



SPRING 2012 BGS NEWSLETTER

Letter from Interim BGS Director:

Dear BGS students, alumni, faculty and staff,



In this issue of the BGS Newsletter, we celebrate endings, beginnings, and a pause. First, the pause: Susan Ross, Professor of Microbiology, Associate Dean of Graduate Education in the Perelman School of Medicine, and Director of BGS is taking a well-deserved sabbatical. I am serving as Interim Director while

Susan is on scholarly leave.

Now onto the main events....

To the 101 August, December and May graduates of BGS, we wish you a fond farewell and continued success. Our spring BGS graduation ceremony will be held on Monday, May 14, and we are honored to have our new dean, Dr. J. Larry Jameson, as commencement speaker. Of course, graduation is a happy time for you and your families and friends. But it is also a time of joy for the faculty here at BGS. We have watched you mature into full-fledged biomedical scientists, and you have become our trusted colleagues and peers. We have seen your labors contribute to the body of scholarly knowledge. We are proud of all of you and hope you will stay in touch with us and Penn.

As our graduates end their time at BGS, we welcome 94 young women and men who are just beginning their graduate studies here. Our new class is distinguished and excited about launching their careers in biomedical research. Some of these students will be starting lab rotations this summer, and many more will be joining them in the fall. The first weeks of grad school can be an exciting but also somewhat anxious time. Please join me in welcoming our new students and easing their transition into life at BGS.

A final word to all the BGS students. I hope you realize the integral role you play in academic life at Penn. The faculty will come to rely on you as co-workers, and we take great pride in your accomplishments, both during your time here and after you graduate.

Congratulations to the Class of 2012, and welcome to our newest students.

With best regards,

Rick Assoian, PhD
Interim Director, BGS

BGS 2012 Graduation Ceremony

Monday, May 14, 2012

Commencement Speaker

J. Larry Jameson, M.D., Ph.D.
Executive Vice President,
University of Pennsylvania Health System
Dean, Perelman School of Medicine

Reception

Warden Garden
Museum of Archaeology and Anthropology
12:30 – 1:30 p.m.

Hooding Ceremony and Awarding of Diplomas

Harrison Auditorium
Museum of Archaeology and Anthropology
1:30 – 3:00 p.m.

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To include information in the next newsletter, please write to Jamie Lipford at jlipford@upenn.edu



IN THE NEWS

Penn Receives the 2012 Presidential Award for Higher Education Community Service

The University of Pennsylvania was one out of five higher-education institutions that received the 2012 Presidential Award from the U.S. Department of Education. The award honors Penn for its commitment to bettering the community through its support of Summer Learning. Penn's Summer Learning program provides a safe, healthy environment for academic enrichment during summer breaks to help students retain what they learned during the academic year.



The full article about the award and how Penn continues to provide community support can be found [here](#).

Researchers at Penn find that Molecular Pair Controls Time-Keeping & Fat Metabolism

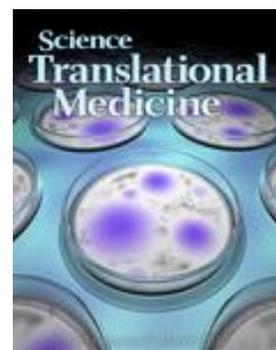


The lab of **Mitchell Lazar, MD, PhD** (CAMB, GCB & PHRM) found that a protein called Rev-erb beta serves as a back-up for Rev-erb alpha, which, together, controls fat metabolism and the circadian clock. When both proteins are not functioning, the liver fills with fat and the cellular clock loses its time-keeping function.

To read more about the research conducted by the Lazar lab, please see the publication in this month's issue of [Genes and Development](#).

Study at Penn May Lead to New Treatments for Male Pattern Baldness

George Cotsarelis, MD (CAMB), along with his team of researchers at Penn, have identified an abnormal amount of a lipid called Prostaglandin D2 in the bald scalp of men with male pattern baldness, a discovery that may lead directly to new treatments for the most common cause of hair loss in men. In both human and animal models, researchers found that a prostaglandin known as PGD₂ and its derivative, 15-dPGJ₂, inhibit hair growth.



