

the Central Sulcus

Delightful Downtown Decatur

By *Laura Mariani*



The City of Decatur is home to many Emory grad students thanks to its proximity to campus and attractive local businesses. Atlanta's next-door neighbor offers lots to do on a student-friendly budget. Many hot spots can be found within a single square mile centered on

Downtown Decatur. Some of us live close enough to walk there, but the attractions described here are also accessible by car (pay lots and elusive street parking), MARTA (Decatur Station on the East/West line) or the free CCTMA Cliff shuttle bus from Emory (until 7 PM, weekdays only).

Drinks!

Brick Store Pub - Rated one of the best beer bars in the country, the Brick Store specializes in Belgian styles but has something for every taste. Good luck finding a seat here on Friday or Saturday night, but it's great for a beer lunch or weeknight casual dinner. They serve burgers and pretzels aplenty, as well as excellent salads when you want something lighter. Beers \$4-\$8; sandwiches and entrees \$7+.

Leon's Full Service - The Brick Store's companion pub (same owners) opened just down the road in 2009. Slightly more upscale, but you can still wear your lab clothes. The typical pub fare gets a classy twist, and house cocktails feature fresh fruit juice and herbs. The outdoor bocce court offers additional entertainment. Beers \$4.75-\$8; cocktails \$8-9; sandwiches and entrees \$8-\$18.

The Marlay House (formerly The Grange) - A classic Irish pub with a beer list that never disappoints (classics like Guinness are always available, with rotating taps featuring special craft brews). Great for catching the football (soccer) game or lounging all night on their breezy covered patio. Sandwiches and entrees \$5.50 - \$11.

Twain's Billiard and Tap - This bar has plenty of space, perfect for large crowds of thirsty neuroscientists. They brew their own beer, which is affordable if not gourmet (drink specials Monday-Thursday). A few rotating guest taps and lots of bottled selections round out the bar. Twain's also has 13 pool tables, 4 dart lanes, 2 shuffleboard tables, and some arcade games for friendly competition. Sandwiches and entrees \$6-\$11.50.

Taco Mac - With over 90 beers on tap, Taco Mac has something for everyone. Work your way through the entire beer list over time to win a prize and the respect of your peers, or just share a pitcher and some wings. Food is available, but mediocre.

The Thinking Man Tavern - Down the road a piece on W. Howard Ave., The Thinking Man is a nerd's paradise featuring antique microscopes, among other things, with a collection of board games behind the bar to keep you occupied. Pint Night on Wednesday (1/2 price draft beers) is a program favorite. The potato rounds are breathtaking. Draft beer \$4-\$5, sandwiches and entrees \$6-\$9.50.

The Corner Pub - Southeast of downtown Decatur near Agnes Scott College, this pub is far enough off the beaten track to avoid huge weekend crowds. A wide variety of food is available, including lots of vegetarian-friendly options. Draft beer \$4-\$5, sandwiches and entrees \$6-\$12.50.

Continued on pg 2...

Table of Contents

Delightful Downtown Decatur	1, 2
Ethics of "Cogniceuticals"	3-5
PI Interview: Mar Sanchez	5
Grad Community and Volunteering	6
Thesis Defenders	6

Editors: Lucy Guillory, David Ehrlich
TheCentralSulcus@gmail.com

the **Central** Sulcus

Food!

Raging Burrito / Raging Taco - Home of burritos the size of your head and pitchers of fine margaritas. Choices range from typical meat, beans and rice combos to blackened tilapia, pineapple jerk tofu, and teriyaki! Validated parking available in the adjacent lot, large patio for outdoor dining. Burritos \$4.50 - \$8, frozen margarita pints occasionally on special for \$4.95.

Taqueria del Sol - The line is usually out the door for these amazing little mouthfuls of taco goodness. Don't worry, they've got a system, and you won't have to wait too long. Enjoy a few tacos with a side salad and a bottle of beer or a frosty margarita. Tacos \$2.19, enchiladas \$3.19, sides \$1.89.

Figo - Fresh pasta is made daily at this unpretentious little Italian place in East Decatur Station (near Agnes Scott College). Pick your favorite noodle and top it with the sauce of your choosing. A cute date spot for broke students – slurp spaghetti, Lady and the Tramp style. Wine \$4.75-\$7 per glass; pasta with sauce \$8-\$12; panini \$8.

Sawicki's - A crunchy little organic grocer and butcher shop that also serves great sandwiches. Quality cold cuts with delicious veggies and condiments make for a low-key treat at their communal dining table. Also a great place to splurge on grass-fed beef or locally farmed eggs to bring home. Sandwiches \$7-\$9.

