

Newsletter

Biophysical Society

JUNE

2016

DEADLINES

BJ Special Issue: Genome Biophysics Call for Papers

July 1

2018 Thematic Meeting Proposals

July 10

Elections: Voting Deadline

August 1

Meetings

Mechanobiology of Disease

September 27-30

Singapore

July 5

Early Registration

2016 Slate of Candidates

Candidates for President-Elect



Angela Gronenborn



Karolin Luger

Voting in the 2016 Society elections began on June 1. The slate includes two candidates for President-Elect: *Angela Gronenborn*, University of Pittsburgh, and *Karolin Luger*, University of Colorado, Boulder. The President-Elect will serve a one-year term, beginning February 2017, followed by a year as President, starting February 2018.

The candidate for Treasurer is *Kalina Hristova*, Johns Hopkins University. The Treasurer serves a four-year term beginning July 2017.

This year there are ten candidates for Council: *Hashim Al-Hashimi*, Duke University; *Zev Bryant*, Stanford University; *Teresa Giraldez*, La Laguna University, Spain; *Ruben Gonzalez*, Columbia University; *Christopher Mathes*, Chantest Corporation; *Linda Nicholson*, Cornell University; *Marina Ramirez-Alvarado*, Mayo Clinic; *Sotaro Uemura*, University of Tokyo, Japan; *Gianluigi Veglia*, University of Minnesota; and *Nieng Yan*, Tsinghua University, China.

Candidate for Treasurer

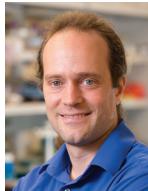


Kalina Hristova

Candidates for Council



Hashim Al-Hashimi



Zev Bryant



Teresa Giraldez



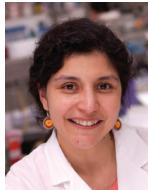
Ruben Gonzalez



Christopher Mathes



Linda Nicholson



Marina
Ramirez-Alvarado



Sotaro Uemura



Gianluigi Veglia



Nieng Yan

The four members elected will serve a three-year term on Council beginning February 14, 2017. Full biographical sketches and candidate statements are available at www.biophysics.org. All regular Society members with 2016 dues paid by May 31, 2016, are eligible to vote. Eligible members may vote electronically by August 1, 2016, through the secure site found at www.biophysics.org.

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Biophysicist in Profile

SAMANTHA HARRIS

Samantha Harris, associate professor in the Department of Cellular and Molecular Medicine at the University of Arizona, grew up in the Chicago suburbs. She was interested in animals and biology from a very young age, and her high school anatomy and physiology class—specifically a cat dissection—set her on a path toward a scientific career. “I loved learning about the different organ systems and how all the structures seemed so perfectly matched to their functions,” she recalls.

Harris’s father was a businessman and her mother was a stay-at-home mom before attending community college and going on to earn her master’s degree in social work when Harris went to college. Harris had always thought that she would become a veterinarian, and throughout high school and college worked in vet clinics. “Growing up, no one in my family was in science. I actually suspect my parents had a bit of a hard time understanding the attraction of science for me, although they seemed to tolerate well enough the occasional cat dissection,” she says. “As for me, I didn’t initially consider a career in research until I met my future husband, *Walt Harris*, an aspiring astronomer, when I was a freshman at the University of Illinois. Neither of us had any idea what academic research involved or how hard it would be to be successful, but we somehow forged a mutual partnership that made it happen.”

She was accepted into veterinary school during her junior year of college, but deferred acceptance to complete her bachelor of science degree. Following graduation, Harris married and moved out of state to attend the University of Michigan, where she began PhD studies in physiology. She was accepted to another vet school that year, but opted to continue her graduate work instead. “In retrospect I feel like I’ve come full circle because one of my projects now involves working with cats that have hypertrophic cardiomyopathy (HCM) due to a mutation in the protein I study, cardiac myosin binding protein-C (cMyBP-C), in collaborative work with veterinarians at University of California, Davis,” Harris says. “It is satisfying to make contributions to both human and veterinary medicine by understanding how mutations in cMyBP-C can cause disease and by exploring new therapeutic approaches to the treatment of HCM.”

