Letter from the BGS Director:

Dear BGS Students, Alumni, Faculty and Staff,

Greetings! As most of you know, I recently became the 5th BGS Director. As such, I would like to thank my predecessors, and the first-rate BGS Staff, for their considerable contributions to making BGS an outstanding organization. I look forward to working with all of you to enable the continued research and training excellence that is our hallmark.

The Spring 2013 BGS graduation ceremony is imminent (May 13, 2013), and I look forward to celebrating the well-deserved achievements of our graduates. I hope you will join us for this festive occasion. We have the good fortune to have as our commencement speaker, Dr. J. Larry Jameson, Dean, Perelman School of Medicine and Executive Vice President, University of Pennsylvania Health System.

This is an exciting time to launch a career in the biomedical sciences. The currently available research tools have made the “cutting-edge” sharper than ever and enable issues to be addressed that weren’t even a dream a decade ago. There is also a growing awareness of parallel career path opportunities. Your time at Penn has likely positioned you well to move on to the next stage of what will hopefully be a long and fruitful career.

We are also set to welcome the first wave of our new incoming class, who will be arriving for the summer semester. Please join me in welcoming them and easing their transition into life at BGS.

I want to also take a moment to ensure that all BGS Students realize the pivotal role they play in academic life at Penn. The faculty rely on you as valued colleagues, and we take great pride in your accomplishments, both during your time here and after you graduate.

Congratulations to the Class of 2013 (please do stay in touch!), and welcome to our newest students!

With best regards,

Mike Nusbaum, PhD
Director, BGS
Penn Researcher Wins Philadelphia Award for Advancements in Gene Therapy

Carl H. June, MD (IMUN & CAMB) won the 2012 Philadelphia Award for advancements in gene therapy aimed at treating HIV and cancer. As published in an article in Penn Medicine News, two children with an aggressive form of childhood leukemia had a complete remission of their disease—showing no evidence of cancer cells in their bodies—after treatment with a novel cell therapy that reprogrammed their immune cells to rapidly multiply and destroy leukemia cells.

One of the patients, 7-year-old Emily Whitehead, was featured in news stories in December 2012 after the experimental therapy led to her dramatic recovery after she relapsed following conventional treatment. Emily remains healthy and cancer-free, 11 months after receiving bioengineered T cells that zeroed in on a target found in this type of leukemia, called acute lymphoblastic leukemia (ALL).

The case report will appear in the April 18 print issue of The New England Journal of Medicine. Until then, to read more about the award Dr. June will receive, please visit: Dr. June Wins Philadelphia Award.

BGS Faculty and Students Rally for Medical Research in Washington, DC

On Monday, April 8th, a group of 22 faculty and students from BGS went to Washington, DC to participate in the “Rally for Medical Research” and also to meet with staffers for different Congressmen. The newly-founded Penn Science Policy Group, a coalition of Penn graduate students and post-docs, helped to organize the trip, which was generously funded by GAPSA and the BGSA.

At the Rally, the group heard from celebrities, Congresspersons and survivors of cancers and diabetes about the continued importance of funding biomedical research, and how the current sequester would negatively impact the development of new therapies for medical research.

Additional recaps of the meeting can be found at the following link: BGS Students Rally in Washington, DC

John Hogenesch, PhD Named Interim Director of Institute for Biomedical Informatics

The Perelman School of Medicine announced the creation of the Institute for Biomedical Informatics (IBI) and has named John Hogenesch, PhD (GCB, PGG & NGG) as the interim director for the new institute.

The IBI will “bring together the large number of Penn faculty who work in the broad field of biomedical informatics to inform science and medical care. We will expand the number of faculty even more to create a wide-ranging program of research and education to find and clinically apply the treatments of the future and to train the next generation of physician-scientists,” says J. Larry Jameson, MD, PhD. Source
This spring, the academic spotlight shines brightly on some of our 2012/2013 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...

