



BC UNDERGRADUATE NEUROSCIENCE EXPRESS

Volume 4 Issue 2

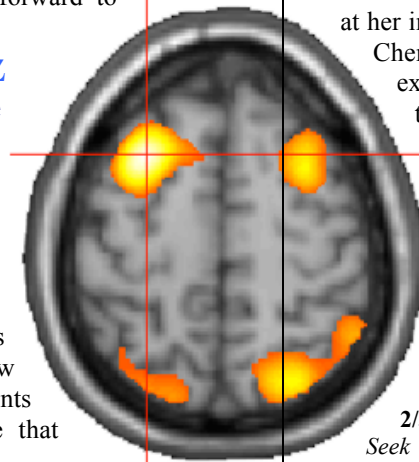
Spring 2010

A Publication of the Brooklyn College Psychology Department

Greetings from the BC Neuroscience faculty. We hope you had a productive Spring 2010 semester. In this edition of the BC Undergraduate Neuroscience Express, we highlight exciting feature events and recent developments in the neuroscience community. We hope you enjoy this issue and have a wonderful summer! Look forward to seeing you in the Fall semester.

DR. BARBARA BELTZ Visits Brooklyn College

This Spring, the Psychology Department was fortunate to have Dr. Barbara Beltz visit and present to our students and faculty. Dr. Beltz is a Professor of Neuroscience and Director of the Neuroscience Program at Wellesley College. Her research focuses on adult neurogenesis; particularly, how environmental and physiological events influence the ancestral cellular lineage that produces adult-born neurons.



Reflections on Dr. Beltz's Visit and Invited Talk, "Neuronal Assembly Line and the Adult Brain" By: Ashley Warmington (BC Undergraduate)

"One of the most important steps for an undergraduate pursuing graduate school is attending lectures hosted by people within your field of study. It allows students to learn about research beyond the scope of the classroom. This certainly held true during Dr. Barb Beltz's visit and lecture at BC. Prior to her talk, Beltz held a Q&A with the Undergraduate Neuroscience Group (UNG) students and advised us on how to choose graduate schools, neuroscience societies, and research opportunities. She expressed the benefits of a small college such as Brooklyn College, which provides more research opportunities in addition to close student-teacher advisory. In terms of her own research, Beltz has studied the many different variables in neurogenesis, such as serotonin uptake and circadian rhythms. The primary animals in her lab are crustaceans such as lobsters, which have given her the basis for research in life-long neurogenesis. Crustaceans are an excellent model system for recording chromosomal daughter cells, which differentiate into proliferation zones where they develop into stem cells. Beltz uses this information to understand the correlation between environmental factors and neurogenesis. Indeed, some of the most exciting and controversial recent research presented in her talk suggests that hematopoietic and circulatory systems may be the likely sources of adult neural

stem cells and neurogenesis. Dr. Beltz also emphasized the importance of collaborative efforts between departments since neuroscience is an interdisciplinary field. Dr. Beltz has done this in her own work by using methods that rely on collective efforts among chemists, biologists and psychologists at her institution. She collaborates with a colleague in Chemistry to use manganese-enhanced MRI to explore the development of a method to identify the neural pathways and activity that may lead to neurogenesis. Dr. Beltz made it clear that neuroscience is a vast field that needs researchers with a broad science background to assist in its progression."

★ BC Department of Psychology ★ Spring 2010 Colloquia Series

We had an exciting line-up of speakers this semester, and expect more in Fall 2010!

- 2/3: Dr. Jennifer Mangels, Baruch College
Seek and Ye Shall Find: A Social Cognitive Neuroscience Approach to Epistemic Curiosity
- 3/10: Dr. Christian Grov, Brooklyn College & Center for HIV/AIDS Educational Studies & Training
Sexual Compulsivity, HIV Risk & Mood: A Daily Diary Study with Highly-Sexually Active Men who have Sex with Men
- 3/24: Dr. Martin Gittelman, NYU Medical School
From Kentucky to Shandong: China's Quest for a Public Mental Health Delivery System
- 4/7: Dr. Frances Champagne, Columbia University
Transgenerational Impact of the Social Environment
- 4/21: Dr. Scott Kaufman, NYU & Free University
Intelligence and Implicit Cognition
- 4/28: Dr. Barbara Beltz, Wellesley College
Neuronal Assembly Lines in the Adult Brain
- 5/5: Dr. Janet Metcalfe, Columbia University
Metacognition of Agency
- 5/12: Dr. Clint Johns, Yale University - *Do you Know who that is? Processing Anaphors with Real-World Referents*
- *We welcome suggestions for future neuroscience speakers from the NYC area. Send suggestions to:*
NKacinek@brooklyn.cuny.edu

NEW NEUROBIOLOGY COURSE - SPRING 2011

Instructor: Professor Paul Forlano

Neurobiology (3 credits) is anticipated to be cross-listed in the Departments of Biology and Psychology. This course will provide an introduction to the structure and function of the nervous system at molecular, cellular, systems, and behavioral levels. Topics will include electrical and chemical signaling of nerve cells, neuroanatomy, neurochemistry, motor and sensory systems, and landmark studies of pioneers in neuroscience.