She completed her PhD in physiology in 1995 and began postdoc studies in muscle physiology in *Richard Moss*’s lab at the University of Wisconsin, Madison. “I liked the idea of studying something entirely new, and Rick Moss’s lab offered many exciting opportunities. I especially liked the broad question of understanding the significance of thick filament (myosin) based mechanisms of contraction—which typify regulation in smooth and invertebrate muscles—in muscles such as skeletal and cardiac muscles, which are known to be regulated primarily through thin filament (actin) based mechanisms,” Harris explains. “This basic question is what eventually led me to study the regulatory protein cMyBP-C while I was in Rick’s lab because cMyBP-C at that time was considered an exclusively thick filament associated protein, but also one that was important for cardiac contraction, a thin filament regulated muscle.”

Following her postdoc, Harris joined the faculty of the department of bioengineering at the University of Washington as a research assistant professor. “The position was a great start for me because it provided a small start-up allowance that along with a Scientist Development Grant I received from the American Heart Association allowed me to be completely independent,” Harris shares. “At the same time, I benefited greatly from the help and mentoring of other established muscle physiology labs, especially from *Mike Regnier* and his lab group.” She was able to hire *Maria Razumova*, a good friend, to work with her as a postdoc, and *Justin Shaffer*, a bioengineering graduate student, joined the lab as well. “It was just the three of us in that small lab doing experiments, but we had a great time together and ultimately we were very successful,” she says. “It was in that small lab that I received a phone call from the NIH telling me that we were funded!”

Regnier collaborated with Harris during this time on some of her initial studies to determine the binding partners for cMyBP-C and how phosphorylation of the cardiac specific motif regulates myosin cycling and cardiac muscle contractile properties. “Our collaborations have been pleasant, productive, and a scientific learning experience for me,” he says. “Sam is a conscientious and careful scientist and you can trust the quality of her research.”

Harris’s colleagues *Marion Siegman* and *Tom Butler*, both of Thomas Jefferson University, agree with Regnier. “She is the type of colleague that you always learn something new from concerning your own research.[...] Sam’s energy and passion for research and teaching are invigorating,” they offer.

After several years Harris moved to the University of California, Davis (UCD), and joined the Department of Neurobiology, Physiology, and Behavior as an assistant professor. “I really enjoyed teaching undergraduates in the exercise biology major at UCD, and I gained a deeper appreciation for the beneficial role of exercise and the detrimental effects of inactivity on human health,” she says. “It was in part because of these experiences that I started biking to and from work—a

lifestyle change that I still enjoy today.”

Since 2013, Harris has been at the University of Arizona, where she works with a growing group of colleagues, including *Henk Granzier*, *Jil Tardiff*, *John Konhilas*, *Carol Gregorio*, *Tom Doetschman*, and *Brett Colson*. “Collectively we specialize in the study of muscle myofilament proteins and cardiac myopathies using methods from single molecule biophysics to whole animal approaches using mouse models. While I have benefitted enormously from having colleagues in different disciplines such as bioengineering and exercise physiology throughout my career, I am thoroughly enjoying being in an environment surrounded by other muscle biophysicists,” she shares. “It actually feels a bit like going to the Annual Meeting of the Biophysical Society when I go into the lab each day.” Her lab is now focused on moving many of their discoveries of the function of cMyBP-C made using in vitro experiments, to studies aimed at understanding how cMyBP-C interacts with its binding partners to affect cardiac function in vivo.

The biggest challenge in Harris’s career has been navigating a science career alongside a spouse who is also in science. “Both of us have been the ‘trailing spouse’ at least once, and the timing hasn’t always fit our professional development,” she says. “At the same time, I think it has also been an advantage for each of us to have a spouse who understands the lifestyle and unique demands of an academic career.”

When she is not in the lab, Harris spends time with her family and their three pets. Harris is also working toward her private pilot license, learning to fly a Robinson 22 helicopter. “I really enjoy the physical and mental challenge of learning something entirely outside of my range of experience,” she explains.

For young biophysicists, Harris offers this advice: “Respect your data and be willing to revise or abandon your hypothesis. Be critical, run appropriate control experiments, but also be willing to accept an unanticipated result. For me, it was an unexpected result in control experiments that led to virtually all of the work that’s ever been done in my lab.”

