BPS Bulletin
THE NEWSLETTER OF THE BIOPHYSICAL SOCIETY
Biophysical Society

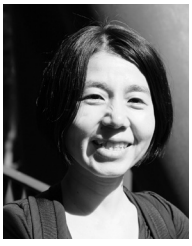
Best of *Biophysical Journal* Symposium

For the fourth year, *Biophysical Journal* will host a symposium at the BPS Annual Meeting to highlight the excellent science published in the journal. This year's event will be titled "Biophysical Journal: Interfaces, Dynamics, and Molecular Mechanisms." The speakers, including the Paper of the Year-Early Career Investigator Award recipient, will be authors from the past year invited to present about their articles, representing a subset of the high-quality research published. The Paper of the Year-Early Career Investigator Award recognizes an early career researcher who has published an outstanding paper in the journal. The speakers will be *Rumiana Dimova*, Max Planck Institute of Colloids and Interfaces, Germany; *Alexandre Lewalle*, Imperial College London, United Kingdom; *Maria Mills*, University of Missouri, USA; *Namiko Mitarai*, University of Copenhagen, Denmark; *Marcus Müller*, Georg-August University, Germany; and *Marcel P. Goldschen-Ohm* (Paper of the Year-Early Career Investigator Awardee), University of Texas at Austin, USA. The symposium will take place at the BPS Annual Meeting in Los Angeles on February 18 from 10:45 AM to 12:45 PM. Please join us to hear about the exciting work of these leaders in biophysics.


Rumiana Dimova


Alexandre Lewalle


Maria Mills


Namiko Mitarai


Marcus Müller


Marcel P. Goldschen-Ohm

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Stay Connected with BPS


Gabriela K. Popescu

President's Message

As I prepare to pass the gavel to President-Elect *Lynmarie Thompson*, it is only natural to reflect on my experience as the BPS president over the past year, and on how BPS has evolved as an organization during this time. The feelings of privilege and gratitude with which I stepped into this role have stayed with me and have been only amplified by a deeper appreciation for the many ways in which BPS meets its purpose and upholds our common values, day in and day out!

The experience has validated my belief that BPS is a strong, vibrant, and nimble organization: one that meets the real, true, and legitimate need of biophysicists to interact with each other, to exchange hypotheses and results, to publicize methods and technology, to support the field and to feel supported, and to navigate change as a community—with the least pain and most gain! I cannot escape the metaphor of a living organism, which to meet its purpose must manage and deploy effectively its resources to maintain function and vitality while adapting to an ever-changing environment. For BPS, this success was made possible by its robust member engagement, skilled and dedicated staff, and an organizational structure that supports excellence, promotes effectiveness, and minimizes waste.

I believe that the strong, unwavering, and proud purpose of BPS—to harness the full potential of biophysics to seek knowledge, improve the human condition, and preserve the planet for future generations—continues to motivate our wholehearted engagement with the Society and our productive interactions with each other. In addition, acting as a community, intentionally and consistently in accordance with commonly held values—scientific excellence; integrity and transparency; diversity, equity, and inclusion; and community building—generates a lasting feeling of connection and belonging and infuses our interactions with meaning. Here, I want to thank you again for the once-in-a-lifetime honor and privilege to represent you as the BPS president for the past year. By the same token, I feel the responsibility to report back to you what, in my view, have been remarkable developments in this period.

Savvy management and wise investments allowed the BPS Council to continue to support a broad and diverse portfolio of activities, which are well-aligned with BPS's strategic priorities and goals. Among these, some projects represent established events, which have repeatedly commanded vigorous member engagement, whereas others represent modifications to ongoing programs or brand-new initiatives, which seek to adapt our structures to new challenges posed by deep changes in the scientific publishing ecosystem, increased online interactions, and deepening concerns about sustainability.

