entirely.



E-WIN meetings are held in a very casual format with a pot-luck dinner in the home of one of our students. Our first meeting was held this winter and was a tremendous success. With great turnout from both students and faculty, the group focused on identifying key issues and brainstorming on ideas for content of future meetings. Our second meeting was held this spring, with invited speaker Julia Melker, an Associate Professor at the Georgia Tech School of Public Policy. Julia spoke about her research on networking and the differences between how men and women network. This was followed up by a lively discussion on networking in general and how the E-WIN group can use some of the information highlighted by Julia’s research to network more successfully throughout their careers.

If you are interested in joining the E-WIN listserv to hear about future events please email emorywin@gmail.com.

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Grad School Blues

By Lucy Guillory

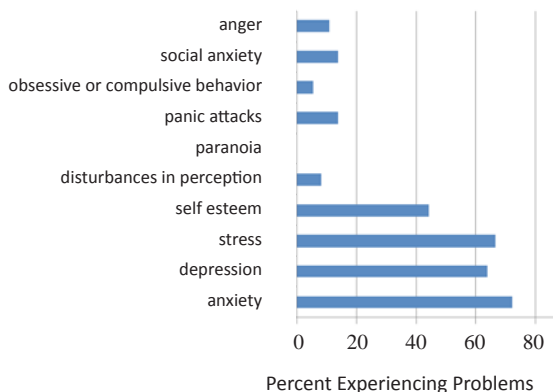
Feeling stressed? Anxious? Depressed? If you're a grad student, you're probably not alone. A survey of 52 graduate students in the Emory Neuroscience program revealed most of us grapple with stress and mental health problems.



Of all students polled, 60% reported having mental health or stress-related problems since entering graduate school. Emory student health service psychiatrist Dr. J. David Moore states a disproportionately high percentage of the psychiatry clinic's patients are graduate students (60%). "However, most anxiety and mood disorders peak in a person's 20's," he said. That is, these disorders may have developed even if these students hadn't attended graduate school, but instead became professional dog groomers (my personal "plan B" to grad school). However, this overrepresentation of graduate students may also be influenced by differences in stress between graduate and undergraduate education.

There's no doubt about it – graduate school is stressful. Of those survey respondents reporting mental health problems, the majority reported significant problems with anxiety (72%). 64% also reported significant problems with depression (see below). Furthermore, 52% of respondents reported their graduate school experience is more stressful than their undergraduate experience, while only 18% thought undergraduate was more stressful.

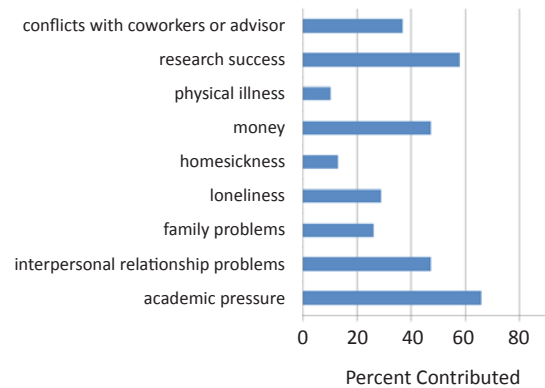
Q: Since entering graduate school have you had significant problems with the following?



But what makes us so vexed? 66% of survey respondents stated academic pressure has caused them stress in graduate school (see below). Several students commented that their first years were particularly stressful due to difficult classes and lack of direction. Many respondents also cited lab projects and research success as significant stressors. One student commented, "Your value as a student and as

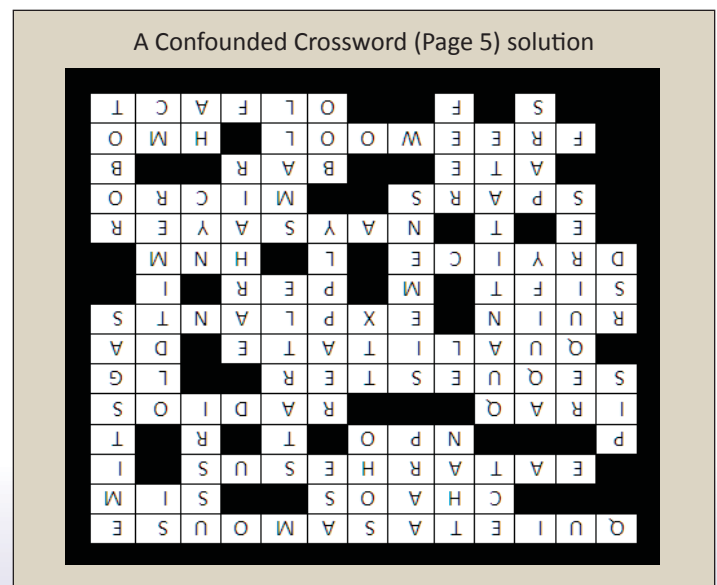
a person tends to get wrapped up in how many significant p-values your work produced, not how many studies you've completed or techniques learned." Another student commented, "I think a lot of the stress comes from lack of time; both not having enough time to do all the work-related things needed and not enough time to do personal things to take care of yourself/manage stress (i.e., relax, exercise, socialize)."