Profilee-at-a-Glance

Institution

University of Arizona

Area of Research

Cellular and Molecular Medicine

Public Affairs

BPS Members Advocate for Science Funding on Capitol Hill



On April 12 and 13, Biophysical Society members *Daniel Richman*, Georgia Institute of Technology, and *Catherine Zander*, University of Alabama, Birmingham, joined over 250 other scientists, engineers, and business leaders making visits on Capitol Hill as part of the 20th STEM on the Hill Congressional Visits Day. This annual event is sponsored by the Science-Engineering-Technology (SET) Working Group, of which the Biophysical Society is a participant. The purpose of the visits was to educate Congress about the important role federal funding plays in research and innovation and express support for sustained and predictable federal funding for research.

Both Richman and Zander are postdoctoral fellows who, in addition to their research, are interested in pursuing outreach and advocacy as part of their careers. This event gave them an opportunity to explore those interests and ideas on how they can be science advocates after the event is over. They also had the opportunity to learn about the federal budget for science agencies, the appropriations process, and the legislative process from a panel of speakers that included representatives from the Senate, the House of Representatives, and the American Association for the Advancement of Science.

Overall, the visiting scientists held 1,200 congressional meetings and visited the offices of members of Congress from 40 different states. Richman and Zander, along with BPS staff member Ellen Weiss, met with staff in the offices of Senators *Richard Shelby* (R-AL), *David Purdue* (R-GA), *Johnny Isakson* (R-GA), and *Jeff Sessions* (R-AL), as well as Congressmen *Gary Palmer* (R-AL), and *John Lewis* (D-GA).

During the event, the SET working group honored Senator *John Thune* (D-SD), Senator *Chris Coons* (D-DE), Representative *G. K. Butterfield* (R-NC), and Representative *David McKinley* (R-WV) with the *George E. Brown, Jr.*, Leadership Award for leadership in science, technology, and mathematics on Capitol Hill.

Biophysics and the Brain at the USA Science & Engineering Festival



In just three days, Biophysical Society staff and member volunteers gave over 6,000 individuals a glimpse of the power and beauty of biophysics research through a short planetarium style movie showcasing images of neurons and proteins in the brain, as well as a hands-on activity—making neuron models out of pipe cleaners.

The Biophysical Society was a proud supporter of public outreach and science education as a partner and participant in the 4th USA Science

and Engineering Festival held April 15-17 in Washington, DC. Referred to as “the Super Bowl of STEM,” the festival attracted over 345,000 visitors. These individuals had the opportunity to hear from famous science ambassadors like *Bill Nye* the Science Guy, meet working scientists, check out virtual reality equipment, and learn about science, engineering, and math through hands-on activities.

The Society would like to thank its volunteers, without whom the event would not have been a success: *Dorothy Beckett, Xiaoyong Lu, Diana Zhang, Kristina Ketchum, and Aravind Chandrasekaran* from the University of Maryland; *Bob Nakamoto, Laura Odango, and Nicole Swipe* from the University of Virginia; *Nnanya Kalu* from Catholic University; *Randy Wadkins*, BPS 2015-16 Congressional Fellow; and *Maria Sophia Balboa*, University of Colorado-Boulder graduate. These scientists enthusiastically helped individuals with their neuron models, explained what they were making, shared their scientific expertise with everyone who visited the exhibit, and assisted with the logistics of the Biomolecular Dome, which was used for the film.

The Society would also like to thank its partners in bringing the Dome to the event: *Wah Chiu* and *Matt Doherty*, from Baylor College of Medicine, and the Houston Museum of Science for the use of their equipment.

Congressional Appropriations Process Underway

After returning from a two-week recess, Congress began tackling FY 2017 appropriations in earnest in April. House Appropriations Committee Chairman *Hal Rogers* (R-KY) and Senate Appropriations Committee Chairman *Thad Cochran* (R-MS) plan to have completed committee consideration of all 12 appropriations bills by the time lawmakers leave for their summer recess in mid-July.

In the Senate, the Appropriations Committee approved the 302(b) allocations, which let each appropriations committee know how much money with which they have to work. These allocations adhered to the \$1.07 trillion overall spending level established by the Bipartisan Budget Act of 2015 last October, which provides basically flat funding overall for the FY 2017 budget compared to the FY 2016 budget. The subcommittees that fund the National Science Foundation (NSF) and the Department of Energy (DOE) Office of Science received small increases over their FY 2016 levels. However, the subcommittees that determine the budgets for the National Institutes of Health (NIH) will be working with fewer dollars than it had in 2016. This does not bode well for the NIH budget, which at \$32 billion is one of the bigger items with which the subcommittee must contend.

