The Restriction Digest

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Johns Hopkins University School of Medicine

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Earth Day Happy Hour

by Elizabeth Eyler

On April 9th from 4:30-7:30, students, faculty, and Hopkins employees gathered in the Turner Concourse for the third annual Earth Day Happy Hour. Over 350 attendants snacked on pretzels, sandwiches, sodas, and beers, as they browsed booths set up by more than two dozen vendors and event sponsors. At the entrance, volunteers handed out raffle tickets in exchange for old cell phones, used batteries and printer cartridges, and worn-out electronics equipment. Over 10,000

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What's Inside?

SOM Graduation 2009 Commencement Speech

by Fatemeh (Pouneh) Rajaii

Deans, faculty, staff, families, friends and graduates, welcome and congratulations.

Today we celebrate achievements many years in the making, and to which everybody in this room has made a contribution.

Though we hail from diverse backgrounds, we started graduate school sharing common goals: the pursuit of science, contributing to human knowledge, answering fundamental questions, discovering the underlying mechanism and perhaps the cure of some disease; in the process we would become scientists. Over the past few years we have shared the common experiences of a graduate student: the disappointment of experiments gone wrong, the thrill of discovery, and the pride of watching those who we have taught forge their own way. And today we share in this celebration.

Today does not mark an end to our education, but a stepping stone on the way to new beginnings. Our futures are as diverse as the histories

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Experimental Biology Conference in Louisiana

by Madeleine Chollet

In April, I attended the 2009 Experimental Biology Conference in New Orleans. Experimental Biology brings together researchers from multiple scientific societies, including The American Physiological Society, American Association for Investigative Pathology, American Society for Biochemistry and Molecular Biology, American Association of Nutrition, American Association for Pharmacology and Experimental Therapeutics, and American Association of Anatomists, the last of which I am a member. The American Association of Anatomists (AAA) was founded in 1888 with the mission of advancing the anatomical sciences. Today, AAA brings together educators and researchers in the fields of genetics, physical anthropology, cell biology, histology, neuroscience, endocrinology, forensics, and imaging.

At the meeting, I primarily attended podium presentations on anatomy education. Human anatomy is at the foundation of every medical education; however, as the number

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pounds of recyclable material was collected by the end of the event.

Just past the recycling collection tables, representatives from VWR and Fisher showed off energy-efficient -80°C freezers, ergonomic pipette tips, and 100% recycled cardboard packaging. A few yards down, the pleasant scents of cucumber melon, pineapple, and sea breeze wafted from the Mountain High Soy Candles booth manned by a mother-son team. Soy candles, I learned from the son, burn longer than traditional paraffin candles, contain fewer carcinogens, and do not explode in the microwave. I must admit that afterwards I felt a certain temptation to try microwaving a conventional candle, but I haven't done it yet.

Also present for the event were members of the Sierra Club and Baltimore Green Works, who provided information about volunteer opportunities and eco-related community events in Maryland. Other groups advertised bike-to-work and green commute options, while members of the Hopkins student group, Leadership Initiative for the Environment (LIFE), answered questions about Baltimore recycling options. At the far end of the Concourse, attendants tested their aim and their recycling knowledge by tossing various recyclable (and non-recyclable) materials into the appropriate bins and receptacles. This was also the area where raffle prizes were announced later in the evening, including gift cards to Amazon.com, the Daily Grind, and iTunes, as well as five grand prize iPod shuffles. As it has been each year, this event was both a fun afternoon for all attending, and a great way to learn more about environmental issues and what each of us can do to live and work in more sustainable ways.

The yearly Earth Day Happy Hour is organized by the student-run group Leadership Initiative for the Environment (LIFE), which works to make the Hopkins community more environmentally sustainable and to evaluate programs that can lead to improvements in environmental policies. Their efforts include close work with administrators and faculty, efforts to educate the Hopkins community about environmental issues, and data collection regarding areas where Hopkins can improve its environmental management.

Since their inception in 2006, LIFE has worked with Facilities Management at the School of Medicine to increase the amount of on-campus recycling over 8-fold—from 19 to 159 tons—between 2006 and 2007 and by 13-fold from 2006 to 2008. Current projects in addition to the recycling campaign include a bike/walk to work campaign, efforts to increase Hopkins shuttle services, and work to reduce Hopkins energy consumption.

