



# BBS Bulletin

March/April 2005

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## BGSO: Your Student Union

Allan M. Gurtan (G4)

Students on Longwood are fortunate to have access to a wealth of resources. The availability of these resources is due, in part, to student input. Over the years, based on such feedback, the academic administration has been improving program curricula, financial resources, and services. Many of these early efforts were informal, having been initiated by students acting alone to present common concerns to DMS administrators. To provide a more formal framework to address student issues, the DMS Student Organization was established several years ago.

The name has since changed to the Biomedical Graduate Student Organization (BGSO), but its goals remain the same. It represents around 700 students enrolled in various PhD programs in the Longwood Medical

Area, including the BBS Program, and its main objectives are to identify student concerns, and establish a unified, inclusive voice when presenting these issues to the administrations on campus. BGSO also allocates funding to organizations run by DMS students.

This year, an additional and overarching goal of BGSO has been to increase communication and cooperation among the different student councils and academic programs on Longwood. Luigi Adamo, a first-year BBS student and Vice President of BGSO, initiated a collaboration with students from Harvard Medical School (HMS) and the Harvard School of Public Health (HSPH) to address two main Longwood-based issues, elaborated in greater detail below: (1) Integration of the LMA graduate and professional programs *see 'BSGO' on page 2*

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## Student Petition:

### The Role of Teaching in Tenure Decisions

Katie Campbell (G3)

At this year's BBS retreat, there was disappointment and discontent brewing among students. They watched as Dr. Ting Wu received an unprecedented third BBS Award knowing that Harvard had not offered her a tenured position. They asked themselves how it was possible that Harvard would not promote such a distinguished teacher and mentor.

The result of these concerns was a petition asking the administration to reconsider Dr. Wu's tenure decision. "On the way back to Boston [from the BBS retreat], we decided that writing a petition to reconsider her tenure was the best solution to both speak up and state that 100% research-based tenure decisions for 100% of the faculty may not be the ideal situation for an institution who claims to train some of the best students in the country," explained Olaia Naveiras (G3), who helped to organize the petition.

No one involved with this petition anticipated

the amount of student support it would receive. An email detailing the petition along with a letter to the administration was sent to G2+ BBS students and students outside of BBS who had taken classes with Dr. Wu; over one hundred of these students "signed" the petition electronically by replying to the email. Joseph Arboleda-Velasquez (G3), who helped organize and send out the petition to the students, remarked, "I have to admit I was completely surprised and overwhelmed by the positive response to the petition. When we started to get the replies, I decided to stay up that night and read each message in real time. Many people actually took some time to write long messages and share with us their thoughts about teaching and mentoring at Harvard." Dr. Wu said that she was very surprised by the number of students on the petition, having thought that it would only be

*see 'Petition' on page 3*



*Petition, continued from page 1*

students from her Genetics 218 class.

The petition was sent to President Larry Summers, Dean Joseph Martin and members of the Harvard faculty. When asked about how the petition was received by the administration, Dr. Nancy Andrews, Dean for Basic Sciences and Graduate Studies at HMS, said “We are always very pleased when we get unsolicited praise for our faculty’s teaching. It’s rare. Many felt that the letter was very well written, and a wonderful tribute to Ting’s dedication and teaching skills.”

In a remarkable change of events, HMS eventually reversed its initial decision. This time she was offered tenure. Dr. Wu was surprised by the reopening of her tenure process, and said “It was something that I had ruled out. It was just never going to happen.” She added that the petition and the events following it made her think about what it was like to be part of the community at HMS. “The students played a huge role,” she said about her decision to accept her tenure offer and remain at HMS. She also acknowledged the support of her colleagues and the members of her lab. As for the effect of the petition, Olaia Naveiras said, “I am sure the student petition was not the only factor that made the University reconsider their decision. But it feels very good

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## Faculty Profile: William C. Hahn

### Assistant Professor of Medicine, Associate Member of the Broad Institute

Phoebe Dan Zhang (G2)

**Research Interests:** To understand how cells become transformed by making experimental models of cancer from primary human cells.

**Beginnings:** Growing up in Ohio, Hahn had always wanted to be a doctor. This decision was influenced by both the doctors in his family and by the experience of relatives who succumbed to cancer. However, it wasn’t until he started working in a lab at Dana Farber Cancer Institute (DFCI) as a Harvard undergraduate when he first became interested in research. At DFCI, Hahn worked with James Rheinwald to characterize PAI-1 (Plasminogen Activator/Inhibitor I). He quickly learned that exciting, cutting-edge science can only be found in the lab. He also saw how current cancer treatments are limited by our lack of understanding about the underlying cause of this deadly disease. This led Hahn to study cancer development and how cancer treatments can be improved by understanding the disease at a molecular level.