Emily Bassett, PhD – Biochemistry and Molecular Biophysics

Joining the BMB graduate group at Penn to pursue a PhD was an easy decision for me. The BMB students stood out from those at other graduate programs, and their enthusiasm for the program combined with outstanding faculty was what drew me to the program. I chose to join Ben Black’s lab because of his genuine excitement for his research and his multidisciplinary approach to solving basic biological problems. My thesis work in Ben’s lab focused on understanding epigenetic mechanisms of centromere propagation. In addition to my thesis project, I also had the opportunity to collaborate with members of my own lab and with researchers at other institutions on several projects that resulted in publication.

One of the highlights of my time in the BMB graduate program was the exposure to a wide variety of techniques, ranging from cell biology to biophysics. I also experienced tremendous support from the faculty, whether it be giving advice on manuscripts or writing letters of recommendation for training grant applications. I was supported by the Penn Structural Biology training grant and a predoctoral fellowship from the American Heart Association, and this would not have been possible without the support and guidance from Ben and other BMB faculty members.

Thanks to the training I received from BGS, I am well prepared for a future in biomedical research and am currently pursuing a postdoctoral position in the field of epigenetics or cancer biology.

Matthew White, PhD – Biostatistics

After working for a few years in the pharmaceutical industry, I decided to return to graduate school and pursue a PhD in Biostatistics in the fall of 2009. I chose to come to Penn because of their high quality research, as well as their commitment to education and mentorship of students. In my time at Penn, I collaborated with nephrologists and neurologists as part of my RA work, resulting in several publications. With my advisor, Dr. Sharon Xie, I developed statistical methods to evaluate diagnostic biomarkers in the presence of measurement error. Using resources from the department and BGS, I was able to present my work at national and international conferences.

Last fall, I defended my dissertation and moved to Boston to begin work as a Senior Biostatistician at Boston Children’s Hospital, with a faculty appointment in Harvard Psychiatry. Here, I hope to put my biostatistics training to good use and continue developing statistical methods in diagnostic testing.
2012/2013 graduates of BGS continued...

Anthony Olarerin-George, PhD – Genomics & Computational Biology

In 2005, I graduated from Ramapo College with a degree in Bioinformatics. At the time, such programs were rare at undergraduate institutions and few graduate programs were equipped with the proper organization and curriculum to train scientists in the burgeoning field of genomics and computational biology. However Penn’s GCB program was exceptional. With its diverse faculty research, dedicated infrastructure and space, and a challenging and comprehensive curriculum, I knew Penn was right for me. For my dissertation, I studied the role of microRNAs in signaling pathways. Under the guidance of Dr. John Hogenesch, and in collaboration with great researchers here at Penn and other institutions, I was able to apply my knowledge to studies in functional genomics, bioinformatics and clinical biomarker discovery. This breadth of training has surely prepared me for the next phase of my professional development (post-doc) and my long term goal of genomics research in academia.

Grad school was not all work, however. Classes were tough, research was challenging, but I managed to make some time for fun, personal development, and long-lasting relationships. Through organizations such as EE Just, Fontaine, and BGSA, I was able to take part in various activities and develop professional and personal relationships with students from all over campus. Also, through my work as a TA and volunteering for EE Just’s Science Education Academy, I learned the joys of teaching. As a result, I plan to teach at every step of my career in both a formal and volunteer capacity. I am truly grateful for my entire experience at Penn and I know the best is yet to come!

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Mary Falcone, PhD - Pharmacology

I came to the University of Pennsylvania as a BGS student in the summer of 2009, after several years spent working on preclinical drug metabolism and pharmacokinetic research in the pharmaceutical industry. The breadth of high quality research and the strong reputation of the Pharmacology department made this an easy decision, and my experience here has been extremely rewarding. My research in Dr. Caryn Lerman’s lab has focused on individual nicotine metabolism rates and the cognitive effects of nicotine withdrawal, allowing me to combine my early experience in pharmacokinetics with my interest in neuropharmacology. The open and collaborative research environment here at Penn provided opportunities to work with faculty from many different departments and gain a broader appreciation of the complexities of scientific research.