In the House, 302(b) allocations were not made publicly available immediately. Rather, Chairman Rogers indicated that each allocation will be released as the full committees consider appropriations bills.

Of interest to the biophysics community, both the DOE Office of Science and the NSF were provided with small increases in bills passed by appropriations subcommittees thus far. In addition, NSF received a nod of support when the Senate Appropriations Committee included in its appropriations bill summary the important role of the Foundation in funding basic research across scientific disciplines. This language is significant as House Science Committee Chairman Lamar Smith (R-TX) continues to advocate that funding for social sciences and geo sciences be cut at the agency.

The Biophysical Society will continue to track the appropriations process and make the latest budget numbers and developments available on its website, as well as in future newsletters.

2016 Summer Research Program in Biophysics Begins

Twelve students from diverse academic, cultural, and geographic backgrounds were selected for an opportunity to spend this summer at the University of North Carolina-Chapel Hill (UNC) studying biophysics. The NIGMS-funded Biophysical Society Summer Research Program: Case Studies in the Physics of Life, in its ninth year, began on May 10. During the 11-week course, students immerse themselves in biophysics-related research projects in the labs of mentors they have selected. In addition to the many hours spent on lab research, students gain confidence and competence through a variety of professional development opportunities, including sessions on writing a personal statement and applying to graduate school, a day at the UNC Outdoor Challenge Course, and a tour of the Hamner Institute in nearby Research Triangle Park. Throughout the summer, students also attend lectures and seminars by UNC faculty and visiting speakers from biophysics programs around the country.

Program co-directors and Society members *Mike Jarstfer* and *Barry Lenz* lead the program and will be assisted this summer by teaching assistants *Samantha Kistler*, *Hunter Wilkins*, *Kevin Knight*, and *Samantha Stadmiller*, all currently graduate students at UNC.

The application site for the 2017 program opens in September. For program updates, including the 2016 course syllabus and lecture materials, visit biophysics.org, or contact *Daniel McNulty* at dmcnulty@biophysics.org.



Manal Ahmidouch
Wake Forest University



Sheila Paintsil
University of Minnesota-Duluth



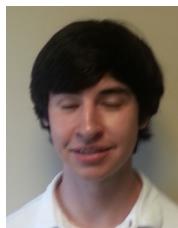
Monica Cortez
The University of Central Florida



Lonzie Hedgepeth
University of North Carolina
at Pembroke



Victor Ekehchiadi
Oklahoma State University



Sebastian Hendrickx-Rodriguez
New Mexico Institute of
Mining and Technology



Loretta Hing
Boston University



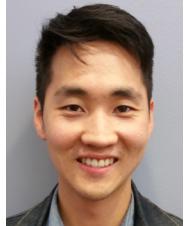
Alexander Li
UNC-Chapel Hill



Fatima Raezelle Javier
Wesleyan University



Jazmine Nash
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Biophysical Journal

Know the Editors



Ram Dixit

Washington University
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Editor, Molecular Machines,
Motors, and Nanoscale
Biophysics

Q: What are you currently working on that excites you?

My lab is interested in understanding the organization and function of the microtubule cytoskeleton.

Two current projects that I am very excited about seek to understand how cells target and regulate microtubule severing, and the function and mechanism of action of novel microtubule plus-end tracking proteins (+TIPs). In the first project, we are working to understand how the microtubule severing protein katanin is targeted with pinpoint accuracy to microtubule intersections and how this activity is tuned by cells to shape microtubule arrays. We suspect that the targeting mechanism involves both mechanical and biochemical cues in the form of deformation of the microtubule lattice at crossover sites and microtubule-associated proteins that protect the bulk of the lattice against katanin attack. We are excited to combine microfabrication technology with single-molecule biochemistry to test these ideas!

In the second project, we are working on several putative EB1-binding proteins in *Arabidopsis thaliana*. Some of them are implicated in membrane trafficking or vesicle secretion, and we are very excited to test the hypothesis that EB1 works to position exocytic factors along cortical microtubules to facilitate secretion at these sites. This work will help to understand how the secretory system is linked to the cortical microtubule array for cell wall deposition.