Under the broad category of activities with continued success, I will mention a robust Meetings and Events Program, which in addition to our flagship BPS Annual Meeting (www.biophysics.org/annual-meeting#/) includes multiple BPS Thematic Meetings (www.biophysics.org/thematic-meetings#/) and BPS Conferences (www.biophysics.org/meetings-events/bps-conferences). I am in awe of our Director of Meetings, *Dorothy Chaconas*, and her team of three! There is also the now well-established and growing Biophysics Week (www.biophysics.org/biophysics-week#/), more than 15 Networking Events (www.biophysics.org/networking-events), and a newly expanded BPS Awards Program (www.biophysics.org/awards-funding/society-awards) to count among the successes.

Under the "upgrades and new wins" category, I will mention the successful signing of a seven-year contract with Cell Press for publishing *Biophysical Journal* and *Biophysical Reports*, which will be in effect through 2031! This contract represents the culmination of a significant two-year effort by BPS staff, including our Director of Publications, *John Long*. BPS staff have also been heavily engaged with the transition of our in-house database to a new association management system, led by Director of Information Technology *Saran Ramu* and Membership and Database Manager *Caitlin Simpson*, which is scheduled to go live on March 3, 2025. This will provide BPS with increased behind-the-scenes functionality and an improved member experience on the website. Please join me in expressing gratitude and appreciation to our "small but mighty" team of 18 staff, and the exceptional leadership provided by our Executive Officer, *Jennifer Pesanelli*!

Under the "new and exciting" category, Council voted to make permanent the Black in Biophysics Symposium at the Annual Meeting. This change reaffirms our unwavering commitment to fostering a diverse and inclusive community, and having Black in Biophysics as a separate symposium allows future presidents to leverage the visibility of the Presidential Symposium to draw attention to emerging global or pressing issues. As I wrote in a previous column (www.biophysics.org/bps-bulletin/presidents-message-31), it was my prerogative to use this medium to focus on sustainability. I believe that scientists in general, and biophysicists in particular, can and want to be part of a solution to the emerging climate crisis.

I hope you will join me at the Annual Meeting on Sunday, February 16, 2025, at 10:45 AM in attending the "President's Symposium: Biophysics for a Sustainable Future" (www.biophysics.org/2025meeting/program/scientific-sessions/president-s-symposium) and at 2:30 PM that afternoon for the panel discussion "Sustainability in Scientific Research," organized by the Public Affairs Committee and the newly constituted BPS Committee on Sustainability, which also belongs to the "new and exciting" category of 2024 activities!

Last in this category is a partnership BPS initiated with the marketing agency Mighty Citizen. This project will help us to better know our members and their needs and will guide our communications to strengthen our connection and engagement with the biophysics community, and to project more effectively our demonstrated brand of quantitative rigor.

Although this is my last column as BPS president, I still have the 2025 Annual Meeting to look forward to! I have every expectation that it will be a celebration of science and biophysics! An opportunity to recognize our successes and take on new challenges! Most of all, I look forward to meeting with friends and colleagues from across the globe, to stimulating presentations and conversations, and to catching up! In person! In LA! It doesn't get better than that!

And as soon-to-be BPS past-president in 2025, and beyond, I will continue to engage with and contribute as I can to BPS, a community I call my scientific home.

With warm wishes for safe travels—see you in LA!

—*Gabriela K. Popescu*, President

Exciting News:

Our New Association Management System Launches Next Month!

We're excited to share that a brand-new Association Management System is on its way! This enhanced platform is designed to improve your membership experience with streamlined tools for managing your profile, accessing resources, and staying connected. Get ready for a faster, easier, and more intuitive way to manage your membership!

Here's What You Need to Know:

- **Rollout Date:** March 2025
- **What's Changing:** You'll need to reset your password to your myBPS account once the system goes live to continue accessing your account details and member benefits. Your username will remain the same.
- **Why the Change:** Our new AMS offers a faster, more user-friendly experience with enhanced features tailored to support you as a valued member.

What You Can Do Now:

- **Stay Tuned:** Look out for detailed information on how to reset your myBPS password.

We're here to ensure a smooth transition. If you have any questions, don't hesitate to reach out at Society@biophysics.org.

