Welcome to this year’s issue of NeuroNews. It has been a dynamic year, and the future promises to see many more changes and challenges. Once again classes were full this year, many with waitlists. Forty-three students did research projects in neuroscience in the last year, including five honors students.

We welcomed Tracie Paine as our new tenure-track hire and have been impressed with how quickly she has set up her research lab. She is already mentoring research students as well as teaching classes.

Mark Braford and Catherine McCormick announced that they will retire as of June 30, 2013. The loss of them will create a big hole in the department that will be difficult to fill.

Michael Loose and I spent fall 2009 in London with 18 Oberlin College students as part of the Danenberg Oberlin-in-London Program.

The Neuroscience Majors Committee taught some basic neuroscience to local third graders. They also organized a film night, some bowling parties, designed and ordered t-shirts, and coordinated a year-end picnic. Faculty and students also enjoyed a November potluck and a Games Night.

Our heartfelt thanks go out to Katie Caldwell and Kara Kile, who have been wonderful visiting assistant professors. Impressively, they have been wonderful research mentors as well as teachers.

THE SEYMOUR BENZER LECTURE IN NEUROSCIENCE

THE NEUROSCIENCE DEPARTMENT is extremely pleased with a gift that establishes the new Seymour Benzer Lecture in Neuroscience, which will bring a distinguished neuroscientist to Oberlin for a talk and extensive interactions with students for each of the next five years. Funds from the estate of Joanne Troy were given by her son-in-law Larry Zipursky ’77 and his wife, Susan Troy ’76, who is a member of Oberlin’s Board of Trustees.

Zipursky named the lectureship to honor his post-doctoral mentor, Seymour Benzer (1921-2007), who is widely regarded as one of the greatest scientists of the late 20th century. Benzer’s early work, mapping the rII region of the bacteriophage T4, recast classical genetics in molecular terms. Later, turning to genetic analyses of behaviors in the fruit fly, Drosophila, he founded the field of neurogenetics. In December, Zipursky gave the inaugural lecture titled “Sperry-like Recognition Molecules and Wiring the Brain.” Students and faculty are looking forward to hosting additional inspiring speakers over the next five years.

Neuroscience faculty members organized a Welcome Back Games Night during the first week of classes in spring 2010. Students and faculty members gathered to play a variety of games. Participants at one of the tables included (clockwise from left): Anrey Wang ’12, Tracie Paine (faculty), Michael Loose (faculty), Jessica Saw ’11, Louie Zamora ’11, Cindy Getschow ’12, and Jan Thornton (faculty).
Mike Loose, associate professor of neuroscience, has taught at Oberlin College since 1990. He spent fall 2009 with the Oberlin-in-London Program. In spring 2010 he taught Neurophysiology, and Studies in Neuronal Function. He continued using EEG recordings to investigate the effects of probability and motivation on the neural correlates of choice in humans. His lab involved six research students in two different projects, including an Honors project with Rafiq Bhatia. Feedback about gambling wins and losses resulted in a larger positive ERP wave when the magnitude of the win/loss was large as early as 200 milliseconds after the feedback information was provided. A striking finding is that the relative size of this neural signal predicted subsequent decisions to switch choices on the next gamble. He is looking forward to a productive sabbatical in 2010-2011 and will continue working with Oberlin students to determine when, where, and how the brain monitors and evaluates upcoming and previous decisions.

Catherine McCormick has been at Oberlin College since 1986 and is a professor of biology and neuroscience. She served as chair of the neuroscience department for 2009-2010. In the neuroscience department, she taught an upper division course called Animal Behavior. Her research uses fish to study the evolution of the auditory system and she mentored six research students over the last year. She also provided leadership to begin a “supplemental instruction” program for the introductory neuroscience course.