To read more about the study, please see the publication in the [March 21, 2012 issue of Science Translational Medicine](#).

New Faces in the BGS Office!



Meet **Kai Evenson**, Admissions Coordinator and Web Manager of BGS.

Kai joined the BGS office last fall and makes regular news updates to the website. To

read Kai's updates, please visit [BGS News!](#)

Meet **Arnaldo Diaz, Ph.D.**, Associate Director of Recruitment & Special Programs.

In addition to his role in the BGS office, Arnaldo has recently been appointed as Adjunct Assistant Professor of Pharmacology.

Congratulations!





This spring, the academic spotlight shines brightly on some of our 2011/2012 graduates of the BGS program. Taking time out of their busy schedules, they were willing to share how their studies and collaborations within the BGS program shaped their future careers.

Here are their stories...

Tishina Okegbe, PhD – Cell and Molecular Biology



Deciding to pursue a Ph.D. was a major life decision, but from the start, I felt confident in my choice of the Penn BGS program. As compared to other graduate programs, I loved the sense of community, support and academic rigor that the CAMB GGR program offered. Throughout my graduate career at Penn, I had the opportunity to present my research at several local, national and international conferences. This culminated in the co-authorship of three peer-reviewed articles. Outside of the lab, I was heavily involved in the Ernest E. Just Biomedical Society and served as a TA for an undergraduate biology course. Albeit a bit indirectly, the skills that I gained and the experiences that I had throughout my graduate career, ultimately helped to prepare me for my non-traditional career move.

I am currently serving as a U.S. Peace Corps Volunteer in Lesotho, Southern Africa. If you had told me 6 years ago that this was where I'd end up after my Ph.D., I wouldn't have believed you! I live in a small town in the southern-most district of Lesotho and teach 2 eighth-grade mathematics classes, and a junior-level chemistry course at the local secondary school. Since math and the sciences are tough subjects for many students here, my goal has been to bring a sense of passion and excitement to the subjects to make them more enjoyable. Though it is a difficult task, I am totally content and know that I am doing exactly what I should be at this juncture in my life. After my two-year stint in Lesotho is up, I plan to pursue a Masters of Public Policy. I'd ultimately like to work for the federal government as a Science Policy Analyst, to develop and implement sustainable science education programs in developing countries.

In the words of the Basotho: Khotso! Pula! Nala! (Peace! Rain! Prosperity!)

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## Greg Sonnenberg, PhD – Immunology

In 2007, I joined the Penn Immunology Graduate Group and pursued my dissertation research in the laboratory of Dr. David Artis. My research has focused on understanding mechanisms of immunoregulation at mucosal surfaces in the context of infection, inflammation and tissue homeostasis. With help from the collaborative environments, facilities and resources that BGS and IGG promote, I was able to develop and advance my research, which resulted in first-authored publications in high impact journals, including *Immunity*, *The Journal of Experimental Medicine* and *Nature Immunology*. I also had the opportunity to present my research at multiple national and international scientific conferences.



In 2011, I defended my dissertation and was the recipient of the 2012 Saul Winegrad Award for Outstanding Dissertation. I am currently extending my research as a post-doctoral researcher at Penn. My future goals include developing an innovative independent research program, within an academic setting.



2011/2012 graduates of BGS continued...

## Rithun Mukherjee, PhD – Genomics & Computational Biology



It is difficult to believe more than 5 years have now passed since I attended the new students welcome reception in the fall of 2006. That day, I did not know what lay ahead in terms of my graduate school experience. The enormity of undertaking training at one of the world's leading schools of medicine stared at me in no uncertain terms. Would I survive in this sea of excellence? Now with my PhD diploma in hand, I can say that the single biggest outcome of my time at BGS has been building a sense of confidence in me as a researcher that can only be nurtured through years of teaching, mentoring and friendships, full of care and love. I have many people to

thank and space here is small.