Besides research, I am also excited about working on a book based on a course that I teach with a

colleague in the architecture department. In this course, biology and architecture students work together to explore how principles underlying cellular architecture can be used to design and build new kinds of human-made structures. This course has been a lot of fun to teach and we hope that our book will inspire others to integrate Science and Arts to promote scientific literacy and spur innovative ideas and applications.

Q: What do you enjoy doing in your free time?

I enjoy the outdoors and go hiking with my family on weekends. I also like reading in our backyard with a beer at hand and visiting the Science Center or the City Museum in St. Louis.

Biophysical Journal Call for Papers

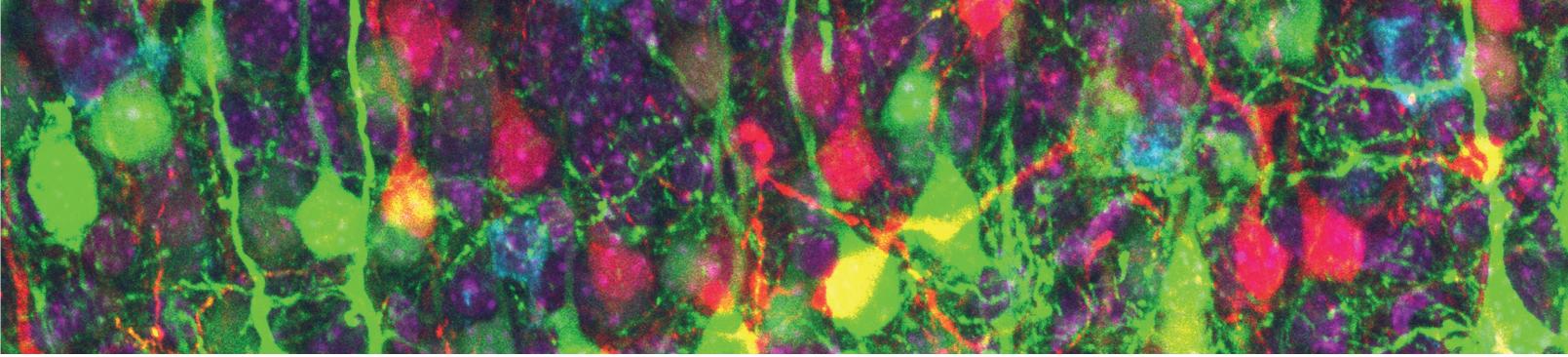
Special Issue: Genome Biophysics

Deadline for submission: July 1, 2016

To submit, visit biophysj.msubmit.net

Errata:

In the May Newsletter, page 6, Know the Editors, *James Keener* was incorrectly listed as an editor for the Proteins Section of *Biophysical Journal*. James Keener is an editor for the Systems Biophysics Section. His correct institution is the University of Utah.



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Announcing the 2017 Thematic Meetings

Mark your calendars! The BPS will hold three thematic meetings in 2017 that will explore focused topics from varying perspectives.



Single-Cell Biophysics: Measurement, Modulation, and Modeling
Taipei, Taiwan
June 17-20, 2017

Biophysical studies in individual living cells enable a quantitative understanding of the structures and dynamics of macromolecules and cellular processes in their own physiological context. This is a grand challenge in biophysics as the complexity of a single cell is multi-scale both in time and space.

Addressing this challenge requires the concerted effort of biologists, physicists, chemists, and bioengineers. The goal of this meeting is to bring together scientists and engineers to discuss current and future experimental, computational, and theoretical advances in the field of single-cell biophysics. Topics will include advances in single-molecule, single-cell, and tissue imaging, dynamics and spatial organizations of cellular structures and processes, responses of cells to three-dimensional microenvironments, new experimental and computational methods for single-cell analyses, and the interaction of cells with materials.



Conformational Ensembles from Experimental Data and Computer Simulations
Berlin, Germany
August 25-29, 2017

Structural biology increasingly relies on combining information from multiple sources of experimental data with ever-improving computational models. A fundamental component in structural biology is thus to combine information from experiments

and simulations in an efficient and correct manner. This is particularly true in the era of integrative structural biology, where heterogeneous and noisy experimental data are often used in conjunction with computational methods to study large and complex biomolecular assemblies and their structural dynamics. Further, as these molecules and complexes are often highly dynamic, special care needs to be taken to interpret correctly the time- and ensemble-averaged experimental data.