Study Spots!

Java Monkey - "The Decatur Caffeinator" serves coffee beverages, pastry, and beer/wine. This funky cafe also regularly features live music.

Dancing Goats - This Washington-based fancy coffee purveyor has an espresso bar on W. Ponce de Leon Ave. Open until 7 PM, they offer coffee, doughnuts, wifi, and hang-out space.

Decatur Library - The local branch of the DeKalb County Public Library offers a quiet space for reading when you're sick of the libraries at Emory. They also have a decent selection of magazines for

browsing, if you're too cheap to subscribe. Open until 9 PM Monday-Thursday, 6 PM on Friday-Sunday.

Get off Your Butt!

The PATH - One of the few car-free stretches of pavement in sprawling metro Atlanta, the PATH runs along Howard Avenue/College Avenue south of Downtown Decatur. A haven for cyclists, runners, and dog-walkers, it stretches all the way from Martin Luther King Center to Stone Mountain Park. Most of the 17-mile PATH trail is green space, but a few miles run along the road (and, in this case, the train tracks as well).

Adair Park - Located off of W. Ponce de Leon Avenue on Adair St. Your canine friends may enjoy a visit to the fenced dog run, and a playground is available for the young or young-at-heart.

CORE Body Decatur - While Emory students have access to the university gym for free, group fitness classes are not included. Some yoga, spinning, and aerobics addicts may prefer to join a separate health club to get their fix. This local gym offers discounts if you sign up for a full year, and even lower rates if you sign up with a friend. Or stop by for a single class for \$7.50.



Neuroscience students hang out at Twain's in Decatur. Photo by Matt Magnuson.

Ethics of “Cogniceuticals”

By Katy Shepard, Christina Nemeth, Karen Murray, Callie McGrath



Against Cogniceuticals. For those who do not already feel disadvantaged by the social and occupational divides created by education, socioeconomic status, race and gender, a new *chemical* barrier lies on the horizon.

Pharmaceuticals designed to enhance cognitive function are being promoted and marketed to the general public. “Cogniceuticals” first hit the scene when research proved fruitful in creating compounds that improved cognition in animal models of various dementias and behavioral disorders. It was posited that if these drugs have the potential to improve the mental capacities of animals (and possibly humans) with deficits, they could *enhance* the normal functioning of a healthy brain. Far beyond enhancers such as caffeine, and the extracts found in *Ginkgo biloba* and St. John’s Wort, more extreme cogniceuticals claim to “improve” personality, picture thinking, creativity, goal-setting and even perception.¹ Many aspiring cogniceuticals are still in the midst of clinical trials, but considering current cognition-enhancing drugs, such as amphetamines, the forecast for society is unnerving. Amphetamines are already recommended for increased brain power, however the associated dangers of its use alone should be enough to petition the restriction of other similar drug creations. Because these drugs threaten to dramatically change the industrial and academic landscape, we need to articulate a position on the non-clinical use of cogniceuticals *before* we find ourselves locked in pharmaceutical arms races with our coworkers and classmates.

As a society, we have decided that performance-enhancing drugs are unacceptable in the realm of athletics; all major American sports organizations have policies in place banning use of performance-enhancing substances. When internal mechanisms have failed to keep athletes from doping, external regulators including the U.S. government have taken an interest and stepped in to correct lapses in rule enforcement. Congressional involvement in the steroid-use policies of Major League Baseball serves as an indicator of the public’s interest in fairness in competition. We agree as a society that in athletics, people should compete to the best of their *natural* ability. Use of artificial enhancers is unethical. If we do not accept the use of performance enhancers in sports, why should we settle for anything less in the world outside of athletics?

Our country was built on an “up by the bootstraps” ideology. In principle, it doesn’t matter where you start – whether from a single-parent home in the ghetto or a wealthy suburb, anyone can rise to the top by virtue of their own merit. Cogniceuticals put an end to this by linking wealth to intelligence. The wealthy will be able to buy attention- or memory-enhancing drugs to improve their children’s performance in school. These children will get into better colleges, increasing their chances of securing high-paying jobs, and the cycle continues, leaving the poor at a disadvantage. The outcome will be intense and accelerate class stratification.