**Graduate School and Beyond:** In 1987, Hahn entered the M.D./Ph.D. program at Harvard Medical School because he wanted to combine clinical and basic research in cancer. He did his Ph.D. thesis in the labs of Steve Burakoff and Barbara Bierer in the Immunology Program, working on the



to have contributed in any way. I think Harvard is very lucky that she decided to stay.”

Dr. Wu and the student petition-organizers expressed hope that teaching and mentoring will be considered more seriously in future tenure decisions. Dr. Wu believes that student input is valued at Harvard, and that with the petition “the students have opened up a new dialog.” She added, “Maybe, if [the students and administration] keep that dialog open, somehow the administration and the students will come up with the solution that has been eluding people for decades.” Jason Arroyo (G3), who was also involved in organizing the petition, said, “I think [the petition] will affect future tenure decisions. The administration, by re-opening Ting’s tenure process, has demonstrated an interest in being more flexible with the tenure process.”

Many students often feel as though they are at the mercy of the administration, but in the end, Dr. Wu and Dean Andrews stressed that student opinions are encouraged and respected by faculty members and administrators. Hopefully, the student petition has set a precedent that will make students feel more comfortable raising issues of concern with the administration.

structure-function relationship of the T cell molecule CD2. After finishing his M.D./Ph.D., Hahn did his internship and residency at Massachusetts General Hospital before returning to DFCI for his medical oncology fellowship. In 1997, Hahn started his postdoc position in Bob Weinberg’s lab at MIT and worked on the function of telomerase in cell immortalization and transformation. Hahn was soon offered a faculty position at DFCI and now serves as an Assistant Professor of Medicine at HMS.

**Hahn’s reasons for staying with Harvard for almost 21 years:** Boston is an exciting place to do science because you are surrounded by incredibly smart and talented people who are inspiring to work with. On top of that, Hahn also feels more comfortable in a place he knows well.

**Advice to Graduate Students:**

1. Don’t be afraid to ask big questions.
2. At the end of the day, trust your data.
3. Don’t be afraid of failure.

**Outsides Activities:** Golf is Hahn’s favorite sport and he tries to play as much as he can. Hahn used to play the clarinet but no longer does so due to time limitations.

**The single item he will save if the office was on fire:** The Blackberry that organizes Hahn’s entire “life.”

**Favorite Trip:** Hahn loves to go to warm and tropical places to play golf, and Hawaii is by far the best.

**Motto:** If it is worth doing, it is worth doing right.

# Future Plans for “Hot Lab” Cause Concern in Boston Community

Melinda Faulkner (G2)

In September 2003, Boston University Medical Center (BUMC) was awarded one of two \$128 million federal grants by the National Institute of Allergy and Infectious Diseases (NIAID), part of the National Institutes of Health (NIH), to construct a National Biocontainment Laboratory, or “hot lab,” that would serve to develop drugs, vaccines, and treatments against the world’s deadliest pathogens and potential bioterrorist weapons. Dr. Mark S. Klempner, Associate Provost for Research at BUMC, stated, “Boston University Medical Center is deeply honored to be given the opportunity to serve the city, the state and the nation in the discovery of new treatments and preventions for serious emerging and re-emerging infectious diseases.”

The new facilities, named the National Center for Emerging Infectious Diseases and Biodefense (NCEIDB), will contain biosafety level (BSL) 3 and 4 laboratories, allowing research on the most dangerous and life-threatening pathogens. There are currently only four BSL-4 laboratories in the United States. Biodefense experts believe that the shortage of BSL-3 and -4 facilities has hindered research on vaccines and treatments for these diseases. BSL-3 agents, as defined by the CDC-NIH Biosafety manual are “indigenous or exotic agents with potential for aerosol transmission, diseases may have serious or lethal consequences,” and include pathogens causing typhoid fever, plague, West Nile, and HIV. BSL-4 agents are “dangerous/exotic agents which pose high risk of life-threatening disease, aerosol-transmitted lab infections, or related agents with unknown

risk of transmission” and include Ebola and Lassa viruses. The danger of pathogens studied in BSL-4 facilities requires maximum containment. NCEIDB will have armed guards and security checkpoints containing eye scans and electronic fingerprints. The building will be a self-contained facility and the BSL-4 laboratories will be kept at a lower pressure than the atmosphere, so a leak in the building structure would let air in instead of out. Scientists will be required to take chemical showers upon both entry and exit of the laboratory and conduct their research in self-contained plastic suits, among other precautions.