Brooklyn College–SUNY Downstate Medical Center NEUROSCIENCE JOINT SEMINAR SERIES

** Inaugural Presentations **

Drs. Todd Sacktor & Andrew Delamater

By: Lyl Tomlinson (BC Undergraduate)

BC began its Neuroscience Joint Seminar Series with SUNY Downstate Medical Center. The inaugural presenters were Professor Delamater of Brooklyn College and Professor Todd Sacktor of SUNY Downstate. In this series researchers from BC visit and speak at SUNY downstate and vice versa. This series attempts to highlight thematically similar neurobiological scientific investigations conducted at both institutions. Dr. Sacktor's presentation, on the BC campus, focused on his work with Protein Kinase M zeta (PKMz), a molecule believed to be important in long-term potentiation/long term memory in the rat hippocampus. The talk focused on a natural inhibitor of PKMz, known as ZIP, which was injected into rat brains after a behavioral spatial memory task (active place avoidance) to test whether PKMz was actually involved in the maintenance of long term memory. Sacktor engagingly presented his results of ZIP's effectiveness in erasing memory, which stimulated intense dialogue. His presentation shed light on the biochemical basis of long-term memory, and inspired collaborative ideas between labs. The following week, Dr. Delamater presented at SUNY Downstate. His talk concentrated on establishment of sensory specific associations (SSA; neural representation of sensory properties of rewards) and behavioral assays of rat hippocampal memory involved in this process. Dr. Delamater excitedly reviewed several behavioral studies performed in his lab focusing on extinction, spontaneous recovery, and renewal. He bridged the gap between labs through discussion of his hippocampal lesion work and its effect on SSAs, which emphasized the structural importance of the hippocampus in memory. This topic generated a strong response and queries from faculty regarding the neurobiological basis of the phenomenon. Results of this inaugural series were promising. Heightened awareness of this exciting new inter-campus seminar series is anticipated to lead to even greater attendance at the Fall seminars. We hope students (especially) will bring their enthusiasm to these contemporary research talks and fuel discussions.

INTERESTED IN LEARNING ABOUT NEW COGNITIVE NEUROSCIENCE TECHNIQUES?

Visit the following website to view lecture slides introducing lab techniques such as EEG/ERPs, fMRI, MEG, TMS & NIRS:

<http://www.psych.nyu.edu/pylkanen/lab/CUNYTutorials/CUNYTutorialSlides.php>

ONLINE COURSES

Online courses on ion channels, synapses, and Parkinson's disease, as well as a functional neuroanatomy course under construction, are at:

<http://geroauen.usc.edu/NSFgrant/>

GRADUATE TRAINING DIRECTORY

<http://www.andp.org/programs/gradgeo.htm>

RESEARCH & TRAINING OPPORTUNITIES

Visit the following website for summer research opportunities:

http://www.funfaculty.org/drupal/undergrad_internships_neuroscience

e Consult with Neuroscience Mentors on campus to obtain advising and explore options regarding other neuroscience research experiences, coursework, and training opportunities.

UNDERGRADUATE NEUROSCIENCE GROUP (UNC) MENTORS ON BC CAMPUS

Professors Israel Abramov, Jennifer Basil, Andrew Delamater, Paul Forlano, Frank Grasso, Natalie Kacinik, Dan Kurylo, Laura Rabin, Anthony Sclafani & Deborah Walder.

UPCOMING NATIONAL CONFERENCES

Society for Neuroscience

Nov 13-17 in San Diego, CA <http://www.sfn.org/am2010/>

International Neuropsychological Society

Feb 2-5 in Boston, MA <http://www.the-ins.org/>

Eastern Psychological Association

March 10-13 in Cambridge, MA

Cognitive Neuroscience Society

April 2-5 in San Francisco, CA

UPCOMING LOCAL LECTURES & SEMINARS

NYU Neuroscience Events & Seminars

<http://neuroscience.med.nyu.edu/all-events-list>

New York Academy of Sciences Events

<http://www.nyas.org/events/default.aspx>

Eighth Annual Neuropsychology Research Day at Queens College

Friday, August 27th

Keynote Speaker: Dr. Eric Nestler, Mount Sinai School of Medicine

INTRODUCING THE * **NEURON CLUB** *

The BC Neuron Club is a dedicated group of Undergraduate and Graduate students at BC with a keen interest in the neural sciences. The club will meet to discuss classic papers and recent advances in neuroscience. The club's blogspot (<http://neuronclub.blogspot.com/>) will post events and reports from students who attended local and national conferences. The club's first discussion, led by Lyl Tomlinson, focused on Dr. Todd Sacktor's research (see Neuroscience Joint Seminar Series in this issue). The next discussion, to be led by Greg Perrin, will focus on a translation of Otto Loewi's (1921) paper, which demonstrates chemical transmission between neurons, and for which Dr. Loewi won the Nobel Prize. To follow, Stavros Hadjisolomou will lead a discussion on a translation of Paul Broca's case study of Tan. Next, Justin Ostrofsky will lead a discussion on the neural systems involved in attention and vision. Future discussions are anticipated to focus on topics such as neurogenesis. To join the club's mailing list, obtain a schedule of events, and inquire, contact BC.Neuron@gmail.com.

NEUROSCIENCE IN THE NEWS

Science Daily

http://www.sciencedaily.com/news/mind_brain/neuroscience/

NeuroscienceDaily.com

<http://www.neurosciencenews.com/index.htm>

SfN – Neuroscience in the News

<http://www.sfn.org/index.cfm?pagename=neuroscienceinthenews>

BC NEUROSCIENCE BROCHURE & CURRICULUM

<http://depthome.brooklyn.cuny.edu/psych/NeurosciTrackBrochure032907.pdf>
http://depthome.brooklyn.cuny.edu/psych/BC_Undergrad_Neurosci032907.pdf

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