All of this work is driven by a team of dedicated graduate students, including Daniel Lee, Rebecca Deering, Matt Boersma, Danica Horrell, Nate Miller, Alyssa Katzenelson, and Karisa Solt. Their efforts and those of other LIFE members have contributed to the driving force that has led to the recent development of the Hopkins Green Team and the Hopkins Sustainability Initiative. Both of these efforts are designed to promote Hopkins' environmental leadership in creative, effective, and sustainable ways.

Those interested in getting involved with LIFE or with questions about their efforts to promote environmental issues on campus should look out for announcements for their regular meetings, or e-mail *HopkinsLIFE@gmail.com.*

Information about the Hopkins Sustainability Initiative can be found online at:
http://www.sustainability.jhu.edu/

The next newsletter submission deadline is July 31st!

If you would like to have your work published in The Restriction Digest, please contact an editor:

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We welcome any submissions - articles, interviews, restaurant reviews, cartoons, pictures, whatever you can think of!

Please visit us on the web at:
http://www.hopkins-medicine.org/gsa/newsletter/index.shtml

Graduation Speech, continued from page 1

that we brought to Hopkins. We will part ways and go on to post-docs, residencies, jobs in the private sector, and even pursue additional doctorates. What we will share in the future, besides these years at Hopkins, should be the role that we will play in our communities.

We have spent most of the past several years in the lecture halls and labs of the Johns Hopkins University. In that time, our nation has endured terrorist attacks, fought wars, debated the importance of civil liberties versus national security, and experienced natural disasters like Hurricane Katrina. The brick walls of the Johns Hopkins Medical Institutions sheltered us through these tough times.

Although most of us have not been at the front lines fighting war or defending civil rights, we have reached out to our communities in the ways that we could. We have tutored and mentored students in East Baltimore, we have invited middle school students to tour our labs to learn what it's like to be a scientist, we have made donations to the survivors of natural disasters.

As we receive our PhDs and step out into the world—no longer students, let us accept the responsibility that comes with being a scientist. We cannot isolate ourselves in the traditional world of scientists: labs, lectures, conferences. We have to be engaged in our society and act to educate and influence our country's decision makers. Although the nature of what we teach and what we do is not really political, we cannot separate ourselves from the society in which we live and work. And oftentimes, the nonscientists in our society have the power to modify or dictate what we are funded to study or what we may teach. I don't just mean the politicians who determine the NIH budget. I'm talking about the school boards that decide that science curricula and textbooks must also teach creationism. I'm talking about presidents who issue executive orders that ban the use of human embryonic stem cells in federally funded research.

It is too easy to blame these restrictions that are placed on scientists on others, but we also must accept part of the blame ourselves. If our society does not realize the importance of science, we should teach them. If the president did not understand the details of stem cell research, we should have informed him. If our representatives in Congress don't know that we would rather our tax dollars be spent on research and education, we must work harder to have our voices heard. This does not mean that we have to be activists. It means that we should be better teachers and mentors. We should explain to our communities that a society without science is a society without progress. We should teach what the scientific method is, and why we should not teach religious theories alongside scientific ones.

Most importantly, we must remember that our successes depended on the contributions of our community, and we should emulate those who have helped us get so far. Great scientists are measured not only by the discoveries they make but by the minds they influence. Let us achieve greatness by contributing to the successes of others, of our communities, our nation, and our world.

Thank you for the opportunity to speak and congratulations class of 2009!

Financial Aid Graduate Newsletter

Congratulations to the Class of 2009! The financial aid office wishes you much success in your future endeavors.

Reminder about applying for financial aid:

The financial aid office will begin awarding aid to students that are applying for the upcoming 2009-2010 academic year this month. To apply for aid, you must complete a FAFSA (Free Application for Federal Student Aid) at *www.fafsa.ed.gov*. Students going on LOA for the upcoming academic year should notify the financial aid office as soon as possible.

