The B&B Potential

The Brains & Behavior Newsletter

A publication of the Neuroscience Institute

Brains & Behavior Area of Focus, also known as B&B, is an interdepartmental program that promotes research collaborations and dialog through graduate courses, lectures, grants, and much more. Researchers and students involved in this program span across the departments of biology, chemistry, neuroscience, computer science, mathematics & statistics, philosophy, physics & astronomy, and psychology. The three central components of this program are the Brains & Behavior Fellowship, the Distinguished Lecture Series and the Seed Grants.

Letter from The IDC Chair

I am happy to report that the interdisciplinary spirit of the Brains & Behavior program is alive and kicking. One of the challenges in transitioning from the Brains & Behavior program to the Neuroscience Institute was to preserve the communal dimension that originally animated the program.

To this end, an Interdisciplinary Committee (IDC) was created. The committee comprises five members elected for a two year term, two core (Don Edwards, NI and Anne Murphy, NI) and three associate faculty (Deb Baro, Biology; Diana Robins, Psychology and Andrea Scarantino, Philosophy). The diverse composition of the IDC reflects the attempt to give voice to a range of disciplinary viewpoints. Over the past couple of years, the IDC has been busy organizing the Distinguished Lecture Series, the allocation of $300,000 of B&B Seed Grants, the administration of forty-six B&B Fellowships and the organization of the Annual Retreat. We are fortunate to have been assisted in such endeavors by Liz Weaver, neuroscience education specialist at the NI, who has been instrumental in the success of all of our initiatives. I am hopeful that the interdisciplinary side of the NI will continue to grow and enrich the intellectual life of the institute, solidifying GSU’s position as a leader in the neurosciences.

Andrea Scarantino, Dept of Philosophy, IDC Chair

The B&B Potential

Just like an action potential allows for communication, so does the new B&B Potential newsletter! Albeit, one is on a micro scale and within a neuronal network and the other is on macro scale and within the Brains & Behavior community. Nevertheless, communication is at the center of both! The B&B Potential will be published three times a year and archives can always be found on the neuroscience website: www.neuroscience.gsu.edu/brains_behavior.html

Georgia State University

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**Brains & Behavior Fellowship program**

The Fellowship is the major student component of the Brains & Behavior program. There are 46 graduate students in this prestigious program and they hail from the 8 different disciplines making up the Brains & Behavior area of focus. They are required to attend all the distinguished lectures. In addition, these students take the B&B Seminar Course for an entire year. Many students engage in extracurricular and community activities together. For upcoming events, see page 4.

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**Did you know?**

- Fellows are eligible for an annual $500 award.
- Brains & Behavior also supports 15 undergraduates’ research through student stipend support.

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**Update on Brains & Behavior Seed Grants**

Not only is collaboration seen at the student level within the B&B Fellowship, but the annual B&B Seed Grant program fosters collaboration at the faculty level as well. Each year, faculty across 8 disciplines work together to initiate interdisciplinary research with the support of a seed grant. Many times, these small projects go on to garner federal funding and develop into large collaborative research.

*UPDATE* The Seed Grant Application went live Feb. 7th, 2011: [http://www.neuroscience.gsu.edu/seed_grant.html](http://www.neuroscience.gsu.edu/seed_grant.html). We received 13 applications this year. Award letters will go out mid-April, 2011.

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**Brains & Behavior Distinguished Lecture Series**

Scholars from across the world come to speak in the yearly B&B Distinguished Lecture Series (otherwise known as DLS). The series is held once a month from September through May in Georgia State University’s new Petit Science Center. The speakers usually meet with faculty and students during their stay. Most notably, each distinguished lecturer meets with B&B Fellows for lunch after their seminar engagement. This opportunity allows students to ask research oriented questions and informal ones alike in a uniquely intimate setting.

*UPDATE* Podcasts of each lecture can now be found here: [http://www.neuroscience.gsu.edu/Social_Media.html](http://www.neuroscience.gsu.edu/Social_Media.html)

For a detailed schedule of the 2011 DLS, see page 8.
B&B Research Spotlight

B&B faculty member Kyle Frantz is a triple threat...She is not only a researcher and science educator, but...she is also doing her part to stimulate the economy by creating new job positions to support these programs.

Neuroscientist encourages next generation

By Jeremy Craig • jcraig@gsu.edu

For associate professor Kyle Frantz, neuroscience was a natural career choice. As a youngster, she became fascinated by the fact that behaviors and personality are strongly influenced by biology, chemistry and physics.

Now Frantz wants to help bring that same excitement of scientific understanding to high schoolers and undergraduate students so they may become passionate about the field of neuroscience, too.

Frantz is the primary investigator on a $1.7 million grant from the National Institutes of Health, in conjunction with Emory University, Spelman College and Agnes Scott College, to immerse undergraduates from underrepresented backgrounds — including minorities, people with disabilities and educationally disadvantaged students — in a two-year neuroscience research program.

The goal is to help bring students into doctoral programs so they may one day tackle the great mysteries of the mind.

Frantz said it’s often difficult for some students to take an interest in a field such as neuroscience because people in their communities may not emphasize it.