The facility will be located within BioSquare, a biomedical research and business park located at BUMC in the South End of Boston. The project, expected to cost around \$178 million dollars, should have countless benefits for the Boston community. Massachusetts Governor Mitt Romney stated, “The construction of this new center will solidify Massachusetts’ position as the national leader for cutting-edge biotech research. It will generate 1300 construction jobs, 660 new permanent positions, and countless other economic opportunities for local businesses and residents.” Overall, the project is estimated to have a \$272 million economic benefit. Dr. Klempner stated, “The laboratory would enhance the scientific and economic standing of the region and be a magnet for talent.”

Although many support the facility for its potential to evade bioterrorism by developing treatments that combat dangerous microorganisms, Dr. Robert Finberg, chairman of

*see ‘Hot Lab’ on page 5*

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## Faculty Profile: Ralph Scully Assistant Professor of Medicine

Maria Naylor (G2)

**Research Interests:** To investigate the potential roles of BRCA1 and BRCA2 in the response to DNA damaging agents, subsequent recombination between sister chromatids, and cancer progression; to identify changes in chromatin, particularly H2AX, that influence recombination.

**Beginnings:** Scully was born in the US, but grew up in Leeds, Yorkshire in the UK. He attended Cambridge University, studying both medical sciences and English literature, to the vexation of his advisor. Medical school followed at University College in London.

**Graduate School and Beyond:** After working in internal medicine for three and half years, Scully decided to pursue a Ph.D. in Herman Waldmann’s laboratory at Cambridge University in England, examining the mechanism of T cell tolerance in transplantation and discovering the deletion of peripheral T cells following the transplantation of foreign bone marrow in mice. He joined David Livingston’s laboratory at the Dana-Farber as a postdoc and worked to

elucidate the function of a then-newly cloned protein, BRCA1. He has been part of the faculty at Harvard since 2001.

**Biggest Lab Goof-up:** Defying the odds to become the one M.D. who did not break the lab centrifuge, Scully instead allowed a mouse quarantined for rabies to bite him and escape the hood at 2 in the morning. Thankfully he caught the mouse at 3 A.M., but didn’t catch rabies.



**Advice to Graduate Students:** Scully advises students to try to “think like a grandmaster.”

**Odds and Ends:** Scully most enjoys spending time with his wife and three children, as well as coaching his two older kids’ soccer teams. He likes to play chess and listen to music, and recommends the Bombay Club restaurant in Cambridge. He also firmly believes in creating a positive, relaxed (but not too relaxed!) environment in the lab.



# Community Service Profile: Science Club for Girls

Amanda Lukens (G1) and Saori Haigo (G1)

## What is the program you work for and what type of service(s) do they/you provide and why?

We participated in Science Club for Girls in Fall 2004. It is a year-round after-school program geared towards K-8 girls to encourage them to enjoy science. Mentors serve as instructors and role models. There is an established curriculum that mentors follow over the course of the program, which is designed to supplement what the girls are learning in school. Two mentors work together with a small group of girls in the same grade. A junior assistant from a local junior high school assists the mentors with each week's activity.

## Are there any requirements such as training or time?

Mentors must be female. No formal training is required. There is an orientation session and a voluntary behavior management seminar is offered for mentors in the program. A strong background in science is preferred. Also, volunteers are asked to commit to two hours once a week for 9 weeks during the semester. These two hours includes prep and planning time.

## Where is your program located?

The program is associated with Cambridge public schools. We worked at the Martin Luther King, Jr. Elementary School located on Putnam St. (near Harvard Square).

## What is the most rewarding aspect for you?

The most rewarding aspect for us is seeing the excitement of the girls towards science and helping them think like scientists.

## Why did you choose to work for this program?

Girls are often discouraged from studying science. A

teacher questioning whether a girl should take advanced math or science classes is an obvious example. Societal pressures for women to pursue careers in the humanities rather than the sciences are a more subtle yet equally powerful influence. Therefore, we chose to participate in this program because we wanted to demonstrate to young girls that women can pursue careers in science and have fun doing so. We also wanted to help get young girls excited about science.

## Why should students/faculty work for your program?



Though we have seen an improvement in the numbers of female scientists, there is still a disproportionate ratio of male to female science professionals (particularly at faculty or other higher ranking positions). We even recently witnessed the president of Harvard making comments that could discourage girls from studying math and science. Female students, post docs, and faculty (acting as mentors) provide the girls with proof that they too can pursue a successful career in science.