Repayment Options for Graduating Students:

As a recent graduate it can be overwhelming navigating the terms and conditions of your student loans. Our office would like to make the transition into repayment easier for our students. Please continue to use our office as a resource as the Financial Aid Staff will always be happy to assist you.

There is also information about the various repayment options on the Financial Aid Website under the Debt Management. We encourage all students to visit the website at *www.hopkinsmedicine.org/financialaid,* which will provide tools, such as loan repayment calculators, information of the new income based repayment option and the standard repayment plans.

AAI Conference in Seattle, WA

by Youngtae Jeong

Thanks to the generous GSA travel award, I could attend the 96th annual meeting of the American Association of Immunologists (AAI), 'Immunology 2009', which was held in Seattle, WA, from May 8th to May 12th. It was a really good experience for me. This was the first time I attended the immunology conference although my major academic interest is in immunology. Second, this conference helped me bridge the gap between my graduate studies and my post-doctoral fellowship. Also, I should not omit the fact that I like Seattle!

I am a 4th year Pathobiology student, studying vascular biology and innate immunity. I expect to finish my Ph.D. in May/June of this year and will start my post-doc in the area of hematopoiesis and lymphocyte development in August. Thus, I needed an opportunity to acquire some up-to-date knowledge in adaptive immunology for my transition as well as to refresh my memory on innate immunology. Furthermore, I hoped to discuss, communicate, and network with other scientists in immunology.

The conference was really great. The program included eight hot and emerging topics in a major symposium, a block symposium on about 40 areas, as well as special lectures, special sessions by AAI committees, career development seminars, hands-on seminars for technical improvement, and exhibitions. In addition, 15 guest societies also participated and provided symposia on their specialized areas. There were events beyond science such as the opening reception, a young investigator party, and the AAI gala for fun and networking. Despite swine flu, more than 3,000 scientists, trainees, and others attended the conference.

For the most part, I listened to talks offered by the major symposium and the block symposium in my interest areas of microRNAs, bone marrow stem cells and lymphopoiesis, epigenetic regulation of the immune response, and cell fate decision in lymphocyte development. The most interesting symposium to me was Dr. Nancy Speck's talk about "Roles of core binding factors (Runx/ CBFß) in hematopoietic lineage choice." Dr. Speck is a professor at the University of Pennsylvania School of medicine and an expert on the role of core-binding factors (CBFs) and Runx in hematopoiesis. Based on the observations that hematopoiesis disappeared in Runx1 germline knockout mice and hematopoiesis occurred normally when Runx1 is disrupted in later embryonic stages, she speculated that Runx1 is necessary at the stage before hematopoietic stem cell (HSC) formation. Furthermore, she found that a small portion of endothelial cells expressed Runx1 in early developmental stages in mice and that conditional deletion of Runx1 in vascular-endothelial-cadherin-positive endothelial cells disrupted hematopoiesis. Finally, she demonstrated that haemogenic endothelial cells are the precursor of HSC and that Runx1 is essential for the generation of HSC from haemogenic endothelium.

The session run by the AAI publication committee, titled "Scientific Publishing: Dos and Don'ts for Authors and Reviewers" was also very helpful. In particular, I'd like to share a suggestion by Dr. P. J. Fink about the order of manuscript writing. She is a professor at the University of Washington School of medicine. Although her approach differs from my previous writing habits, writing in the order of "Figure > Figure legend > Materials and methods > Results > Abstract > Discussion > Introduction" sounds like a good way to produce an effective and well integrated paper.

Another memorable thing was that I met another Youngtae in immunology the same age as me. He is a Ph.D. student at the University of Connecticut. It was great to meet him, and we promised to see each other once I move to Boston in the summer.

The last but best about this conference was Seattle. I probably like Seattle because my two visits there have been in May and June. I have wanted to live in Seattle since my first visit in 2006 because of the beautiful scenery. During the conference, I stayed at a friend's house, and every evening he showed me nearby parks and lakes. He is right when he says: "There are only a few places for tourists to sightsee, but lots of places for the residents to enjoy." The natural beauty of Seattle made me regret my choice of going to Boston for my post-doc and I may try to move to Seattle later if there is another opportunity. Finally, it was impressive that people in Seattle do not cross the road at red signals and don't jaywalk even if there is no traffic. Ignoring

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AAI conference, continued from page 4

red lights and jaywalking was strange to me when I first came to the US, but now not doing it is strange to me!