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Lynmarie Thompson

Lynmarie Thompson

Area of Research
Mechanistic studies of bacterial chemotaxis receptor signaling complexes

Institution
University of Massachusetts Amherst

At-a-Glance

Lynmarie Thompson, President-Elect of the Biophysical Society, reflects on her scientific journey, which led her to specialize in biophysical chemistry, specifically on mechanistic studies of bacterial chemotaxis receptor signaling complexes. As president, she aims to expand the impact of biophysics, emphasizing its applications in medicine and encouraging early-career biophysicists to engage with the community and pursue meaningful, balanced research projects.

Incoming Biophysical Society President *Lynmarie Thompson* moved around frequently in her early years, with a father who served as a pilot and engineer in the US Air Force. Her mother was a high school and college Spanish teacher, although Thompson herself learned Spanish primarily from her Cuban grandmother, who lived in the household as well. Thompson was born in Texas and lived in Charleston, South Carolina; Boulder, Colorado; and Dayton, Ohio before landing in southern California, where she went to high school and college.

She shares, "As a kid I always loved math. I had a fantastic chemistry teacher in high school and decided I wanted to study science in college. I didn't think I liked biology, because I thought it was all memorization, and I preferred concepts and equations. As a freshman at Caltech it seemed to me that biology was really chemistry, chemistry was really physics, physics was really math, and math was really wild stuff. I chose a chemistry major but also took nearly all the requirements for the biology major. In the spring of my sophomore year, I looked for a lab in which to do undergraduate research and realized that I really liked biophysical chemistry—applying physical chemistry tools like spectroscopy to understand a biochemical question. That summer I started doing research in the laboratory of *Sunney Chan*."

In graduate school Thompson worked in *Gary Brudvig*'s lab on a membrane-protein complex, photosystem II. She explains, "For my postdoc, I wanted to learn a technique that I could then use on membrane proteins that did not have built-in spectroscopic handles—photosystem II contains multiple metal centers and chromophores. My husband and I are both scientists, so finding two jobs in one place was a challenge. I approached this with a willingness to make sacrifices, but not too big a sacrifice. I took a postdoc in Boston while my husband was starting his new faculty position at the University of Massachusetts Amherst (UMass), a two-hour drive from Boston. I decided there was not a good postdoc opportunity for me at UMass, so it was worth taking a short-term position at a distance. For us it made sense to do this for a couple of years, getting together on weekends, until I got a position at UMass."

For her postdoc, she worked in *Bob Griffin*'s lab at the Massachusetts Institute of Technology on solid-state nuclear magnetic resonance (NMR) on bacteriorhodopsin. Thompson says, "It was a great time to get into this field, as lots of new methods were emerging that would be applicable beyond the active site chromophore. I worked on NMR of trapped photocycle intermediates and performed distance measurements at the active site of bacteriorhodopsin."

Now Thompson is a professor at UMass in the Chemistry Department and the Graduate Program in Molecular and Cellular Biology. She continues, "My group assembles functional chemoreceptor signaling complexes and applies biophysical methods to compare the structure and dynamics of the kinase-activating and kinase-inhibiting signaling states. For example, solid-state NMR measurements focusing on the protein-interaction region of the receptor are helping us to determine how the receptor contacts change to transmit the signal that controls the kinase. Our hydrogen exchange mass spectrometry experiments on signaling complexes have revealed that signaling involves changes in protein order and stability for both the receptor and the kinase, and we are now investigating the coupling protein to determine whether it is involved in transmitting the signal."

Thompson notes, "I love when we see our results converge into an interesting story that reveals how the system works. For instance, we struggled for a while when our hydrogen exchange studies showed unusual patterns that were not easily analyzed by the standard computer program. But we figured out a way to analyze them, and in the end these patterns led to the most interesting conclusion of that study: that receptors are partially disordered within functional complexes. I also love watching and helping students become

independent scientists. It's great when a previously hesitant student becomes bold enough to want to venture into new territory, diving into the literature to figure out how to do something new and how to critically interpret the results."