Some moments shall stick in my memory, like receiving nuggets of wisdom in numerous one-on-one sessions from Dr. Warren Ewens, one of my favorite teachers at Penn, and my thesis committee chair. I had come across books he wrote before I joined Penn and here he was in person, instructing me personally from those pages. Also, receiving a lab-joining gift from my thesis adviser, Dr. Frederic Bushman, of a book he himself authored was one of my highlights -- a book that I had browsed through multiple times when in college. Even just the thrill of the opportunity to be a graduate student in his lab was an honor. And, of course, the pleasure and satisfaction of publishing a first paper in a peer-reviewed journal gave me a feeling that I had contributed my own wee-bit to advancing scientific literature. So, what's next? Well, here I am on the "other" coast beginning a postdoctoral fellowship at the Fred Hutchinson Cancer Research Center in Seattle. Here, I am hoping to put my BGS training and skills to good use by continuing on a research path, and contributing my little bit, from time-to-time, to advance science.

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## Michael Harbut, PhD - Pharmacology

I studied biology and chemistry in college and following that, I worked as a research assistant at Oregon Health & Science University, studying mechanisms of DNA repair. This turned out to be an extremely scientifically fruitful experience, and it solidified the idea that I wanted to further pursue graduate studies at the bench.

The great breadth of high quality research at Penn made choosing BGS for graduate school an easy decision, as I didn't necessarily have a particular scientific area I was looking to concentrate on for graduate work when I entered. I wound up joining the lab of Dr. Doron Greenbaum, in Pharmacology, for my dissertation work. Here, I focused on the utilization of chemical biology approaches to both elucidate protease function and validate proteases as drug targets in the malaria parasite *P. falciparum*. For this work, we collaborated with numerous other faculty within BGS, another positive aspect of having the wide variety of research that BGS offers. Along with my lab work, BGS has provided a rich graduate experience; it has provided funding for me to present my work at conferences, allowed me to meet Nobel laureates, and fostered a sense of community amongst fellow graduate students, through numerous social events. This overall experience has kept me enthused to remain in research science. I am currently wrapping up my work in Dr. Greenbaum's lab and am deciding on potential postdoc positions.





2011/2012 graduates of BGS continued...

## Catherine Kopil, PhD – Neuroscience

My nearly six years in graduate school have been an immensely rewarding learning experience. Coming into BGS, my background was in psychology and I faced a large learning curve in course work, and in lab, to say the least. I am so thankful for the faculty in the Neuroscience Graduate Group whose guidance helped bring me up to speed during my first 2 years, and has continued to support me throughout my thesis research. My thesis project in Dr. Robert Neumar’s laboratory, in the Department of Emergency Medicine, has focused on the neuropathologic role of IP<sub>3</sub> receptor proteolysis in ischemic brain injury. Throughout my research training, I have enjoyed the truly rich collaborative environment at Penn. Working with a number of different PIs, postdocs, graduate students and research specialists across Penn’s campus, has allowed me to expand my project from single-channel electrophysiology to clinically relevant injury models in rodents.



Beyond the laboratory, my teaching experiences at Penn have been among the most rewarding parts of my graduate training. From TA’ing in undergraduate neuroscience classes to working with the Center for Teaching and Learning, teaching has provided an exciting medium for discussing science; sharing my love for the brain. I am extremely grateful for the support of the Neuroscience Graduate Group and countless faculty mentors I have met through the program who provided me with an incredibly strong foundation in pedagogy and science education. Following graduation, I will be pursuing a postdoctoral research fellowship, with the ultimate goal of a career that combines my passions for both science and teaching.

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## Incoming BGS Students

### Total Candidates by Graduate Groups

- ♦ Biochemistry & Molecular Biophysics – 13
  - ♦ Cell and Molecular Biology – 36
- ♦ Genomics & Computational Biology – 7
- ♦ Epidemiology & Biostatistics - 14
  - ♦ Immunology - 8
  - ♦ Neuroscience -15
  - ♦ Pharmacology - 13

### SUIP and Penn PREP Programs

This summer, 27 undergraduates from across the country and Puerto Rico will be participating in the Summer Undergraduate Internship Program (SUIP).