Q: Which of these factors have contributed to your mental health or stress issues?



Despite the prevalence of anxiety and depression in the students surveyed, the majority (65%) have not sought treatment. This is not from lack of resources at Emory, however. Emory's University Health Services psychiatry clinic has four physicians and is free to students with the provided health insurance. Emory Student Health and Counseling Center also offers free counseling to students with this insurance, although visits are limited. Both the student Health Center and Counseling Center also offers on-call counselors for emergencies. So in sum, graduate school is stressful; we all agree. But if you are having trouble, use Emory's resources! They are free, so you may as well take advantage of them.

Student Health Services: 404-727-7551
Emory Counseling Center: 404-727-7450



Congratulations to our recent thesis defenders!

Jun Liu - May 26 - "Ferritin as a Transgenic MRI Reporter in Embryonic Stem cells" (Anthony Chan lab)

Zoe Donaldson - May 21 - "Exploring the neurogenetics of sociality: creation of models to assess the functional role of V1a receptor diversity" (Larry Young lab)

Gus Davis - May 14 - M1 Muscarinic Acetylcholine Receptor Signaling and Regulation of Amyloid Precursor Protein Processing (Jim Lah/Allan Levey lab)

Rayna Bauzo - April 23 - Role of Glutamate on Dopamine Neurochemistry and the Behavioral Pharmacology of Cocaine (Leonard Howell lab)

Liliya Iskhakova - April 13 - Microcircuitry of Group III Metabotropic Glutamate Receptors (mGluRs) in the Mouse Striatum (Yoland Smith lab)

Sarah Ewing Corcoran - April 3 - Early Life Stress, HPA Axis Function and Sensitivity to Psychomotor Stimulants in Nonhuman Primates (Leonard Howell lab)

Heather Ross - March 30 - Oxytocin and Affiliative Behavior in Prairie Voles (Larry Young Lab)

Elizabeth Martin - February 12 - Corticotropin-Releasing Factor Overexpression in the Central Amygdala: Gene Expression, HPA Axis Function and Behavior. (Charles Nemeroff lab)

We apologize for these omissions in the last issue:

Kroshona Tabb - Sept 19, 2008 - A Rat Model of Depression and Epilepsy Co-morbidity (David Weinschenker lab)

Jennifer Caldwell Wilhelm - Oct. 8, 2008 - The GABAA receptor is a critical part of the sensing machinery that triggers homeostatic plasticity of synaptic strength and intrinsic excitability (Pete Wenner lab)

We are looking forward to welcoming an excellent class in the fall, from many different universities and backgrounds and with diverse research interests!

Mallory Bowers - University of Pennsylvania - neuronal plasticity in mood disorders

Katherine Bryant - College of William and Mary (BS), George Mason University (MS) - visual attention and its relationship to theory of mind in apes

James Burkett - Emory University - endogenous opioids and pair bonding in prairie voles, electrophysiology

Amaryllis Cintron - University of Florida (BS), Georgia State University (MS) - computational and experimental approaches to study plasticity in the pyloric network, learning and memory

Todd Deveau - Vanderbilt University - genetic differences between responders and non-responders to pharmacological anti-depressant therapy

Sarah DeWitt - Barnard College - emotional memory, anxiety, fear conditioning in rodents

Zachary Johnson - University of Illinois - differences in the brain's processing of social rewards and other types of rewards, such as eating or using drugs

Joseph Mertz - Cornell University - developmental neurobiology.

Ariana Mullin - Trinity College - Parkinson's Disease, other neurodegenerative disorders.

Donald Noble - University of California in Los Angeles - brain plasticity related to emotion, attention, and volition; effects of mental training and meditation techniques

Cecilia Prudente - University Fed De Minas Geras - motor control and movement

Katherine Reding - College of William and Mary (BS), University of Liverpool (MS) - effects of gonadal hormones on behavior and cognition, comparative biology of the dopamine system

James (Drew) Solyst - St. Mary's College of Maryland - mechanisms of social cognition, the neural correlates of empathy, and the possible involvement of mirror neurons in these social processes.