As the incoming president of BPS, Thompson envisions an exciting future for the field. She states, "I find it exciting to see biophysics being applied on a broad scale, with things like proteome-wide approaches to deduce determinants of protein stability. Along with these fundamental advances, I believe biophysics will have an increasing impact on medicine. An important contribution that biophysicists can make is to retain rigor even as they extend their experiments into more complex systems. As president of BPS, I look forward to helping the Society to continue to have a positive impact at many levels—from individual biophysicists to society as a whole. I look forward to supporting the many successful ongoing activities of BPS, and I welcome ideas for new activities that BPS might pursue to foster the success of our members and enable us to benefit the larger community."

Her advice for early-career biophysicists is that they use opportunities like the Annual Meeting to connect with scientists who are excited about their work and about science. She says, "I think the Annual Meeting provides wonderful opportunities to learn new systems, approaches, and techniques and connect with potential collaborators and friends. I have greatly enjoyed and benefited from the community fostered by the Annual Meeting. I love being part of this inclusive and supportive biophysics community."

Thompson with her husband and children.

With respect to suggestions for trainees, she instructs, "Choose projects you find interesting and impactful, and work diligently and carefully. Find a balance with activities that keep you physically and mentally healthy, spending time outdoors or with friends and family, which will help you keep things in perspective during the inevitable ups and downs of research and of life."

2025 Annual Meeting Job Posting Special

Don't miss this exclusive opportunity to connect with top talent in biophysics at a special rate! As part of the Society's Annual Meeting, BPS is offering a 60-day job posting at a significantly reduced price. But hurry—this offer ends on February 14, 2024!

What's Included:

- **60-Day Job Posting** on the Society Job Board
- **On-Site Exposure** at the Career Development Center during the Annual Meeting
- **Unlimited Resume Access** on the online job board
- **Access to Interview Space** at the Career Development Center (as available)
- Inclusion in the Society's **Job Flash Email** sent to **7,500+ biophysics professionals**

Attract the brightest minds in biophysics and take your team to the next level!

Cost:

$399 for BPS members
$499 for non-members

For more information and to post your open position, visit:
https://biophysics-jobs.careerwebsite.com/employer/pricing/

United States and China Renew Science Pact

The US and Chinese governments signed an extension of a 45-year-old agreement that recognizes the benefit of scientific collaborations. The new version modifies the terms to account for the increased tensions between the two countries. Signed in 1979 as China was making its debut on the global science stage, the agreement applies only to collaborations between government entities in each country on a host of topics. The agreement has also served for decades as a template for Chinese officials to ink partnerships with US universities as well as nongovernmental organizations, fostering student and scholar exchanges and lab-to-lab interactions.

The extension contains new language on the need for reciprocity in data sharing and creates a process to discuss alleged violations of those provisions and terminate the treaty if concerns are not addressed. The agreement also covers the safety of individual scientists. The White House must approve any proposed collaboration between a US agency and its Chinese counterpart.

NIH Initiative to Replicate Biomedical Studies

In 2024, the National Institutes of Health (NIH) launched a new program to recruit principal investigators to self-nominate their NIH-funded biomedical study for replication by a third-party contractor. NIH put out two calls for volunteers who have lab studies that could have a major impact on health.

For the selected studies, the NIH will then give the investigator up to $50,000, plus overhead costs, to help a contract research organization (CRO) arrange the exact same techniques, protocols, and reagents. The two participating contract labs—one focusing on technologies, the other on experiments—have separately received $2 million in total to complete the work by January 2026.

For years, concerns have mounted that many basic biomedical experiments do not hold up when another lab attempts them, casting doubt on plans to translate the work into a treatment. A string of recent efforts has sprung up to test reproducibility. Other countries have launched their own programs: the main Dutch science agency has invited researchers to repeat landmark studies, with mixed success, and a Brazilian nonprofit and Germany's science ministry both have replication efforts underway.