A total of eight students will be part of the University of Pennsylvania Post-Baccalaureate Research Education Program (*Penn PREP*)

*Pictured above: 2011 SUIP Students*



## **Congratulations to All of Our May 2012 Degree Candidates!**

### Biochemistry & Molecular Biophysics

- ♦ Tammer A. Farid, PhD
- ♦ David Thomas Moore, MD-PhD
- ♦ Kathryn Lorenz Sarachan, PhD
- ♦ John J. Skinner, PhD

### Biostatistics

- ♦ Lu Chen, MS
- ♦ Matthew David Davis, MS
- ♦ Elizabeth Anderson Handorf, PhD
- ♦ Jiwei He, MS
- ♦ Daniel Shin, MS
- ♦ Emin Tahirovic, MS
- ♦ Jarcy Zee, MS

### Cell and Molecular Biology

- ♦ Maria Ciocca, PhD
- ♦ Christopher R. Edwards, PhD
- ♦ Margaret R. Fleetwood, PhD
- ♦ Eugene Khandros, MD-PhD
- ♦ Matthew LeBoeuf, MD-PhD
- ♦ Rebecca Skye Lijek, PhD
- ♦ Wenyu Luo, PhD
- ♦ Amar Jayprakash Majmundar, MD-PhD
- ♦ Jennine M. Dawicki McKenna, PhD
- ♦ Natalie Miller, VMD-PhD
- ♦ Alexandra Maria Ortiz, PhD
- ♦ Nadeene Elizabeth Riddick, PhD
- ♦ Ishmail J. Abdus-Saboor, PhD
- ♦ Adam P. Siebert, PhD
- ♦ Nikhil Singh, MD-PhD
- ♦ Monica Teta, PhD

### Genomics & Computational Biology

- ♦ Rumen L. Kostadinov, PhD

### Immunology

- ♦ Danielle Haney, PhD
- ♦ Brittany Weber, MD-PhD
- ♦ Tao Zou, MD-PhD
- ♦ Katie Lynn Williams, MS

### Neuroscience

- ♦ Marco E. Boccitto, PhD
- ♦ Nooreen S. Dabbish, MD-PhD
- ♦ Nina Shen Hsu, PhD
- ♦ Chih Houn King, PhD
- ♦ Catherine Mary Kopil, PhD
- ♦ Marek Ma, PhD
- ♦ Kayla Metzger, PhD
- ♦ Sean I. Sheffler-Collins, PhD
- ♦ Mathieu E. Wimmer, PhD

### Pharmacology

- ♦ Sankha Subhra Basu, MD-PhD
- ♦ Jason Ray Dunkelberger, PhD
- ♦ Michael Brandon Harbut, PhD
- ♦ Matthew L. MacDonald, PhD
- ♦ Jaclyn Marie St. Louis, MS



**Mitchell Lewis, PhD (BMB)** is the recipient of the *2012 Christian R. and Mary F. Lindback Award for Distinguished Teaching*; Penn's highest teaching honor.

With a rare knack for maintaining a relaxed and fun research environment, while at the same time churning out some of the most significant publications in the field of structural biology, Dr. Lewis lectures to the students about complicated mechanisms in such a relaxed manner, that one feels like he is having a casual conversation with the students over lunch.

Despite this deceptively laid-back atmosphere—which includes the annual singing of the song “Glucose Glucose”—his vision, enthusiasm and creativity have led to numerous enhancements to the course, including delivering every lecture himself, securing a highly competitive Howard Hughes Medical Institute award to introduce BGS students to clinical settings, and attending classes in every PSOM course to better understand the students' experiences (“He took every course!, “one student amazedly observed).

“He arrived to lecture every morning bounding with energy,” remembers a student, “equipped with his unique smile reflecting both joy and excitement, anxious to impart the wonders of biochemistry onto us.”

Source: [April 10, 2012 Almanac](#)



**Thomas Petty, PhD (GCB – 2010)** recently won a highly competitive *interdisciplinary research award from SystemsX*.

This award funds a project bridging groups from computational and biological sciences and the clinic, in order to create medically-relevant innovations.