The amazing level of support I received from my advisor, the Pharmacology faculty, and the graduate group helped me to develop my research skills and share the results of my efforts with the scientific community through publications and presentations at conferences. After graduation, I will be extending my research using PET imaging techniques and gaining experience in managing clinical studies at the Center for Interdisciplinary Research on Nicotine Addiction, here at UPenn.
2012/2013 graduates of BGS continued...

Vanessa Troiani, PhD - Neuroscience

From the moment of admission into BGS, I felt truly honored to be joining the 2008 matriculants into the Neuroscience Graduate Group. As someone who works with human fMRI data, the cellular/molecular focus of our early BGS coursework was somewhat daunting. However, it ultimately became an asset to have a strong understanding of cellular neuroscience to inform my cognitive research interests, and is something that is unique to training in cognitive neuroscience in BGS.

My thesis advisor was Bob Schultz, whose guidance enabled me to contribute to nine manuscripts that are in various stages of publication and review, including a high profile paper on the Social Motivation Hypothesis of Autism. Because Penn’s environment is so collaborative, I had many opportunities to learn from distinguished Penn professors. I received a great deal of scientific guidance and support from Russell Epstein, whose direction helped me acquire a National Science Foundation Graduate Fellowship during my first year in BGS. Beyond my own training, I have also had the opportunity to participate in science awareness as part of the Upward Bound program.

My BGS training has helped me build an arsenal of scientific tools to achieve my future goals. My main interest is to better understand the role of social motivation and social rewards in selection of visual information - a process I believe ultimately guides a great deal of learning and development.

Chao Lu, PhD - Cell and Molecular Biology

It is hard to believe that five years have passed since my arrival at Penn. After my research training in college, I was certain that my long-term career goal was to lead an academic research group, and BGS was the graduate program which would bridge me there. Retrospectively, I feel I made the right decision. The training in the BGS program, under my thesis advisor, Craig Thompson, has equipped me with scientific, intellectual and technical skills to become an independent researcher. My thesis work focused on investigating molecular mechanisms of the oncogenes IDH1 and IDH2. The breadth and depth of Penn’s biomedical research means that scientific collaboration is only a step away and the help I received from the BGS community is critical for the success of my research. I will join Rockefeller University for my postdoctoral training and I am confident and fully prepared to take the next challenge.

Among my many memorable experiences in the BGS program, beyond the laboratory, are the Cancer Biology trainee talks on Fridays, and of course, the happy hour events. These were great opportunities to expand my research horizons, speak with and learn from faculty, stay connected with fellow graduate students, and have a lot of fun! I am extremely grateful for my program organizing these events, and many other student activities.
Congratulations to All of Our May 2013 Degree Candidates!

Biostatistics
- Shaun David Bender, MS
- Julie Kobie, MS
- Anagha Kumar, MS
- Kaitlin Marie Woo, MS

Epidemiology
- Sydney Brown, MD–PhD

Cell and Molecular Biology
- George J. Buchlis, PhD
- Sarah E. Clark, PhD
- Alison L. Dell, PhD
- Dan Feng, PhD
- Jamie Lynne Fox, PhD
- Erin E. Graf, PhD
- Derek Spencer Johnson, PhD
- Chao Lu, PhD
- Natalie Miller, VMD/PhD
- Melanie G. Millholland, PhD
- Tatyana Panchenko, PhD
- Nicholas Fredric Parrish, MD–PhD
- Alexander James Valvezan, PhD
- Patrick Ward, MD–PhD
- Te–Lang Brian Wu, PhD
- Jie Xu, MD–PhD

Genomics & Computational Biology
- Le Ba Nguyen, PhD
- Anthony Olarerin–George, PhD
- Jonathan Youn, PhD

Immunology
- Emily Jiun–Huei Chen, PhD
- Natalia M. Ramos–Hernandez, PhD
- Natalie C. Steinel, PhD