Cognitive enhancers could also carry serious abuse potential. Although many cogniceuticals do not have a recognized mechanism of action and rely on the placebo effect for results, others, such as amphetamines, are powerful stimulants that are highly abused by adolescents and college students in the face of a more demanding and competitive academic scene. Furthermore, these drugs are most frequently acquired illegally and without a prescription, increasing the risks of overdose. Drug addiction already affects millions of people

Continued on pg 4...

the Central Sulcus

and is a priority for public health research. The promotion of cognitive enhancers can only contribute to this damaging and costly epidemic.

Although the idea of a chemically-enhanced brain may be alluring, unnecessary drug use will negatively impact not only our bodies but the academic and professional landscape as we know it.

In Favor of Cognitive Enhancers. Today's society consumes an assortment of pharmaceuticals to enhance behavior and function. Caffeine, nicotine, multivitamins, and *Ginkgo biloba* are all non-medicinal cognitive enhancers that are commonly used and socially accepted. Currently, drug companies are developing new enhancers known as cognitive enhancers, which are drugs that facilitate learning, memory, attention, and potentially other aspects of mental efficiency and processing. Although we accept the use of traditional enhancers as the status quo, controversy surrounds the development of new cognitive enhancers. Caffeine is a readily available and widely consumed cognitive enhancer. Both scientific literature and popular press have documented and praised caffeine's stimulation of alertness, attention and memory.² Although minimal side effects occur, society feels that caffeine is a safe, and perhaps even necessary, cognitive enhancer. The gains of consuming caffeine outweigh the losses since most of the negative side effects are mild and attenuated after cessation of consumption. Furthermore, individuals are typically able to moderate their caffeine intake to achieve their needs. One fear society has about future cognitive enhancers is that they will not have control over how these compounds are obtained and consumed. So far, people feel comfortable with the self-administration of caffeine, suggesting that individuals will be able to maintain this self-dosing responsibility in the future. Comparing cognitive enhancers with highly regulated and abused substances, such as steroids, may be an unfair comparison as the potential for abuse of cognitive

enhancers should be limited. Steroids have been banned in many settings due in part to their detrimental effects; yet such deleterious characteristics should not be a component of new cognitive enhancers when used properly. As drug research evolves, a new future for cognitive enhancing drugs emerges. Well-developed, well-researched drugs will reach the public with known efficacies, side effects, and benefits. These are attributes currently lacking from supplements such as *Ginkgo biloba*, an herbal remedy used widely to boost memory despite the fact that its effects are not fully substantiated and taking this supplement may be useless or have detrimental side effects.³ Despite the unknowns surrounding *Ginkgo biloba*, its use is sanctioned. Surprisingly, public perception of a compound currently acts as more of a criterion for usage than drug efficacy or side effects. In the future, well-regulated cognitive enhancers should provide greater transparency and efficacy, lessening public apprehension on the use of these newly developed compounds.

A strong argument for the use of memory enhancing drugs is the potential benefit to society as a whole. As people age, memory declines. Memory enhancing drugs can help remedy this deficit. For those not yet affected, benefits could range from ease in remembering the location of keys to improved eyewitness recall. Few would argue against such benefits, but rather against introducing a drug to facilitate such augmentations. No cognitive enhancer will be a miracle drug creating abilities no individual possesses. The extent to which they can provide a benefit will most certainly be limited. The use of cognitive enhancers plays to one's sense of fairness by selectively giving an advantage to one group over another. However, before any enhancer is introduced, some individuals are already at an advantage caused, at least in part, by the genetic lottery. Some individuals have photographic memories, **Continued on pg 5...**

while others have difficulty remembering where they parked their car. Rather than provide an unfair advantage, memory enhancers could level this playing field. The intention is to create opportunity for a more productive society. Society is constantly reaching to the future to improve upon itself. Tools such as exercise, meditation, sleep, diet, and traditional enhancers are known to improve cognition, but these tools have limits. Cogniceuticals will improve upon these traditional tools. It is now the responsibility of society to endorse the development of cogniceuticals to promote the natural forward growth of humanity.

1. "Nootropic" <http://en.wikipedia.org/wiki/Nootropics>

2. Medline Plus. Caffeine. April 2009.

<http://www.nlm.nih.gov/medlineplus/caffeine.html#cat>

3. National Center for Complementary and alternative medicine. Herbs at Glance: Ginkgo. November 2008. <http://nccam.nih.gov/health/ginkgo/>

P.I. Personals: Interview with Dr. Mar Sanchez

By *Brittany Howell*



Dr. Mar Sanchez **Brittany Howell**

How did you end up at Emory?

I did part of my PhD in the USA (LSU), and later got a postdoctoral fellowship to come back. While I was there I contacted Paul Plotsky to do a second postdoc at Emory to study the neurodevelopmental effects of early life stress in the rat. I did not know I would end up working with monkeys...