Tracie Paine joined the Department of Neuroscience as an assistant professor during the 2009-2010 academic year. She taught Neuropharmacology, Introduction to Neuroscience Laboratory, The Brain: An Introduction to Neuroscience, and a senior seminar titled Neurobiology of Mental Illness. After establishing her lab in early fall, Paine and five students began investigating the neurobiology of attention deficit hyperactivity disorder (ADHD). Specifically, they have been examining whether drugs used to treat ADHD can reverse attentional deficits observed following disruption of cortical protein kinase A (PKA) function.

Jan Thornton came to Oberlin College in 1990 and is a professor of neuroscience and biology. In June 2009 she was the faculty host for an excursion to Alaska sponsored by the Oberlin Alumni Association. During fall 2009 she joined 18 Oberlin students as part of the Danenberg Oberlin-in-London Program. While there, Thornton taught a non-majors class called Brain, Mind, and Madness, as well as an advanced neuroscience course on the evolutionary and neural bases of emotions. During spring 2010 she taught Hormones, Brain, and Behavior, and a neuroendocrine research methods course. Research with five students in her lab focused on the possible detrimental effects of high levels of luteinizing hormone on the hippocampal mechanisms that affect memory. In fall 2009, Thornton gave a talk on her research at St. Andrews University in Scotland. She and Loose are co-authors on an invited review paper about the effects of androgens before birth on sex differences in nonhuman primate behaviors. Thornton will be on sabbatical for 2010-2011.

Albert Borroni has been at Oberlin since 1996 and is a lecturer in neuroscience and computer science. He is director of the Oberlin Center for Technologically Enhanced Teaching (OCTET). He teaches a seminar on Mind and Machine.
faculty and staff activities, cont.

Gisela Knight, instructional and technical assistant, has been with the neuroscience department almost since its inception. She assists with laboratory instruction, provides technical support, and assists students with their research projects.

Lori Lindsay has been the animal caretaker since 2003.

Casey Ross has been an administrative assistant with the neuroscience department since 2007. “To be involved in a department that deals with such exciting and interesting developments makes my position so rewarding,” Ross says. “Then, add great people and extraordinary students: it doesn’t get any better!”

Deb Mull and Dorothy Auble, who work in both the biology and neuroscience departments, continue to help with facilities management and departmental ordering, respectively.

Braford Honored as Educator of the Year

While attending the 2009 Society for Neuroscience Meeting in Chicago, Mark Braford was honored by the Faculty for Undergraduate Neuroscience (FUN) when he was named Educator of the Year. This award is given annually to a member in recognition of his/her significant efforts in support of the FUN mission to promote undergraduate neuroscience education and research.

Don’t Miss Out!

In an effort to curb print, postage, and environmental costs college-wide, Oberlin is moving several of its print publications online. Please make sure we have your email address, so that you don’t miss out on newsletters, invitations to alumni regional events, and more. You can update your e-mail address (and other information) via OBIEWeb at www.oberlin.edu/alumni. Go to the MyOBIEweb box and click on “register to access the community” (it’s free).

Please direct questions to alumni@oberlin.edu or call the Alumni Association at (440) 775-8692.

NEUROSCIENCE DEPARTMENT SEMINARS

Harold Zakon
Professor, Department of Biology Sciences, Section of Neurobiology, University of Texas
Mechanisms and Consequences of Gene Duplication for Evolution: Lessons from Electric Fish
Friday, November 13

S. Lawrence Zipursky ’77
Professor of Biological Chemistry, Investigator of the Howard Hughes Medical Institute, David Geffen School of Medicine, University of California, Los Angeles
Sperry-like Recognition Molecules and Wiring the Brain (Inaugural Lecture: The Seymour Benzer Lecture In Neuroscience)
Friday, December 4
Sponsored by the Seymour Benzer Lectureship Fund

Gary M. Mawe
Professor, Department of Anatomy and Neurobiology, University of Vermont
Investigating Neuroplasticity Using a Bottom-Up Approach: Inflammation-Induced Changes in Key Elements of Peristaltic Reflex Circuitry in the Colon
Friday, February 19
Invited by the NSCI Majors Committee