Congress has urged NIH "to establish a program to fund replication experiments on significant lines of research" as well as monitor for scientific fraud, according to a report accompanying a funding bill this year. The US House of Representatives suggested $50 million for the replication and fraud efforts and the Senate $10 million, but the final bill did not specify an amount.

NIH and DOE Implement Public Access Policy

In August 2022, the White House Office of Science and Technology Policy (OSTP) released a memo mandating that all federally funded research articles be made immediately available for public access by the end of 2025. On December 20, 2024, the National Institutes of Health (NIH) and Department of Energy (DOE) released their final plans for complying. The NIH and DOE policies require grantees to post accepted, peer-reviewed manuscripts in each agency's public repository as soon as they are published, among other stipulations. Research funding agencies are also expected to require immediate sharing of project data.

Questions about the new policies surround copyright and who controls when a paper is published publicly. The NIH and DOE both assert that work funded by those agencies is covered by a "government use license," authorized by an existing US regulation, that supports zero-embargo depositing of grantees' papers—overriding standard contracts authors sign with publishers requiring embargoes. The NIH also asserts that the government license allows other uses of the text, such as using automated methods including artificial intelligence to analyze papers for research.

Whether the new policies will survive scrutiny by Congress remains a wild card. An appropriations bill for this fiscal year in the House of Representatives bars any funding for implementing the 2022 policy. The corresponding bill in the Senate directs OSTP "to instruct agencies not to limit grant recipients' ability to copyright, freely license, or control their works." Final resolution on the bills is unlikely to come until March, after agencies have announced their final public access policies. It is also unclear what position President-Elect *Donald Trump* will take on the policy, with his commitment to reducing government regulation.

Around the World

UK Funding Changes Put University-Hosted Research Units at Risk

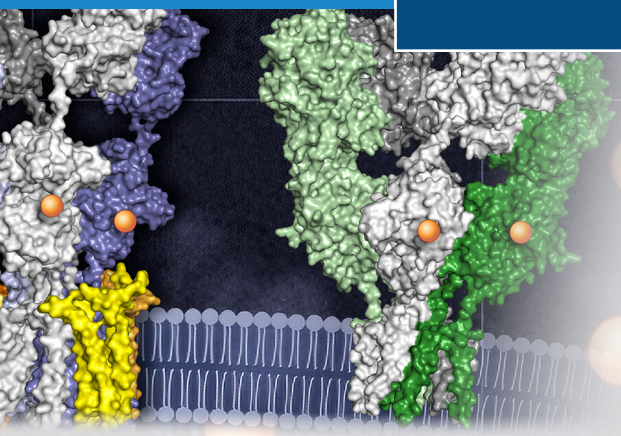
Scientific institutes around the United Kingdom are facing potential closure due to a new funding scheme proposed by *Patrick Vallance*, the nation's science minister. Under the plans, the Medical Research Council (MRC), the United Kingdom's primary public funder of medical research, will end its rolling funding of university-hosted research units, many of which have been around for decades. Instead, the MRC will award large grants to new Centres of Research Excellence (CoREs), which aim to tackle specific challenges within a 14-year funding period. The first two CoREs, which will focus on gene therapies, were announced in early December 2024.

The MRC says the changes are necessary to produce "transformative" biomedical research in a fixed time frame. Opponents of the change say the decision was made without transparency or input from the scientific community and will result in the loss of important research infrastructure and institutional memory. The changes to the funding model were announced in July 2022, but the change in government elected in July 2024 brought about new hope that the changes could be reversed. However, Vallance defended the move in Parliament in October, prompting a new round of concern from university researchers.

New Zealand Announces Plans to Divert Funding from Social Sciences to Core Science

In a December 2024 announcement, New Zealand's center-right coalition government announced it would divert half of the NZ$75 million (US$42 million) Marsden Fund, the nation's sole funding source for fundamental science, to "research with economic benefits." Moreover, the fund would no longer support any social sciences and humanities research, and the expert panels considering these proposals would be disbanded. In announcing the change, Minister of Science, Innovation and Technology *Judith Collins* said the fund should focus on "core science" that supports economic growth and "a science sector that drives high-tech, high-productivity, high-value businesses and jobs."