Was it difficult to transition from working in science in Spain to working in the US?

Just the opposite. The US has a stronger science

infrastructure and a very efficient system. That's why I stayed here.

Congratulations on recently becoming a US citizen! What are some of things that you miss (and don't miss) about Spain?

Definitely, I miss the "tapas." I am kidding...although I do miss Spanish food. Mostly, I miss my family and friends. I don't miss the cigarette smoke everywhere.

"Love what you do in science. Be persistent and creative." – Dr. Mar Sanchez

Why neuroscience?

Since I was very young I wanted to understand why we feel and behave the way we do. That could only drive me to study the brain and how early experiences shape its development.

What do you enjoy most about working with monkeys?

Their unique personalities. I love the fact that they are so different to each other; some are easy-going, others are neurotic!

I know you must not work every second of the day, so what do you do during those 5 or so extra seconds each day?

I play mommy, spend time with my dogs, hike, read...(all in 5 seconds.)

Favorite musician?

Not just one, or one type of music. I love Spanish guitarists (Andres Segovia, Paco de Lucia), Celtic music (Luar Na Lubre), classical (Bach), Pink Floyd, Queen, REM, Sheila Chandra.

What were your greatest challenges so far in your career, and how did you overcome them?

Finding a balance between family and career, which I am still working on. I had to become more efficient and focused at work, and establish clear priorities. And sleep less...

Any last words of advice?

Love what you do in science. Be persistent and creative.

Discovering the Graduate Student Community By Volunteering

By Lydia Morris and Amy Anderson-Zose



A new organization is harnessing the volunteer efforts of graduate students from across the Laney Graduate

School. With help from an older “sibling” group GIVE (GDBBS Involved in Volunteerism at Emory), SAVE (Students Advocating Volunteerism at Emory) was chartered by the Graduate Student Council just this past fall. As an active member of GIVE, NaTasha Hollis (a PhD Student in Genetics and Molecular Biology) took the initiative to form a graduate school-wide volunteer organization.

While GIVE provides volunteer opportunities for graduate students, post-docs, staff, and professors across the Biological Sciences (GDBBS), SAVE is open to only graduate students across all fields and is completely student run. SAVE is also intended to be a social volunteer organization providing graduate students with a sense of community at Emory and a mechanism for meeting other graduate students outside their programs. Graduate students are in a unique phase of life; it is important for them to interact with other students in different fields for them to gain perspective on their lives and their research. Neuroscience graduate student Yvonne Ogbonmwan, an executive board member, states that both the social aspect of a volunteer organization and serving the community motivated her to become involved. As its first outreach effort, SAVE collaborated with GIVE to hold three drives this

winter: Toys for Tots collection, a canned good drive to collect food for the homeless, and a winter clothes collection to benefit domestic violence victims and homelessness prevention centers in Atlanta. Upcoming volunteer opportunities include judging a science fair, cereal box tops to raise money for local schools, child care at a local homeless shelter (Genesis), Aeropostal Teens for Jeans, a weekend trip in March to help monitor and preserve dolphin populations in the Savannah area, and much more. **Contact SAVE by emailing Amy Anderson-Zose, akande2@emory.edu, or check out our Facebook page, <http://www.facebook.com/group.php?gid=193800887978>**

Congratulations to our recent thesis defenders!

Stephen Collins-12/21- Stephen Warren

Assessment of the clinical impact of sequence variants in the FMR1 gene

Nathan Schulteiss-12/18-Dieter Jaeger

Intrinsic and Synaptic Determinants of Spike Timing Revealed by Phase Response Analyses of a Morphological Globus Pallidus Neuron Model

John Rolston-11/16-Steve Potter, Robert Gross

Multielectrode interactions with the intact and epileptic brain

Lindsey Fischer-11/16-Jonathan Glass

Cu,Zn-Superoxide Dismutase (SOD1) and Oxidative Stress in the Pathogenesis of Axonal Degeneration

Milos Cekic -9/23-Don Stein

Progesterone, Vitamin D, and the Acute Inflammatory Response After Traumatic Brain Injury in the Aged Rat

Yair Gozal-8/27-Jim Lah, Allan Levey

Identification and characterization of disease-associated proteins in frontotemporal lobar degeneration

Rebecca Rosen-7/9-Lary Walker

Characterization of Naturally Occurring, Pathogenic and Benign Ab Multimers (Why don't monkeys get Alzheimer's disease?)