Extracurriculars

Summer 2009 activities in and around Atlanta

Atlanta Botanical Gardens

May 2-Oct 31

www.atlantabotanicalgarden.org

Atlanta Journal-Constitution Peachtree Road Race

July 4

Lenox Mall to Piedmont Park

www.atlantatrackclub.org/peachtree.htm

BODIES... The Exhibition

Atlantic Station Exhibition Center

265 18th Street

www.bodiesitheexhibition.com

Decatur Book Festival

September 2-4

Downtown Decatur

www.decaturbookfestival.com

Dragon*Con

September 4-7

Midtown Atlanta

www.dragoncon.org

PI Personals: Dr. Ranjita Betarbet

By Elaine Pranski

When did you start at Emory?

I started at Emory in 1993 as a post-doc in Neurosurgery. In 1996, I moved to Dr. Tim Greenamyre's lab. I became an assistant professor in 2002, and in 2005, I became affiliated with Dr. Allan Levey and Dr. Jim Lah's lab. In 2007, I received my RO1 funding to begin my own research.

Tell us about your research.

I have always been interested in Parkinson's disease. My initial research began looking at transplantation as a tool to treat Parkinson's disease. When I moved to Dr. Greenamyre's lab, I became more interested in the mechanisms of Parkinson's disease, in particular with regards to the basal ganglia. I then started gravitating towards the environmental and genetic factors responsible for the pathogenesis of the disease. Currently, I am beginning new projects concerning the overlap between Alzheimer's disease and Parkinson's.



Where did you work/study before Emory?

I received my Ph.D. in 1989 from All India Institute of Medical Sciences in India. I worked at University of Pittsburgh and University of Cambridge, UK before coming to Emory.

What first sparked your interest in science when you were young?

I was always interested in the brain and how it functioned. I was especially interested in movement circuitry, which is probably how I became interested in Parkinson's. When I was younger, I felt like discovering something new would be fascinating.

What do you enjoy doing outside of lab?

I love to cook. I also like being outside and enjoy walking along nature trails. I enjoy spending time with my husband and two children (currently 14 and 16 years old).

What is your favorite restaurant in Atlanta?

My family and I went to Bonefish last weekend. We all loved our meals and I think that would be my current favorite.

How do you balance your work and home life?

At first this was very tough for me; I wanted to perform at 100% at both. In the lab I would see everyone working so hard and spending such long hours in lab finishing up ex-

periments. I knew that I did not have that freedom; I had only a certain amount of time that I could be at work before I had to take care of my children. I also did not want my children to suffer because of my work either. Now, I've reached a healthy balance between the two. I try not to set my expectations too high for either. I spend as much time with my children and husband as possible. I schedule weekly meetings with my lab members so I'm up to date on each of their projects, but I'm usually around the lab enough that if they ever want to discuss something with me, I am available. My husband and children are also very helpful and understanding, although sometimes it was very tough managing everything when my son and daughter were younger. I am glad that I had my children closer together instead of spread apart so that this time period was as short as possible.

Have you had any challenges as a woman in science?

I have faced some challenges in my career, but I'm not sure if I could directly attribute them to being female. I didn't have a green card to begin with. However, I have never faced any type of discrimination in the neurology department. I have been allowed to develop on my own terms, without any pressure. I do think that the amount of time it took me to develop my independence took more time than it would have if I were not a woman.

If you could be something besides a neuroscientist, what would you be?

There is nothing I can think of that would make me as happy as I am currently. I enjoy my work and couldn't imagine doing something else. If anything, I could distantly see myself as a chef since I enjoy cooking.

What do you like most about Atlanta?

The weather -it allows me to be outside and enjoy myself.

What are three things you know now about science as a career that you wished you knew in graduate school?

One, the importance of a good advisor. This is much harder to find than I expected and it can take much longer to understand if the relationship is working. Two, that it is still hard to manage your life as a female scientist despite having a supportive partner. Three, the importance of developing your writing skills from the beginning of your training to prepare you for grants and scientific papers.

Do you have any general advice for the neuroscience graduate students?

It is crucial for your scientific development to find a good environment where resources are shared and the exchange of ideas is encouraged. While some may feel that a competitive environment is beneficial, it has its own drawbacks. Most importantly, enjoy what you do.