This meeting aims to bring together scientists from across disciplines to advance integrative structural biology into the "dynamic age." The program will consist of a mix of computation, theory, and a broad range of methods in experimental structural biology, focusing on methods and applications for studying the structural dynamics of biomolecules by integrating experiments and simulations.



Emerging Concepts in Ion Channel Biophysics

Mexico City, Mexico

October 10-13, 2017

This meeting will cover recent discoveries pertaining to the study of the structure and the function of ion channels and transporters and will bring together a diverse group of experts who use precise techniques to study an assortment of ion channels. Themes that will be addressed include leading knowledge on the function of voltage-, ligand- and mechanically gated ion channels and transporters, as well as the use of structural, optical, electrophysiological, biochemical, and modeling techniques to delimit fine structural interactions within ion channels as well as to study their regulation by different molecules.

gated ion channels and transporters, as well as the use of structural, optical, electrophysiological, biochemical, and modeling techniques to delimit fine structural interactions within ion channels as well as to study their regulation by different molecules.

The meeting will provide a positive environment for feedback and discussion between leaders in the field and junior researchers and students using different approaches to study the physiology of ion channels and transporters, stimulating interactions and collaborations among them.

Call for 2018 Thematic Meeting Proposals

Submissions Due July 10



All 2016 members are encouraged to submit proposals for the 2018 BPS Thematic Meeting series. The Society's Thematic Meetings are unique and exciting because they bring together researchers who do not otherwise attend the same events, allowing for the exploration of shared topics of interest from a variety of perspectives. The meetings must be proposed and chaired by Society members; the Society provides all logistical and management support. This is a wonderful opportunity to propose that unique meeting related to your work that you always wanted to attend...if it only existed! For more details on how to submit a proposal visit www.biophysics.org and click on Thematic Meetings.

By the Numbers

Since 2009, the Society has recognized over 180 talented high school students at regional and state science fairs all over the world with a Biophysical Society Science Fair Award.

Career Center

Hiring, Firing, and Beyond

At the Biophysical Society 60th Annual Meeting in Los Angeles, the Committee for Professional Opportunities for Women hosted a panel discussion called *Hiring, Firing, and Beyond: How to be an Effective Supervisor*. The panel included *Dorothy Beckett*, University of Maryland; *Kelly Knee*, Pfizer; *Prithwish Pal*, Illumina; *Rohit Pappu*, Washington University in St. Louis; *Rajini Rao*, Johns Hopkins University; and *Joanna Swain*, Bristol-Myers Squibb. The discussion is summarized below.

Q: As a relatively new PI, I have heard that a catchy job ad is important for hiring good people. How do you write one and where should you post it?

Write a good, accurate description of the position. For a postdoctoral position, highlight opportunities for additional training. Send the description to friends who may know good candidates, and add it to your website. Ads in magazines like *Science* generate many responses, but you just end up sorting through many that are irrelevant.

Q: How do you assess students during the hiring process to see if they will work well in your lab?

If you have a rotation system at your university, use your rotations wisely. Spend a lot of time in the first two weeks with the student talking about what question he/she should be looking to answer, rather than the everyday minutiae of the position. Let them know your working style and that of your lab members. Watch, assess, and monitor how the student fits in and adds to the lab.

If you do not have the luxury of time with a student, ask behavioral questions in your interviews to figure out how the student will fit in with the other lab members. One prompt to give applicants is, "Tell me about a time you had to deliver something by a certain time and it did not go well." Let them tell the story and keep asking questions as they talk.

Have candidates spend time with both senior and junior members of the lab so that you can evaluate how they will interact with both.

Q: What makes a great supervisor?

Take care not to transfer your stressors and issues onto your lab members. Do not micromanage; this is not well received and instead adds stress and takes away from their time on the bench. Do not put pressure on lab members or blame them for everything that goes wrong, because this could inadvertently encourage someone to fabricate data, which is every PI's nightmare. Remember that each of your lab members has his/her own challenges, which are just as important as your own. Treat them as co-discoverers rather than employees. Pay attention to your team's strengths and alter your management approach to best suit each person. While you should not micromanage, some people require more hand-holding than others.

Find senior people to talk to about your stressors, because otherwise they can infect your home life and/or life in the lab.

Q: What can you do to deal with toxic students once they are already in your lab?