**Vladimir Muzykantov, MD, PhD (PHRM)** is this year's recipient of the *Jane M. Glick Graduate Student Teaching Award*.

Dr. Muzykantov will be presented with this award during the BGS graduation ceremony on May 14, 2012, at the Museum of Archaeology and Anthropology.

*The Jane M. Glick Graduate Student Teaching Award was established in 2010 by the Glick family in remembrance of Dr. Glick and her dedication to the Biomedical Graduate Studies programs.*



**Dennis E. Discher, PhD (CAMB, PHRM)** has been elected to the *National Academy of Engineering*. This election is among the highest professional distinctions accorded to an engineer.

Discher is a leading scholar in soft matter and physicochemical approaches to cell and molecular biology. He has co-authored more than 150 publications with over 10,000 citations.

Source: [SEAS News](#)

### Additional Faculty Awards



**Virginia M. Y. Lee, PhD, MBA, and John Q. Trojanowski, MD, PhD**, both professors of Pathology and Laboratory Medicine, have been named recipients of the 24<sup>th</sup> Annual Medical Research Award in Neuropsychiatric Disorders by the Robert J. and Claire Pasarow Foundation.



**Mark Lemmon, PhD (BMB)** is the 2012 award recipient of the Dorothy Crowfoot Hodgkin Award of the Protein Society.



**2012 Sloan Fellowship Recipients:**

**Christopher Fang-Yen, PhD (NGG)**

**Benjamin F. Voight, PhD (GCB)**

### BGS Student Awards



**Josh Allen (BMB)** has been selected to participate in the **2012 St. Jude National Graduate Student Symposium (NGSS)** where he will present his work on “Potent anti-tumor effects of TIC10 require Foxo3a and TRAI gene upregulation”.

Josh also received a 2011 **AACR-Bristol-Myers Squibb Scholar-in-Training Award from the AACR** (American Association for Cancer Research). He is now completing his Ph.D. with Wafik El-Deiry at Hershey Medical Center.



**Sydney Brown (EPID)** was awarded the **Clinical Epidemiology Research Prize** for her paper entitled “The Epidemiology of Intensive Care Unit Readmissions in the United States”.



**Jacqueline Morris (PHRM)** is the **2012 winner of the Solomon and Catherine Erulkar Traveling Fellowship** award.



**Marino Pagan (NEURO)** won the **“Best Oral Presentation” award** at the BGS Symposium.



**Kevan Salimian (BMB)** was awarded the **Dr. Roy G. Williams Award** for “meritorious research in basic medical sciences”.

Additional Student Awards



**NGG Recipients Awarded \$100 Gift Cards for Best Posters at the 2012 MINS Retreat**

**Morgan Bridi** - Cell & Molecular  
**Colin Challis** – Cognitive Neuroscience  
**Daniel Denman** – Systems  
**Whitney Parker** – Development  
**Toni Prince** – Behavioral  
**Dustin Shilling** – Neurobiology of Disease



**2012 National Research Service Award (NRSA) Recipients**

**Morgan Bridi** (NGG)  
**Morgan DeSantis** (BMB)  
**Armen Moughamian** (NGG)  
**Whitney Parker** (NGG)



**Recipients of the 2012 NSF Research Fellowship Awards**

**Laura Castellano, PhD** (PHRM)  
**Cierra Danko** (CAMB)  
**Janine Hall, PhD** (BE)  
**Peter Huwe, PhD** (BMB)  
**Greg Osborn** (CAMB)  
**Khaing Win** (NGG)



**Recipients of the 2012 Saul Winegrad Award**

**Scott Bressler, PhD** (BMB)  
**Stephanie Cross, PhD** (NEURO)  
**Michael Harbut, PhD** (PHRM)  
**David Hill, PhD** (CAMB)  
**Rithun Mukherjee, PhD** (GCB)  
**Gregory Sonnenberg, PhD** (IMUN)  
**Jichun Xie, PhD** (BSTA)



# ALUMNI UPDATES

## Special Achievements



**Brian Brooks, M.D., Ph.D (PHRM – 1997)** will receive the Camras Translational Research Award from the Association for Research in Vision and Ophthalmology in May 2012.