A Confounded Crossword

By Erin Hecht

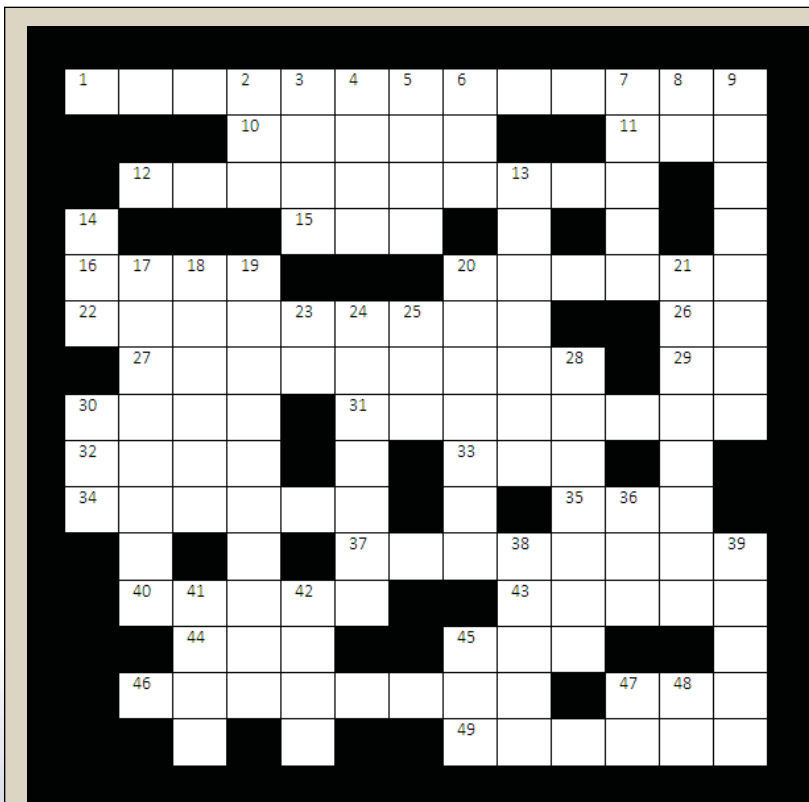
Across

1. Weinshenker's lab on Christmas Eve
10. When small perturbations in initial conditions lead to unpredictable variations in observed behavior
11. Programmable card in phone
12. There's no right way to...
15. Amnesty International, the Ad Council, or the Sierra Club
16. Mess o' potamia
20. Devices used to report escaped research subjects
22. What the endoplasmic reticulum does to calcium
26. Opposite of 38 down, abbr.
27. More descriptive than 19 down
29. "Cuz the boyz n ___ hood are always hard, come talking that trash and we'll pull your card"
30. What 34 across will do to the food in your freezer
31. Shawn Hochman's spinal cords
32. What you do with your Pubmed results
33. Cent, million, or diem
34. Classic sublimator
35. Hybrid Neural Microsystems
37. Who says you can't "finish in four?"
40. Fights, but for fun
43. Between milli and nano
44. My research subject ___ my homework
45. Where you go after your NRSA gets rejected
46. How sheep exercise control over their own actions?
47. Health maintenance organization
49. What your nose knows?

Down

2. According to a 1999 Surgeon General's report, this has a better remission rate for severe depression than SSRI's
3. Greater or less ____
4. 15 across for 21 down
5. Trendy neighborhood in 36 down
6. Enzyme suffix
7. Communist antidepressant?
8. Measurement system used in science
9. 34 across does this at room temperature
13. Response to 45 down
14. Our bosses
17. Needs
18. To make watery?
19. More precise than 27 across
20. What to do when your NRSA doesn't get funded
21. John McCain, Mick Jagger or Shirley MacLaine
23. What we'll use to get around town at SfN '09
24. MRI manufacturer
25. Why not to order blowfish sushi
28. "Earmark" of 21 down
30. Complex regional pain syndrome where acute pain becomes chronic
36. The city that never sleeps (it must be full of grad students)
38. Runts, Mini Coopers, and studio apartments
39. Marvin the Paranoid Android was a sad one, and C-3PO was an urbane one
41. The opercularis is my favorite and the compacta is Kalynda's
42. Where zebrafish live when they're not in the lab
45. Davis lab motto?
47. What the NIH reviewer said about your NRS
48. Young Jeezy, Q-Tip, and Flava Flav

Solution on Page 2



GIN Election Results

Presidents..... Sara Freeman, Catie Capello
 Recruitment..... Eileen Kessler, Christina Nemeth
 Treasurer Lisa Matragrano
 Executive Committee..... Megan Lyle, Laura Mariani
 Curriculum Committee Damon Lamb, Steve Ryan
 Frontiers Katie Barrett, Katy Shepard
 Webmasters Nikki Sawyer, Callie McGrath
 Newsletter David Ehrlich, Lucy Guillory
 Secretary Monica Chou

Division Student Advisory Council
 Jacob Shreckengost

GSC Reps (*everyone is welcome to attend meetings*)
 Kalynda Gonzales Chris Makinson
 Jeanne McKeon Yvonne Ogbonmwan