Brian Woodside
Assistant Professor, Psychology, Mount Union College
LTP, MDMA (Ecstasy), and Memory: What Do These Three Have in Common?
Tuesday, March 2

Elisabeth J. Ploran, M.S.
PhD candidate, University of Pittsburgh
A-ha! Examining the Underlying Cognitive Processes Before and After Object Recognition Using fMRI
Tuesday, March 23

Robert Sapolsky
Professor of Biology and Neurology, Stanford University
Behavioral Changes Induced in Rodents by Toxoplasma Infection: An Informal Discussion and Why Zebras Don’t Get Ulcers (Convocation Talk)
Thursday, April 8
DURING FALL SEMESTER 2009 Michael Loose (my husband and neuroscience faculty colleague) and I traveled across the pond with 18 Oberlin students (including 10 neuroscience majors) as part of the Danenberg Oberlin-in-London Program. I was the only Oberlin faculty member who taught in the London program, but was joined by two faculty members from Grinnell College and adjunct faculty members. Our classrooms were near the British Museum. We offered courses to Oberlin and Grinnell students on topics that ranged from the London theater, Shakespeare, sociology, and politics, to neuroscience. I taught a course called Brain, Mind and Madness, a course on the Evolutionary and Neural Bases of Emotions, and a seminar course for Oberlin students who did work internships. All the Oberlin students took a History of London class, as did Michael and I. We all agreed that the weekly history walks were a highlight of our time there. Michael and I also enjoyed going with the students to many of the theater productions.

London provided amazing opportunities for some fabulous field trips. For the madness course we visited the Science Museum, which has fantastic displays on the history of medicine. You can find a book by the great anatomist Versalius and original equipment from some of the early physiology labs. There is a model of DNA that is built partly from components used by Watson and Crick. We toured Oxford and its science museums. We also visited Freud’s London house and saw “the couch.” Everyone went to the Wellcome Trust Museum to see the Exquisite Bodies exhibit, which consisted of a collection of beautifully rendered wax models of human bodies and disease, that had been used to teach anatomy in the 1800s. The museum also had an eclectic mix of amazing curiosities such as Napoleon’s toothbrush, trephinated skulls, and paintings of medically related subjects. We were also privileged to have two guest speakers, a practicing clinician from the United Kingdom and Dr. Alan Wachtel from the United States.

We had more wonderful field trips for the emotions course. We visited the National Gallery and talked about paintings that portray a particular emotion. November 24, 2009, was the 150th anniversary of Origin of Species, so we celebrated “Darwin Day” with cake and brain/evolution jeopardy. After reading Origin of Species and parts of the Evolution of Emotions by Darwin, we visited his family home (Down House). We also toured Cambridge, sat in on a class at Cambridge University, and visited science museums that had special displays related to Darwin, including his slides of barnacles, stuffed finches from the H.M.S. Beagle voyage, and his hand-colored maps. (See the newly dedicated sculpture of young Darwin in the above photo.) We had lunch at the Eagle Pub, where rumor has it that Watson and Crick first announced the structure of DNA.

I thought the semester was fabulous. It was a lot of work as I created new courses I had not taught previously, but well worth it. London is an amazing city with so much to see and do. And it was a great opportunity to get to know better some wonderful Oberlin students. I want to thank the alumni who have helped make the London program possible. In future years, Oberlin College plans to send two faculty members to teach in London each spring semester. I hope the neuroscience department faculty and students will be amongst them again soon.

—Jan Thornton
RECENT STUDENT AND FACULTY PUBLICATIONS

(*denotes Oberlin student)


Kile KB, Tian N, and Durand, DM. (accepted for publication). Low frequency stimulation decreases seizure activity in a mutation model of epilepsy. Epilepsia.


Congratulations to Student Award Winners

WE ARE VERY PROUD OF OUR MAJORS. Each year, members of the neuroscience faculty choose outstanding seniors for departmental prizes. The Nancy Robell Memorial Prize in Neuroscience/Biopsychology is given to seniors who show outstanding future promise in the field. It was awarded this year to Abby Feresten, Nic Novak, Stephanie McMorris, and Andrea McQuate.