**Jessica Taaffe, Ph.D. (CAMB – 2011)** started a Global Health Interest Group at the NIH. The purpose of the group is to unite the community of NIH researchers involved in global health activities, and to give fellows more exposure to these activities. For more information, please visit: [Global Health Interest Group](#)

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## Alumni Appointments

**Sarah Cullinan, Ph.D. and her husband, Andrew Gladden, Ph.D.,** both 2005 graduates of the CAMB graduate group, have wonderful news to share. In addition to recently celebrating their daughter Claire's 1<sup>st</sup> birthday on April 25, 2012, Sarah now serves as the new Deputy Editor for the American Journal of Human Genetics, and Andrew was recently appointed as an Assistant Professor at the MD Anderson Cancer Center. *Congratulations!*



**Henry Adler, Ph.D. (INSC – 1993)** has been appointed as a tenure-track Assistant Professor of Biology in the Department of Science and Mathematics at the National Technical Institute for the DEAF (NTID) at Rochester Institute of Technology in Rochester, New York.

**David J. Calkins, Ph.D. (INSC – 1994)** has been promoted to Professor and Vice-Chairman of Ophthalmology and Visual Sciences for the Vanderbilt Eye Institute of the Vanderbilt University Medical Center

**Sarah A. Connolly, PhD. (CAMB – 2003)** will become a tenure-track Assistant Professor of Microbiology at DePaul University this fall.

**Jason Mills, M.D., Ph.D. (CAMB – 1997)** was promoted to Associate Professor, with tenure, in the Departments of Medicine, Pathology & Immunology, and Developmental Biology at the Washington University School of Medicine.



# UPCOMING & PAST EVENTS

## THE GEORGE W. RAIZISS 29<sup>TH</sup> ANNUAL RETREAT

June 14-15, 2012  
Swarthmore College

### Keynote Speaker:

**Harvey M. Friedman, MD, Professor of Medicine**

Chief, Infectious Disease Division, Department of Medicine

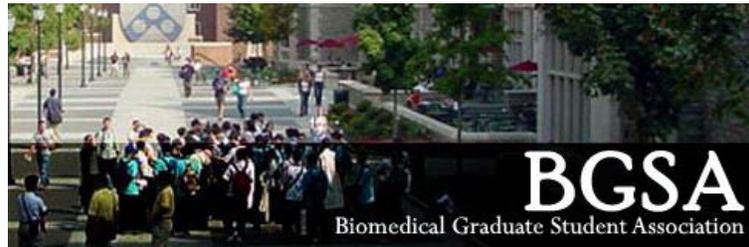
Director, Botswana-Upenn Partnership

“Botswana-Upenn Partnership: emerging opportunities for global health research”

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## PAST EVENTS

### **2012 Biomedical Student Research Symposium**



**April 13, 2012**

BRB II/III Auditorium

University of Pennsylvania Perelman School of Medicine

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### Philadelphia Science Festival

April 20-29, 2012



In its second year, the Philadelphia Science Festival showcases the impact of science and technology past, present and future. There were lectures, exhibits and hands-on activities for all to enjoy. More than 100 institutions, including the University of Pennsylvania, support the festival.



# FACULTY APPOINTMENTS

## Genomics and Computational Biology

- o **Yoseph Barash, PhD**, Assistant Professor of Genetics, Perelman School of Medicine
- o **Elizabeth Grice, PhD**, Assistant Professor of Dermatology, Perelman School of Medicine

## Neuroscience

- o **David Leitman, PhD**, Research Assistant Professor of Psychiatry-Neuropsychiatry, Perelman School of Medicine
- o **David Wolk, MD**, Assistant Professor of Neurology, Perelman School of Medicine

## Pharmacology

- o **Benjamin Voight, PhD**, Assistant Professor of Pharmacology, Perelman School of Medicine
- o **Tilo Grosser, MD**, Research Assistant Professor of Pharmacology

To include information in the next newsletter, please write to Jamie Lipford at [jlipford.upenn@gmail.com](mailto:jlipford.upenn@gmail.com)

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