It’s difficult, she says, to “see yourself as a scientist when you might not see scientists among your family, friends, or peers.”

Frantz also oversees the Institute on Neuroscience (ION) for high school students and the Behavioral Research Advancements in Neuroscience (BRAIN) program for undergraduates. Both are projects of the Center for Behavioral Neuroscience.

One of the first hurdles for these young scholars is accepting the incredible workload required to be successful in science, she said.

“When our students realize how much work is involved in a science career, and are still enthusiastic about the process of research and still curious about the mind and brain, then we have the highest hopes for their futures in neuroscience,” Frantz said.
Recent Events

Brains & Behavior Program at a Glance

Brain & Behavior Program at a Glance

Upcoming Events

B&B Distinguished Lectures
See Page 8

B&B Seed Grant Awards Are Announced
April 15, 2011

B&B Annual Retreat
April 1, 2011

B&B Student Retreat
April 1- April 3, 2011

Where: Big Canoe, Georgia
Who: B&B And NGSA Fellows
What: Team Building & Data Blitzes

Quick Resources

Georgia State University

PROGRAM WEBSITE
www.neuroscience.gsu.edu/brains_behavior.html

FELLOWSHIP WEBSITE
http://neuroscience.gsu.edu/4219.html

DISTINGUISHED LECTURES
http://neuroscience.gsu.edu/lecture_series.html
SOCIAL MEDIA MAKES ITS WAY INTO BRAINS & BEHAVIOR

Communication is a multi-billion dollar business and is arguably one of the most important aspects of modern science. Without communication, all of our important ideas and advances would be discovered in isolation, if at all. Because of this reality, it’s clear that we, as scientists, are dependent upon communication. Therefore, it’s worth taking a moment to examine the way modern communication can help shape our scientific community here in the B&B program. In the “old” days (twenty years ago), communication in science meant hearing a lecture, reading a paper or even watching the television. And for the day, these media appeared sufficient and necessary, two qualities we appreciate in science.

However, today’s social media have capabilities that previous ones did not. They allow scientists and science-minded communities to communicate on a much higher level. Today, with technology such as Twitter, MySpace, IM chatting, blogging, etc., communication media have the ability to support a conversation as opposed to previous outlets which offered more of a broadcast of information. While we still need papers and lectures, outlets like Facebook provide a platform for rapid dissemination and discussion. Recently, B&B has joined this conversation and we would like you too as well! So join us in stay connecting, the old way AND the new. See below for more details.

B&B IS NOW ON TWITTER!

Follow us at BrainsBehavrGSU. Everyday we tweet research findings as interdisciplinary as the program itself. In the spirit of dialog, feel free to add to the conversation! If you are new to Twitter or have never done it and would like to know more, please email Liz Weaver: weaver31@me.com. Don’t want to download it on your phone or computer? Follow our live stream here: http://www.neuroscience.gsu.edu/Social_Media.html

YOU HAVE A VOICE, USE IT!

Should Brains & Behavior have two webpages for Facebook; one for Fellows and one for the rest of the B&B community OR just one for everybody? Send an email to Liz Weaver at weaver31@me.com and voice your opinion.

B&B now has Twitter, follow us @BrainsBehavrGSU. Comment on articles, ask questions, let us know what you want to hear more about via Twitter.
The IDC oversees the Brains & Behavior program. This committee rotates faculty each year in order to represent each discipline and their unique needs.
Please enjoy our very first crossword challenge. Each publication will have a different subject matter, eventually representing each of the departments that make up B&B. Neuroscience is our first theme. Enjoy!

ACROSS
2 Broca’s and Wernicke’s areas are involved in this
4 Endogenous opiate chemicals
5 Pictorial representation of the sensory and motor anatomical divisions
7 Brain Awareness Month
8 Technical name for the well-studied sea slug
10 Very first antipsychotic drug
11 Director of the Neuroscience Institute
12 Abbr. for this technology is BCI
14 Abbr. for this is EEG
17 Long-Term potentiation occurs through changes in the strength of synapses at contacts involving these receptors
18 Insulates nerve cells
19 Basic building block of the nervous system
20 Corpus Callosum connects these

DOWN
1 Master clock in the brain
3 4 out the 5 drugs that are FDA approved to treat Alzheimer’s disease work on this neurotransmitter
6 Type of memory that includes declarative knowledge (facts and data)
9 Bundle of axons
13 One of neurotransmitters involved in reward
15 Produced in the hypothalamus and acts on the pituitary
16 Benzodiazepines increase this neurotransmitter

Written by Liz Weaver
REMAINING
2011 BRAINS & BEHAVIOR DISTINGUISHED LECTURES

Second Tuesday of each month at 10 AM,
124 Petit Science Center, 100 Piedmont Ave SE.
This lecture series is free and open to all GSU students, staff, and faculty and all members of the Atlanta Neuroscience Community.
Click here for more information

April 12, 2011
Carol Barnes
University of Arizona
Host: Anne Murphy

May 10, 2011
Mary Kennedy
California Institute of Technology
Host: Sarah Pallas