The Neuroscience Department Prize is awarded to seniors who have distinguished themselves in their academic work in the department. Recipients for 2009-10 were Mary Burke, Shannon Gallagher, Taylor Soderborg, and Jamie Wagner.

At the recent Experimental Biology meeting, Jamie Wagner ’10 (a Goldwater Fellow) received the David S. Bruce Award for Excellence in Undergraduate Research, an annual prize of the American Physiological Society. Alexander Roseman ’09 was honored with a travel award from the Faculty for Undergraduate Neuroscience that enabled him to present his research at the annual meeting of the Society for Neuroscience in November 2009.

Sigma Xi inducted seven neuroscience majors in spring 2009: Julie Chen, Kyle Jasper, Valerie Karuzis, Abigail Feresten, Andrea McQuate, Taylor Soderborg, and Christine Zelnick. Sigma Xi is a scientific research honor society and nomination is by faculty members. Students who have shown a marked aptitude for scientific research are invited to join, as demonstrated by independent investigation ordinarily resulting in a written report. Rafiq Bhatia, an economics major, was also honored with acceptance into Sigma Xi based on the honors research he did in neuroscience.

Gifts for 2009-2010

The Neuroscience Department is indebted to the individuals and families who have generously provided philanthropic gifts to enhance our academic program. During the past year, funds were used, in part, to help students present their research at scientific meetings and also for the Neuroscience Department Prize to honor outstanding graduating seniors. We are grateful for your financial support.

We would also like to thank those alumni who have very kindly sent us information during the last year about research job opportunities available for graduating seniors. They include Wilma Friedman ’79, Liz Waring ’06, Cory Myers ’08, Louisa Thompson ’08, Rebecca Kriepke ’08, Shira Ziegler ’08, and Leah Bakst ’09. Our graduating seniors really appreciate it.

If you would like to make a contribution, please send a check to: Neuroscience Department, Oberlin College, 119 Woodland St., Oberlin OH 44074. Make the check payable to Oberlin College, with “for NSCI Dept” in the memo line. You may also contact Oberlin’s development office directly at 440-775-8273.
WE LOVE TO HEAR FROM YOU, so we can learn about the important events in your lives and share in your triumphs. If you would like to be included in future newsletters, tell us about your personal and professional activities and achievements. You may contact us via email at casey.ross@oberlin.edu or jan.thornton@oberlin.edu (Our web site is www.oberlin.edu/arts-and-sciences/departments/neuroscience/) or postal mail (Neuroscience Department, Oberlin College, 119 Woodland St., Oberlin OH 44074). Be sure to include your name, graduation year, address, and email address. We look forward to hearing from you!

Paul Albert ’81 majored in psychobiology and mathematics. He says, “This combination led me to study biostatistics, where I received my PhD from Johns Hopkins in 1988. I have been at the National Institutes of Health since then. I am starting a new position as branch chief and senior investigator of biostatistics and bioinformatics.”

Karen L. Gunther ’92 is in her third year of a tenure-track position at Wabash College in Crawfordsville, Ind. She says she is in a great department, has great faculty colleagues, and is enjoying teaching and working with her students on investigations into how our visual system processes color. In her free time she quilts and had a one-woman quilt show at the local library in November 2009.

Gilbert Gee ’93 moved to Los Angeles three years ago. His wife, Wendy, works at the counseling center, and he is an associate professor in the UCLA School of Public Health. From Gil: “Most importantly, we have a 14-month-old baby girl, Lauren. She’s a joy, joy, joy.” Congratulations.

Lisa J. Rosenthal ’93 is an assistant professor of clinical psychiatry at the University of Pennsylvania School of Medicine. Oberlin students interested in medicine may contact her at lisajr@world.oberlin.edu.