The immunology conference was very beneficial and fun for me. Once again, I really appreciate GSA and all other fellow students for the travel award without which I couldn't have had this wonderful experience!

Experimental Biology Conference, continued from page 1

of qualified anatomy educators dwindles, the time allocated to teaching anatomy is cut, technological advances provide alternatives to cadaveric dissection, and curricula move towards group-based learning and away from traditional lecture format, anatomy education is in flux. Educators and researchers from around the world spoke about how their programs have addressed these challenges.

My favorite talk was by Dr. Darrell Evans who helped to develop the anatomy curriculum at the new Brighton-Sussex Medical School. Evans has created an intensely interactive learning environment where students regularly have the opportunity to participate in course lectures through computerized voting and group discussion. In addition, he has produced a vast array of online resources to supplement existing course materials. For example, students can download ten-minute podcasts that cover the basic concepts of every lecture to help them prepare for class. Students are also encouraged to strengthen their communication skills and to flex their creativity through a series of projects that require them to create brochures and videos that explain common medical conditions using their understanding of anatomy to the public. Evans' desire to engage students, to link the basic sciences to clinical practice, and to use medical education to benefit the public was truly inspiring.

Other interesting presentations at the meeting included a symposium on the basics of different imaging modalities and how they can be incorporated into existing research protocols, as well a series of talks on morphological variation in development and disease. I also enjoyed a society-wide symposium on science education and the continuing struggle to keep creationism out of school science classes.

I also had the opportunity to present my own research in anatomy education at the Experimental Biology meeting. Over the past two years, I have been working with faculty and another student within the Center for Functional Anatomy and Evolution to collect data from the gross anatomy class so that we could begin to assess the effectiveness of the anatomy course as a whole and its various components. Specifically, we tested the effectiveness of student laboratory presentations as a learning tool in the anatomy education. We found that students performed significantly better on written exam questions on topics covered by their presentations than on questions on topics not covered by their presentations. Presentations helped all students, regardless of the grade they received on their presentation and regardless of the question type. Our findings provide empirical support to previous studies that indicate that students believe they understand the material better and in greater depth after giving an oral presentation. The American Association of Anatomists honored me with a Student Education Research Award for this research. All in all, it was a great conference. Thank you to the GSA for the travel support!

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www.sudoku-puzzles.net

Find the solution to this Sudoku on our website at
http://www.hopkins-medicine.org/gsa/newsletter/index.shtml

Johns Hopkins
Student Assistance Program
Serving Graduate and Professional Students

Adapting to Change

One of the most essential life skills a person can have is the ability to adapt to change. An adaptive individual is one who is able to refocus the mind in new directions and make choices based on his or her desired outcomes.

However, adapting to change is difficult for most people due to the fact that humans are creatures of habit; having to change our patterns and behaviors is frustrating and annoying and takes us out of our comfort zone. But developing the skills necessary to adapt to change can have powerful outcomes, including self-improvement, ongoing learning, and a higher level of personal and work achievement.

What are some of the obstacles to change?

According to psychologist Dennis O'Grady, the inability to adapt to change is related to a combination of five fears:

1. *Fear of the Unknown* - The unspoken message from society says that when change occurs, you will lose control.

2. *Fear of Failure* - If I commit myself to goals for change, there is a chance for failure.

3. *Fear of Commitment* - Commitment forces an answer to tough questions. "What do I really want?" Commitment to one option may feel intimidating because it eliminates other options.

4. *Fear of Disapproval* - If I change, I risk having people say they like me better the way I was. Your own change also forces others to change in relationship to you.

5. *Fear of Success* - If I change, what other demands will be made of me? Can I sustain this success?

How can you overcome the obstacles to change?

• Gain an awareness of what's going on in your immediate environment. Give yourself time to analyze situations thoroughly. View potential change from different angles and perspectives to gain a more complete understanding of its possible effects.

• Try to anticipate change before it happens, and have a plan to take advantage of new situations and opportunities.