Make your expectations clear from the beginning and hold people to them. If you start questioning a student, talk to someone, such as a senior colleague, about your concerns to make sure you are being reasonable about your expectations.

Do not wait too long to ask someone to leave if it is not the right fit; it is worse for the health of the lab to keep someone who is poisonous to the atmosphere. When you do talk to them, be civil and pragmatic, rather than placing blame. Give them enough time to find something new.

If you are asking a postdoc to move on before his/her contract is up, make sure that you have documentation about their behavior.

Q: I work at a PUI and have no control over who works in my lab. What can I do when I am frustrated by the work ethic and intelligence of the students?

If you can, talk to people who have worked with the students before to get an idea of how they worked with them. Start slowly with instruction so that they can get up to speed before you give them additional tasks.

In industry, employees have regular performance reviews. People write a self-evaluation and you write one for them. Implementing this review system may open a dialogue and help the student set goals. It may help to have weekly group meetings at which you provide a list of tasks to be accomplished by the next week. Your students will come to understand that whether or not they complete their tasks, they will just get more the following week, and may be inclined to manage their time more effectively. If their tasks are not completed by the next group meeting, ask why and publicly address any issues.

Q: If a student works hard but has issues with a particular task, how long should you give them to get up to speed?

Start by giving the student small tasks that would not take you long to complete. Give them a set amount of time to complete the task and evaluate how long it takes them; this will give you an idea of how long they need. Some students have “experiment-phobia” and talk themselves out of taking action; give them license to have things not work out right away.

Q: Do you have any advice about coming into an existing lab as a new PI?

This can be an unpopular position. Establish trust early on by connecting with people on an interpersonal level. Go out for lunch or happy hour with your lab members, bring in treats, or have them over for dinner.

Q: How many hours should I expect students to work each week?

There is no magic number. Some students can work 9-to-5 and are very productive, whereas others may hang around the lab constantly but not accomplish much. Put more weight on the results of their work than the number of hours they are working.

Q: How do you maintain ties with your lab while on sabbatical?

Use Skype and phone calls rather than email as much as possible, because having more personal contact is better. Wait to take on new students until after your sabbatical is over, because they will need a lot of interaction in the beginning and you will want to do that in person.

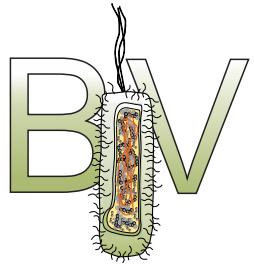
Q: I am a lab manager whose PI is on sabbatical. How should I deal with undergraduate students who do not deal well with failure?

Students often have the view that they need to be perfect, which is a barrier to their troubleshooting. Emphasize to them that it is okay to fail by telling stories of your own mistakes. This will help them realize that their mistakes can be fixed and are not the end of the world. Give the students a checklist of things that could have gone wrong so that they can try to figure issues out on their own before bringing the PI into things. This will make them feel a greater sense of ownership over their experiments.





Subgroups



BIV

2017 Junior Faculty Award

The subgroup is thrilled to announce the inaugural competition for our Junior Faculty Award. The purpose of the award is to boost the visibility of a beginning faculty member whose research and recent achievements focus on cutting-edge investigation of biomolecular processes in living organisms. The research can involve computation, theory, or experiment. The winner will present a featured talk at the 2017 Biopolymers in Vivo Subgroup Symposium in New Orleans.

Candidates must be members of the subgroup and be employed by a research university at the tenure-track assistant professor level. The award comprises a plaque and a check for \$2,000 to be awarded at our symposium. There are no additional reimbursements.

Candidates must submit a cover letter that includes a short statement about the significance of their past research accomplishments, a one-page outline of current and future research plans with their "research vision," a two-page curriculum vitae, including a list of publications, and a letter of support from their department head. These items should be sent as a single pdf file to Biopolymers.in.vivo.subgroup@gmail.com. Each candidate must also arrange for two letters of recommendation to be sent by the recommenders to the above address.

The deadline for applications is July 1. The BIV officers will discuss the applications and select a winner. The winner will be notified in August, in time for him/her to submit an award abstract; the award announcement will appear in the September newsletter.

—*Gary J. Pielak*, BIV Chair

Grants and Opportunities

Investigator Awards

Objective: To fund world-class researchers and clinicians with a compelling long-term vision for their research.