The Marsden Fund was set up explicitly to support pure, "blue-sky" research, and its current modest budget could support only about 10% of the applications submitted. New Zealand's science sector already has several other much larger funding sources for applied research, including the NZ$359 million (US$202 million) Strategic Science Investment Fund and NZ$247 million (US$139 million) Endeavour Fund. Critics of the change in direction note that the Marsden Fund supports nearly all the country's research in social science.



BPS2025 los angeles

February 15–19, 2025 california

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What You Should Know Before Heading to the Annual Meeting in Los Angeles

Badge Pick-Up

Look for your registration confirmation with QR code by email on February 13. Print this confirmation and bring it with you to expedite the process of picking up your badge. Don't worry if you don't have your QR code; you can still pick up your badge at the Express Check-In Counters by using your name.

Badge Pick-Up Hours

Friday, February 14	3:00 PM–5:00 PM
Saturday, February 15	7:30 AM–6:30 PM
Sunday, February 16 – Tuesday, February 18	7:30 AM–5:00 PM

Housing Confirmation

Everyone who booked their hotel reservations through the official BPS housing bureau, Convention Housing Partners (CHP), should have received their confirmation via email. If you have not received your confirmation, please contact the housing bureau toll-free at 1-800-274-9481. Outside the United States, please call 1-415-813-6088 and select option 4.

Plan, Sync, Connect with the Mobile App and Desktop Planner

Visit biophysics.org/2025meeting for more information on the Biophysical Society Events Desktop Planner and Events App.

Search keyword "BPS Events" in the app stores below.

Download on the App Store

GET IT ON Google Play

Follow along using the hashtag #bps2025

Undergraduate Student Lounge

Need a quiet place to unwind and relax or catch up on coursework while at the Annual Meeting? Visit the Undergraduate Student Lounge in Room 508ABC of the Los Angeles Convention Center.

Attending the Annual Meeting?

Our volunteers make it possible! Their impact is immeasurable and has a profound effect on science communities around the world. Ask one of our volunteers wearing this button about how you can get involved with BPS.

If you are not attending the Annual Meeting but would like to get involved with BPS, please visit www.biophysics.org/get-involved to learn about all of the opportunities to make a difference.

Ask Me About My Research

Share Your Research! Grab a button and wear it throughout the Annual Meeting and during Biophysics Week to encourage others to ask you about your research. These conversation starters can help you share your research and make connections.

Art of Science Image Contest

Images from 10 finalists will be on display in the Exhibit Hall. Remember to stop by and vote for your two favorite images. Voting will be open until 2:30 PM on Tuesday, February 18. Ballots will be distributed with your badge at badge pick-up.

Plan Your Exhibit Hall Experience Before Arriving in Los Angeles

View the 2025 exhibiting companies at www.biophysics.org/2025meeting/exhibits/exhibitor-information/exhibitor-list and make sure to participate in the new Exhibit Hall Bingo activity to win Apple Airpods!

Career Development Center/Job Board

Do you have a position to fill in your lab or company? Are you looking for that next job opportunity in the field of biophysics? If you answered yes, then you need to stop by the Career Development Center in Room 409A during the Annual Meeting to post or view the latest job openings!

Biophysical Society TV

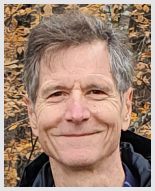
BPS is once again partnering with Websedge to bring Biophysical Society TV to the Annual Meeting! Biophysical Society TV features new episodes daily, including Thought Leadership and Annual Meeting News. View program highlights, "behind the scenes" interviews, and coverage of meeting events while at the Los Angeles Convention Center.

Follow Annual Meeting events on Facebook, X, Bluesky, and the Biophysical Society Blog throughout the Annual Meeting for scientific session news, press releases, and attendee blog posts.