Amy Wisniewski ’94 is associate professor and co-director of fellowship training at the University of Oklahoma Health Center, Department of Pediatrics, Section of Diabetes/Endocrinology. She is part of a group that has started a clinic for developmental disorders at UOHSC. See their website at www.succeedclinic.org.

Last year we noted that there were five Neuro alums at Stanford University. We were mistaken; there are more than five. Ary Shalizi ’96 is also at Stanford, in the Crabtree Laboratory, and Olivia Winter ’09 will begin graduate school there in fall 2010.

Mark Lazarev ’96 entered medical school at the University of Pittsburgh after working for two years in schizophrenia research at the University of Pennsylvania. He went on to do an internal medicine residency at Beth Israel Deaconess in Boston, then a gastroenterology fellowship back at the University of Pittsburgh and an additional year in inflammatory bowel disease at Mount Sinai in New York. Mark is currently assistant professor of medicine at Johns Hopkins Hospital with a focus on Crohn’s disease and ulcerative colitis.

Hilda Canes Garðunón (Canes) ’99 earned a master’s degree in environmental and occupational health from George Washington University’s School of Public Health and Health Services. She has worked at the U.S. Environmental Protection Agency since 2003.

David Andrew ’04 and Sarah “Uppie” Updegraff ’04 were married on May 24, 2009, in Williamsport, Pa. They started dating after being lab mates and sharing a microscope in Lynne Bianchi’s developmental neurobiology course their junior year. Dave is pursuing his PhD in neuroscience at the University of Arizona. In 2009 Uppie completed her master’s degree in public health and has started an accelerated program to earn a Bachelor of Nursing at the University of Arizona. Both are currently loving living in the desert of Tucson.

Sandra J. Weissmiller ’04 is at the Pharmacy School at the University of Tennessee. She says, “Oberlin has influenced me to be active in my profession, and as such I attended an international student pharmacy conference last summer in Cluj-Napoca Romania, World Congress International Pharmaceutical Students’ Federation.”

Jessica Hauser ’05 writes from Harvard, “I started graduate school here in the neurobiology department in September and, man, I’ve been so busy and having so much fun! I joined my thesis lab!!! I’ve joined Bernardo Sabatinis lab: http://www.hms.harvard.”

Anne Berry ’06 was awarded a 2010 National Science Foundation (NSF) Graduate Research Fellowship! Congratulations Anne! She began graduate school at the University of Michigan in fall 2009.

Elizabeth Waring ’06 is a clinical research associate at the Center for Autonomic and Peripheral Nerve Disorders at the Beth Israel Deaconess Medical Center (a Harvard Medical School hospital) in Boston. She is leaving her position to attend medical school at Tulane University.

Sarah Allen ’07 will marry Evan Daniel on June 12, 2010. Sarah is in graduate school in neuroscience at the University of Rochester.

Leak Bakst ’09 has been working as a research assistant in Randy Buckner’s cognitive neuroscience lab at Harvard since June 2009 and is investigating the links between genes and brain structure and function. They plan to do genome-wide analyses (from saliva samples), structural and functional MRIs, and collect behavioral data from a set of tasks and questionnaires. She is also still trying to play guitar on the side.

Brandon Grossman ’09 says, “I am a research assistant in genetics resource sciences at the Jackson Laboratory, located in beautiful Bar Harbor, Maine.”
A LOOK BACK...
Sage Aronson ’12

MONICA ZELL ’11 AND I BECAME CO-CHAIRS of the Neuroscience Majors Committee (NMC) in spring 2009. She was abroad, and I was running for student-faculty liaison—so, you could say that our induction was one of chance or, perhaps, serendipity.

In our yearlong stint, we hosted a number of events including neuroscience movie nights, ran a rather unique t-shirt competition and, we feel, helped to create an environment of camaraderie among Oberlin neuroscience students. The student-faculty bowling night was a popular event, and attendance nearly quadrupled on our most recent night. There was a large demand for programs that encourage and allow for the interaction with faculty outside of the classroom and on a more person-to-person scale.