Who May Apply: To be eligible for an Investigator Award, you must be based at an eligible higher education or research institution in the United Kingdom, Republic of Ireland, or a low- or middle-income country. You should be employed in an established academic post: a permanent, open-ended or long-term rolling contract, salaried by your host institution.

Deadline: July 27, 2016

Website: <http://www.wellcome.ac.uk/Funding/Biomedical-science/Funding-schemes/Investigator-Awards/WTX059284.htm>

Enriched Doctoral Training in the Mathematical Sciences

Objective: To strengthen the nation's scientific competitiveness by increasing the number of well-prepared US citizens, nationals, and permanent residents who pursue careers in the mathematical sciences and in other professions in which expertise in the mathematical sciences plays an increasingly important role.

Who May Apply: Universities and two- and four-year colleges (including community colleges) accredited in, and having a campus located in, the United States acting on behalf of their faculty members, as well as non-profit, non-academic organizations associated with educational or research activities.

Deadline: July 20-23, 2016

Website: <http://www.nsf.gov/pubs/2015/nsf15555/nsf15555.htm>

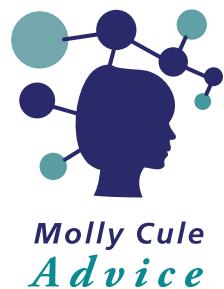
Student Center



Federico Comitani

Federico Comitani
Department of Physics
King's College London

Molly Cule



What are some advantages to a career in industry?

Finding and keeping a position in academia as a professor or (principal) investigator continues to be challenging. Countless researchers are competing for fewer positions, and for a dwindling amount of funds available for scientific research. This poses a significant barrier to researchers who are pursuing an academic career. In fact, more than 85% of PhD holders will end up working outside of academia.¹ Job seekers should not count out opportunities in biotech and pharmaceutical companies, which can offer several advantages over the academic track and can lead to very rewarding and productive careers in science. In contrast to a typical tenure-track faculty position in academia, which may be rather individualistic and demands frequent (high-impact) publications, industry works in teams towards a common goal to advance product development. Success is dependent on how efficiently the team functions together as a whole. Finding a team during the application process that fits one's expertise and ambition is important. Additionally, one should have a vested interest in the technology being developed or used by the company and be prepared for a steep learning curve that is typically encountered when pursuing an industry position. Finally, employees of biotech or pharmaceutical enterprises are incentivized based on milestones, team contribution, and product success in the market but also have access to elaborate career development plans which can be used to better yourself and grow your personal network. In contrast to academia, an industry career can still encourage scientific research but commonly does not focus on publications. Instead, your contributions may help to develop a platform that, in turn, will aid an academic lab to achieve their goals. So, in a way, you get the best of both worlds.

1. Sauermann, H., and M. Roach. 2012. Science PhD career preferences: levels, changes, and advisor encouragement. PLoS One 7:e36307.

Members in the News



Yilun Ying, East China University of Science and Technology, and Society Member since 2016, was named one of L'Oréal's 15 International Rising Talent grant recipients in the

category of "Technology and Engineering: Innovations that could change the face of medicine."



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UPCOMING EVENTS

BIOPHYSICAL SOCIETY NEWSLETTER JUNE 2016

August

August 14-19

From Nanostructures to Microcircuits in Health and Disease
Waterville Valley, NH
<https://www.grc.org/programs.aspx?id=12757>

August 18-20

2nd International Conference on Transcriptomics
Portland, OR
<http://transcriptomics.conferenceseries.com/>

September

September 14-15

6th International Conference and Exhibition on Nutrition
San Antonio, TX
<http://www.nutritionalconference.com/>

October

October 4-6

Advances in Biophysical Methods for Protein Characterisation
Palermo, Italy
<https://www.eventbrite.co.uk/e/advances-in-biophysical-methods-for-protein-characterisation-conference-registration-21306502322>

October 27-29

World Conference on Climate Change
Valencia, Spain
<http://climatechange.conferenceseries.com/>

November

October 31-November 2

12th Global Vaccines & Vaccination Summit and Expo
Istanbul, Turkey
<http://vaccines.global-summit.com/middleeast/>

November 7-9

NIMBioS Investigative Workshop: Next Generation Genetic Monitoring
Knoxville, TN
http://www.nimbios.org/workshops/WS_nextgen