Don't forget to purchase an Annual Meeting t-shirt as well as other Society merchandise at the Society Booth located in the West Lobby of the Los Angeles Convention Center.

biophysics.org/**2025meeting**

Know the Editor



David Stokes

David Stokes
New York University School of Medicine

Associate Editor
Biophysical Reports

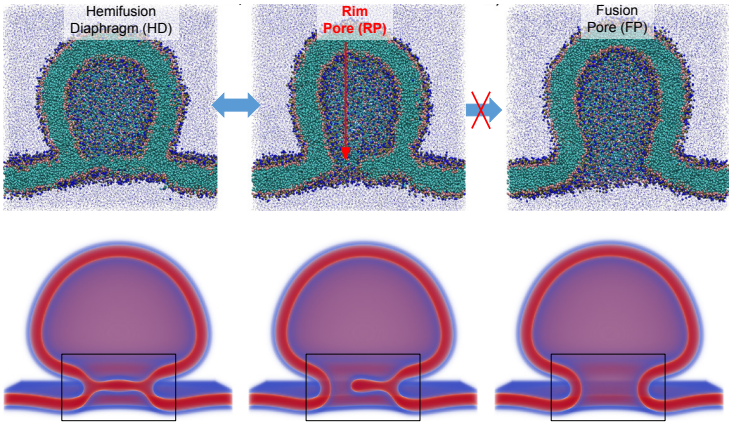
What are you currently working on that excites you?

Imaging of macromolecular machines under turnover conditions. This is old hat for single-molecule people, but I'm born and raised a "structural biologist" with a legacy of using inhibitors and mutations to lock the machine in a defined conformational state. The resulting homogeneity in the population of molecules is necessary for crystallization and very helpful for cryogenic electron microscopy (cryo-EM) analysis. But the increasing capabilities of cryo-EM make it possible to segregate individual reaction intermediates from a population of proteins that are actively cycling through the steps of the reaction. Not only does this guarantee native conformations that are relevant to catalysis, but like single-molecule data, it provides information about the kinetics of the reaction, based on the relative numbers of molecules occupying each intermediate state at the moment of freezing.

At a cocktail party of non-scientists, how would you explain what you do?

I have always made a serious effort to explain my science to anyone who will listen. My feeling is that everyone can, and should, understand the underlying principles. The trick is simply not to get technical and to find analogies with the macro world that are generally taken for granted. In that regard, I liken the island of Manhattan to a cell, surrounded by a ring of highways akin to the cell membrane, with the rivers representing the extracellular milieu. Given my research interests, I like to try to convey the idea that proteins act as machines that accomplish everyday tasks: garbage trucks (proteosome), trains and buses (cytoskeletal motors), power stations (mitochondria). Even the physical scale is not so far off. Given the lack of clear compartmentalization, I have to admit that Manhattan is more bacterial than eukaryotic. If I still have their interest, then we move to a particular machine, which requires a different analogy.

Editor's Pick



Biophysical Journal

Transient pores in hemifusion diaphragms
Russell K. W. Spencer, Yuliya G. Smirnova, Alireza Soleimani, and Marcus Müller

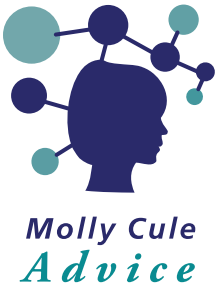
"This study explores the complex dynamics and stability of pores in hemifusion diaphragms (HDs), critical intermediates to fusion processes like synaptic neurotransmitter release. By integrating particle simulations, field-based calculations, and phenomenological modeling, the authors investigated the factors influencing pore formation and stability in HDs. Their findings illuminate the preferential formation of pores at the HD rim and their sensitivity to line tensions, membrane tension, HD size, and lipid dynamics. This research not only advances our understanding of the HD behavior, but it also sheds light on potential cellular mechanisms for controlling pore dynamics, with significant implications for the broader fields of neurobiophysics and membrane biophysics."