The t-shirt competition in spring 2009 may be one for the books. With the winner being the ever-so-punny “hippos on a campus” entry, we decided to cut costs and up the quality of the fabric by silk-screening the shirts ourselves. Now, partially due to a lack of ferocious delegation on the part of Monica and myself, and in part because the NMC’s agenda had slipped lower and lower on people’s to-do lists as finals approached—this task fell solely on the two of us and our expert in the silk-screening process, Vincent Alessi ’11. Spending nearly 10 hours in the Art Building, we produced more than 50 shirts (plus two that fell prey to the insuppressible urge to have an ink fight.) A bit more non-traditional than past shirts, each was filled with a sense of quirkiness and individuality that, if nothing else, typifies our program down to the very last dendrite.

This year, we also held a celebration of Brain Awareness Week (though, we held the event about a month after the “official” week). The NMC partnered with the Du Bois Project to teach “Neuroscience 101” to third-graders in Oberlin schools. The Du Bois Project helps underrepresented minorities and children from socioeconomically disadvantaged families achieve and maintain academic excellence. There was a large turnout for this event, which took place at the Splash Zone, a recreation center for Lorain County located in Oberlin. The kids were mesmerized by presentations on different parts of the brain and visual illusions. There are plans to continue this program in upcoming years.

This was certainly a learning year for the NMC, and with all learning comes a mix of triumph and frustration—we have had our fair dose of both. We wish to congratulate the new NMC board, as we dutifully pass the torch.

A LOOK FORWARD...
By Anna Frackman and Lindsay Boven

ANNA FRACKMAN ’11 AND LINDSAY BOVEN ’12 HERE. We are excited to be the new co-chairs of the Neuroscience Majors Committee. This past semester has been great. We got our t-shirts done in record time and had a very successful and fun neuroscience majors and faculty bowling night a couple of weeks ago! We also put together an end-of-the-year picnic to celebrate all the hard work we’ve done! Recently there was a student panel on research and honors for the younger students in the department. We hope that this will be a beneficial way for the younger students to gain advice, hear other students’ experiences, and get involved in neuroscience research here at Oberlin.

We are excited for the fall semester, during which we plan to continue to bring brain awareness into the Oberlin public schools with another program to introduce elementary-aged kids to the wonders of the human brain! We are also expecting to bring in various guest speakers for the department, and host another panel on navigating the neuroscience department and major. We hope this newsletter finds you well; we know that we have all of you to thank for the strong legacy of Oberlin’s Neuroscience Department.
CONGRATULATIONS NEW GRADS!

During December 2009 and May 2010 we had 29 majors graduate with degrees in neuroscience. Congratulations to all of you and your families! We look forward to hearing about your lives and accomplishments in the future!

May 2010 Graduates
Mary Burke
Julie Chen
Joshua Cohen
Cher-Wen DeWitt
Pari Fariborz
Abigail Feresten
Shannon Gallagher
Sara-Alicia Gonzalez
Rosetta Gottesman
Kyle Jasper
Rita Kaplon
Valerie Karuzis
Stephanie McMorris
Andrea McQuate
Nicholas Novak

Gabriel Ocker
Stephen Pelkey
Natalie Rygier
Rosalyn Schneider
Taylor Soderborg
Jamie Wagner
Jeffrey Zahratka
Monica Zell
Christine Zelnik

December 2009 Graduates
Raphael Bivas
Dana Kelley
Alisa Olmsted
Elise Roy
Dayna Wick

Commencement News:

Every year just prior to Commencement, the Department of Neuroscience holds an open house at the Science Center. Specific information is available online at www.oberlin.edu/reunion, and a complete printed schedule is available at the Commencement/Reunion Center. If you will be in Oberlin please stop by. We love to catch up with alumni and meet the family and friends of our graduating seniors. We plan to have a repeating slide show of recent student/faculty/staff activities during the open house, so take a look if you are in the area. Additionally, a bulletin board near the department office will display photo highlights of the year in neuroscience.