Neuroscience
- Carl T. Fulp, MS
- Jing Guo, PhD
- Bradley S. Hollidge, PhD
- Michael Gregory Paine, PhD
- Dustin Jerome Shilling, PhD
- Vanessa J. Troiani, PhD

Pharmacology
- Mary Katherine Falcone, PhD
- Maya Emad Khezam, MS
- Allison Marie Lesher, PhD
- Robert Lin, PhD
- Nyamekye Obeng–Adjei, PhD
- Carly Meyer Sayers, PhD

Please click on the following links to see our list of August 2012 and December 2012 Graduates!
Stephanie Murphy, VMD, PhD (BMB-1996) has been awarded the 2013 ASLAP Excellence in Laboratory Animal Medicine Award. Dr. Murphy has developed an internationally recognized laboratory with a research focus on the exploration of gender differences in the expression and sequelae associated with cerebral ischemia.

Additionally, she has consistently incorporated a dedication to the enhancement of the science of comparative medicine through unique model development and exploration of mechanisms to refine existing models to enhance the welfare of animals used in biomedical research. 

Source: ASLAP March 1, 2013 Issue

Garret FitzGerald, MD, FRS (PGG Faculty) has been awarded the 2013 Grand Prix Scientifique by the Institut de France. The award is shared with Carlo Patrono, MD, at the Catholic University Rome, for their development of low-dose aspirin for the prevention of cardiovascular disease.

This award is considered the world’s most prestigious prize for cardiovascular research.

Source: Penn Medicine News

After 20 years at the Yale University School of Medicine, Mark Shlomchik, MD, PhD (IMUN-1989), will be now become the Chair of the Department of Immunology at the University of Pittsburgh School of Medicine.

Dr. Shlomchik will recruit six new junior and senior faculty members to join him over the next several years.

David Artis, PhD (IMUN & CAMB Faculty) is the recipient of the AAI-BD Biosciences Investigator Award for his outstanding early-career research contributions to the field of Immunology.

Dr. Artis will be recognized for the award at the AAI Centennial Meeting May 3-7, in Honolulu, Hawaii.

Stathis Gennatas (NGG Student), created an image that made the front cover of the October 1, 2012 issue of NeuroImage. This image is based on data from his Neuron paper entitled “Predicting regional neurodegenration from the healthy brain functional connectome”.

Source: NeuroImage
Additional Faculty Awards

Meera V. Sundaram, PhD (CAMB) is the 2013 recipient of the Jane M. Glick Graduate Student Teaching Award.

BGS Student Awards

Chris Dengler (NGG) has been awarded a predoctoral fellowship from the Epilepsy Foundation.

Brigid Jensen (NGG) is the Poster Award Recipient for Children’s Hospital of Philadelphia’s 23rd Annual Research Poster Day – February 27, 2013.

Russ Port (NGG) has been awarded a one-year predoctoral fellowship from the Autism Science Foundation.

NGG Jameson-Hurvich Travel Award Winners – Spring 2013
Kamesh Krishnamurthy
Ryan Tsou
Samantha White
Khaing Win
Nicole Yohn
Additional Student Awards

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

- Chris Dengler (NGG)
- Brigid Jensen (NGG)
- Nicole Martinez-Gonzalez (BMB)

**Recipients of the NSF Research Fellowship Award**

- Anissa Alexander (CAMB-CBP)
- Ben Dyer (CAMB – MVP)
- Amanda Hay (CAMB – MVP)
- Brianne Jeffrey (NGG)
- Mi Kwon (CAMB – CBP)
- M. Morgan Taylor (NGG)
- Kellie Woll (PGG)
- Zhenyu Zhao (BMB)

**Recipients of the Saul Winegrad Award**

- Emily Bassett, PhD (BMB)
- Lauren Bayne, PhD (CAMB)
- Sydney Brown, PhD (EPID)
- Jun Chen, PhD (GCB)
- Stephan Kadauke, PhD (CAMB)
- Ji-Yeon Kim, PhD (IMUN)
- Matthew Nassar, PhD (NGG)
- Nyamekye Obeng-Adjei, PhD (PGG)
- Matthew White, PhD (BSTA)
Special Achievements

Danielle Haney, PhD (IGG - 2012) and Tishina Okegbe, PhD (CAMB - 2011), in partnership with the Philadelphia-based Science Education Academy (SEA), have established a pilot program, International Connections, with students in Lesotho, Southern Africa.