• Make informed decisions. Communicate concerns and ask questions to get information that might not be apparent.

• Identify both internal and external barriers you feel may stand in the way of what you want to accomplish.

• Counteract self-created doubt by looking at your lack of confidence logically and talking about it with family and friends.

• Think Positively. You control how you think about and perceive changes! The more positively you think about change the more positive your reaction to it.

• Be willing to step outside of your comfort zone…it may prove to be a great experience!

Seek Assistance

The Johns Hopkins University is committed to assisting students in managing the challenges they face during their academic careers. The Johns Hopkins Student Assistance Program provides support to students in dealing with personal, academic, and relationship problems.

If an inability to adapt to change continues to interfere with your ability to be successful, you may benefit from more individualized services. Contact the Johns Hopkins Student Assistance Program (JHSAP) at 443-287-7000 or visit our website for more information: *www.jhsap.org.*

Congratulations to the Graduates of 2009!

The Graduate Student Association wishes you the best of luck in all of your future endeavors.

Master of Arts

Diana Christine Allen • David H. Kim • Anna Jennell Kvanvig • Julia Molnar • Danielle Reisinger Murray • Michelle Nater • Roger Vargas Ortines • Jared Oliver Travnicek • Jenny Wang • Jennifer Kathleen Wind

Master of Science

Jacob Aaronson • Dwayne D. Grant • Yakubu M. Owolabi

Doctor of Philosophy

Michael Gerard Acker • Michael David Allen • Ashley Shequina Beasley • Michael Jeffrey Bergen • Hannah Justine Block • Angela Kathleen Brice • Hugh Brian Cahill • Christopher Thomas Campbell • Hunter Hong-Chun Chen • Chih-Chien Cheng • Ning Cheng • Barry Al Chestnut • Win Den Cheung • Hojung Cho • Julia Tsok Lam Choi • Joshua Peter Cysyk • Louis Tuong Chinh Dang • Karen Kate Ocampo David • Lisa Marie DiPilato • Jonathan Andrew David Farrell • Elizabeth Ann Feeser • Tiffany Albright Frey • Liangfeng Han • Christin Lee Hanigan • Timothy James Harris • William Hawse • Megan Albert Healey • Geoffrey Graham Hesketh • Kristi Anne Hohenstein • Tammy Marie Holm • Michael Patrick Housley • Chuan-Hsiang Huang • Hun-Way Hwang • Yuchen Jiao • Xiao Jie • Bilal Ersen Kerman • Ae Ryon Kim • Jared Randall Kohler • Jee-Hyun Kong • Kristina Vladimir Krasnov • Bennett Allan Landman • Aaron Matthew LeBeau • Colleen Mulvey Lemmon • Davinna Ligons • Yu-Yi Lin • Megan Elizabeth Lindsay • Yen-Chun Liu • Christopher Matthew Long • Dengke K. Ma • Mary Margot Catherine Maleckar • Kathryn Erin McDougal • Winnette McIntosh Ambrose • Jason Scott McLellan • Janna Merte • Simon Amadeus Messing • Meredith Boyle Metzger • Ronald Alan Miller • Kedar Narayan • Anne Norris • Matthew C. O'Neill • Eunhye Park • Joon Tae Park • Harshan R. Pisharath • Maria Alexandrovn Pletneva • Rishi Harish Porecha • Robert Jeffrey Prill • Simil Lakshmi Raghavan • Carlo Rago • Fatemeh Rajaii • Yunzhao Ren • Leslie Ann Rivera-Rosado • Jesse Worth Rowley • Srivatsun Sadagopan • Ahmad Reza Sedaghat • Rajesh Babu Sekar • Soona Shin • Courtney Faith Silverthorn • Katherine Marie Sixt • Megan Jean Stine • Michael Raphael Tadross • Tanya Marie Teslovich • Pramodsingh Hirasingh Thakur • Kathryn Elizabeth Tifft • Eric Clifford Tuday • Jennifer Nichole Uram • Ling Wang • Zihao Wang • Sasrutha Rasika Wickramasinghe • Laura DeLong Wood • Sheng Xu • Robert Mace Yarrington • Melinda Sue Yates • Yong Zhang • Binquan Zhuang