## How can others get more information about your program?

For more information, please contact the program coordinator, Alejandra Pallais, at (617)549-2442 or [girls\\_science\\_clubs@yahoo.com](mailto:girls_science_clubs@yahoo.com).

## Biology 95, continued from page 2

Persons interested in teaching a Biology 95hf course must submit an application procedure, detailed here: [biology.harvard.edu/forms/95hfTutorApp20052006.pdf](http://biology.harvard.edu/forms/95hfTutorApp20052006.pdf). The deadline for the 2005-2006 school year is March 11, 2005. Compensation for the full year is at one-fifth Senior TF rate over ten months, which was \$8580 this past year. Once an application is approved by the Biology Committee on Undergraduate Studies, applicants are invited for an interview.

But even after passing the application and interview hurdles, you'll need students to take the course! You must have at least two students enrolled in order for your course to be offered. There is a tutorial fair at the beginning of each school year to recruit interested students.

This year there are 15 Bio 95hf courses offered, two of which are taught by BBS students Mike Boyce and Jen Kowalski. They are teaching courses on apoptosis and cell migration, respectively.

As Bio 95hf is a year-long commitment and not a required class, students tend to only take the course if they are particularly interested in the subject material. Mike feels

that Bio 95hf is a great pedagogical opportunity to share your scientific interests with students who are as interested in learning the material as you are in teaching it. As a former section leader for various courses, Mike enthusiastically endorses Bio 95hf as "definitely the best teaching experience he has had . . . both in terms of intellectual and *financial* satisfaction."

Jen has appreciated the experience of formulating her own course and particularly recommends Bio 95hf for those interested in teaching careers after graduate school. She is also grateful for her students' enthusiasm and believes that students find the course to be a welcome change of pace from the large lecture courses the students are used to. As Jen conducts her thesis research on various aspects of the cytoskeleton and cell migration, she has appreciated the opportunities to both use her expertise and learn more about her field.

For more information about Biology 95hf, please contact Barbara Cerva ([barbara@mcb.harvard.edu](mailto:barbara@mcb.harvard.edu)) in the Biology Undergraduate Office.

## Recent BBS Student Publications:

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\*These authors contributed equally to this publication.

## Faculty Profile: Andrea I. McClatchey

### Assistant Professor of Pathology

Danny M. Chou (G2)

**Research Interests:** Using mouse models to study how cells organize membranes and how membrane organization contributes to cancer development and progression.

**Beginnings:** McClatchey, the daughter of a meteorologist, was born and raised in Boston. As a child, she adored animals and loved to learn about living things. This interest led her to major in biology at the University of Vermont, and eventually developed into her career in science.

**Graduate School and Beyond:** McClatchey received her Ph.D. right here at Harvard Medical School. As a graduate student, she rotated in the labs of Cynthia Morton and Bob Kingston before settling down in the laboratory of James Gusella. The Gusella lab, well known for linking the CAG repeat expansion with Huntington's disease, specializes in positional cloning of disease genes. For her thesis, McClatchey linked mutations within a voltage-gated sodium channel gene (SCN4A) to a heritable form of temporary paralysis. These mutations were found to inactivate a loop within the protein that prevents the channel from shutting itself off. After taking a month off following graduate school for a cross country drive in her Honda Civic hatchback, McClatchey moved across the Charles River to start her postdoc in Tyler Jacks' lab at MIT. Around this time, Gusella positionally cloned NF2 by familial studies and McClatchey

went on to develop a mouse model to study its product. McClatchey joined the Harvard faculty at the end of 1997, and continues to study the NF2 tumor suppressor Merlin and its family members. Today, she is just a short (and free) cab ride away at MGH East.

**Advice to Graduate Students:** Mentors are going to be the most important people in your career, and you want one who will be there to support you throughout your career. In addition, McClatchey also stresses the importance of leading a balanced life. You will often make more progress by occasionally taking some time off before returning to the problem you've been working on.



**The Personal Side:** McClatchey is an iPod aficionado and a loyal Boston Red Sox fan. In addition to spending time at Fenway Park, McClatchey also loves to be in the wilderness. She speaks often of her husband as well as her 8 year-old son Russell. McClatchey fondly recalls one occasion when Russell came to the lab with the intent of cloning and recreating dinosaurs. Perhaps suggestive of a successful future career in science, Russell can also be credited with contributing "grant writing" to the list of things scientists do posted on his classroom wall.



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