The purpose of the International Connections program is twofold. First, primary students from Philadelphia and secondary students from Moyeni HS engage in an online scientific curriculum designed to challenge students academically and to encourage them to make observations about their daily life and surroundings. Secondly, the program seeks to elicit cultural exchange on both sides, so that Philadelphia students learn about Basotho culture and so that Basotho students learn about American culture. In this way, students grow not only as scientists and critical thinkers, but also develop an international perspective. Additionally, the program provides an opportunity for students to engage in hands-on experiments, a rarity in present day Lesotho.

Jessica Bertout (CAMB – 2009) has been awarded the 2013 Marsha Rivkin Center for Ovarian Cancer Research Gilman Family Scientific Scholar Award for her project entitled “High-Resolution Detection of Somatic Ovarian Cancer Mutations in Bodily Fluids”.

Ralph Deberardinis, MD-PhD (CAMB – 1998) has been elected to the American Society for Clinical Investigation. Dr. Deberardinis also received tenure at UT-Southwestern as an Associate Professor.

Iris Zamir Jaffe, MD-PhD (CAMB – 1997) has been elected as a member of the American Society of Clinical Investigation (ASCI) and was also awarded the American Society of Hypertension Young Scholar Award.
David J. Calkins, PhD (NGG – 1994), Professor and Vice-Chairman of the Vanderbilt Eye Institute of the Vanderbilt University Medical Center, has been named to the Denis M. O’Day Chair of Ophthalmology and Visual Sciences.

Adam R. Hersperger, PhD (CAMB – 2010) will start a tenure-track position as an Assistant Professor of Biology at Albright College in Reading, PA beginning this summer.

David A. Hill, PhD (CAMB – 2011) will begin a pediatric residency at the Children’s Hospital of Philadelphia in June of this year.

Michael Keeley, PhD (CAMB – 2005) has been appointed as the Group Product Manager for New Product Commercialization of Alzheimer’s products at Genentech.

Jonathan Lifshitz, PhD (NGG – 2002) has taken a new position as the Director of the Translational Neurotrauma Research Program at the Barrow Neurological Institute at Phoenix Children’s Hospital.

Andrew M. Lippa, MD-PhD (CAMB – 2011) has been appointed to a Pediatric Physician Scientist position at St. Louis Children’s Hospital/Washington University, where he will begin his residency training.

Kyle Mansfield, PhD (CAMB – 2005) began a new position as an Assistant Professor in the Biochemistry and Molecular Biology Department at the Brody School of Medicine at East Carolina University in Greenville, NC.

Douglas G. Metcalf, PhD (BMB – 2009) has accepted a position as an Associate at the law firm of Foley Hoag LLC.

Laura A. Solt, PhD (IGG – 2008) accepted a position as an Assistant Professor in the Department of Molecular Therapeutics at the Scripps Research Institute – Florida campus.

Giancarlo Tanzi, PhD (CAMB – 2003) was recently appointed as Director of Investor Relations at Biogen Idec.

Laura Simon Treml, VMD, PhD (IGG – 2008) recently accepted the position of Director of Drug Development at Aratana Therapeutics.

Yejia Zhang, MD-PhD (CAMB – 1998) recently accepted the position of Assistant Professor in the Department of Physical Medicine and Rehabilitation at the Hospital of the University of Pennsylvania.
UPCOMING EVENTS

Systems and Integrative Biology/Vision Retreat  
May 15-17, 2013
May 15, 2013  
Barchi Library  

Scholar-in-Residence:
Maria Feller, PhD, Professor of Neurobiology,  
Member of the Helen Wills Neuroscience Institute,  
Molecular and Cell Biology, Berkeley

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2013 Mid-Atlantic Genetic Epidemiology and Statistics (MAGES) Conference  
May 17, 2013  
Sheraton Philadelphia University City Hotel

The Center for Genetics and Complex Traits (CGACT) of the University of Pennsylvania will host a one-day conference on Genetic Epidemiology and Statistics: Methods and Applications in the NGS Age, on May 17, 2013, at the Sheraton Philadelphia University City Hotel.

The 2013 MAGES Conference is sponsored by the Center for Clinical Epidemiology and Biostatistics (CCEB) of the University of Pennsylvania. Registration is free but is mandatory, and will be limited to 150 participants.
The highly anticipated BGS Alumni Social took place on the evening of May 2, 2013 and was a huge success!

Alum who had not seen each other in years caught up over cocktails and conversed with current students who were eager to meet BGS graduates.

Throughout the evening, many in attendance commented on how great the social was, as they enjoyed delicious bites, soft music, and the vibrant energy in the room.
Newly-appointed Director of BGS, Mike Nusbaum welcomed guests and briefly spoke about the bright future he sees for BGS. Followed by Mike was Julie Crudele, Chair of BGSA, who took to the podium to encourage everyone to exchange business cards begin bridging connections between alum, current students, and faculty.

Even as the event was winding down, many guests wanted to stick around to continue chatting, which is a good indication of just how much everyone enjoyed themselves!

Now that the event has wrapped up, we would like to thank everyone who attended as we look forward to making this social bigger in the years to come!
PAST EVENTS

Penn Science Student Research Symposium
April 12, 2013

The BGSA organized its annual Penn Science Research Symposium, in which graduate students from the Penn Medical, Nursing, Vet, Dental, School of Arts and Sciences, Engineering and BGSA participated. There were 8 speaker talks and over 50 posters presented at this event! This event also helped to promote the development of new collaborations among the different programs.

This event was attended by House Representative Chaka Fattah, who delivered the closing remarks, as well as representatives from Senator Toomey and Casey’s offices.

Winners of Poster and Student Talks

BGS Dominates in Sports!

We are proud to announce that the BGS intramural basketball and flag football teams both won the 2012 championships in their respective field of sports! To award them for their hard work, these future Olympiads each took home Penn Intramural Championship t-shirts!

Basketball Team: Anissa Alexander, Becky Billmire, Collin Challis, Mike Convente, Leo Guercio, Rosemary Lewis, Isaac Perron, Emma Reuschel, Dustin Shilling, Steven Tuyishime, Scott Ugras, Lauren Vaught and Matt Young.

Football Team: Lara Abramowitz, Burton Barnett, Collin Challis, Maria Fasolino, Leo Guercio, Maclean Hall, Bri Jeffrey, Wade Mayes, Isaac Perron, Emma Reuschel, Levi Rupp, Steven Tuyishime, Lauren Vaught and Matt Young.
Faculty Appointments

Biochemistry and Molecular Biophysics

- James Petersson, PhD, Assistant Professor of Chemistry, School of Arts and Sciences

Cell and Molecular Biology

- David Feldser, PhD, Assistant Professor of Cancer Biology, Perelman School of Medicine
- Hiroshi Nakagawa, MD, PhD, Research Associate Professor of Medicine, Perelman School of Medicine
- Rugang Zhang, PhD, Wistar Institute Associate Professor of Genetics, Perelman School of Medicine

Immunology

- Ulf Beier, MD, Assistant Professor of Pediatrics, Perelman School of Medicine
- Gregory Beatty, MD, PhD, Assistant Professor of Medicine, Perelman School of Medicine
- Wenchao Song, PhD, Professor of Pharmacology, Perelman School of Medicine

Pharmacology

- Jeffrey Barrett, PhD, Research Professor of Pediatrics, Perelman School of Medicine

To include information in the next newsletter, please write to Kai Evenson at kevenson@mail.med.upenn.edu