Version of Record Published June 11, 2024
DOI: https://doi.org/10.1016/j.bpj.2024.06.009

By the Numbers

The BPS Find a Biophysicist Network has 3,588 members who have signed up to be part of this database that allows members and non-members to contact them to be mentors, K–12 classroom visitors, speakers, science fair judges, student chapter sponsors, and more.

How to Make the Most of Your Experience at the Annual Meeting



It is nearly that time of the year where the excitement and flutter of the Biophysical Society's Annual Meeting starts to happen. You've booked your flights and booked your hotel, and now you're faced with a daunting program longer than your own PhD thesis (nearly!). In 2025 the Biophysical Society will meet in Los Angeles, amidst all the glamor of Hollywood and movie stars, become a star yourself by downloading the Annual Meeting app (www.biophysics.org/2025meeting/general-info/mobile-app) and research the area near the LA Convention Center to learn about what's on offer.

Editor's Pick of Great Sessions. The first thing you notice is that there are many parallel sessions happening at the Annual Meeting. If you, like me, are incredibly disorganized, I recommend the "What's On Today" feature to locate events in real time. Depending on your current academic position, certain events may interest you in particular. For PhD students, I can heartily recommend the "Graduate Student Breakfast," where like-minded students meet to network and discuss an interesting topic, accompanied by free food. Similarly for postdoctoral fellows, there is a fabulous "Postdoc Breakfast" with topics geared at postdoctoral affairs. If you're interested in the newest and flashiest science, the "New and Notable" session is fabulous. There are specialist panels on grant funding, as well as a career center where you can get recommendations on how to tailor your CV for the job market. Keep an eye out for the packed sessions, this is usually a sign that something exciting is cooking!

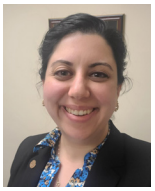
Local activities. Another excellent thing is to find the local guides that populate the meeting each year. Back when I was a postdoc at Johns Hopkins the meeting took place in Baltimore. Thus, knowing the ins and outs of great bars in the city, I volunteered to take willing students on a pub crawl, obviously after a full day of scientific sessions.

Present science in a myriad of formats. Some of my most enjoyable activities to do at the Annual Meeting are to present a poster, deliver a talk, or even be a judge in one of the many poster sessions occurring. I have met some incredibly gifted undergraduate students who came along for their own Undergraduate Poster Session, and as a postdoc you are eligible to be a judge for this session. It is truly inspiring to meet the next generation of excellent biophysicists.

Friends for life. Some of my best scientific connections and collaborations were established at the BPS Annual Meeting. This is due to the relaxed nature in which truly outstanding science is presented. I recommend keeping an open mind when it comes to meeting new people, even if the prospect can seem daunting for some. We offer lanyards and pins with various networking messages to help you indicate you are open to talk about science. Use them! You never know who you might meet.

—*Molly Cule*

Cheers! for Volunteers



Rita Sharp

Education Committee

Rita Sharp

Is this your first volunteer position for BPS? If not, what other positions have you held?

My role on the Education Committee is my first time volunteering for BPS.

Why do you volunteer?

I've been a member of the Biophysical Society since I was in graduate school. I wanted to give back and also get involved. I was hoping for an opportunity to network and collaborate with scientists in similar roles with a passion for education. I was not disappointed! I also wanted to give back in a space where I can promote biophysics, which I never expected to be part of my career, but has been a constant thread.

What has been a highlight from your volunteer experience?

At the risk of being clichéd, I have thoroughly enjoyed conversations with my fellow Education Committee members and working with them to plan sessions at the BPS Annual Meeting. We exchange ideas, talk about our work, and discuss ways to promote biophysics education. I had the opportunity to help plan the Biophysics 101 session at the 2024 Annual Meeting, and I really enjoyed it because, again, you meet people who are passionate about their work and they are quite willing to spend some time sharing what they're working on.

Do you have advice for others who might be thinking about volunteering?

Go for it! It's rewarding work and BPS is a great organization to be involved in. There are different committees and ways to support the work of BPS. You get to promote biophysics in different capacities. If you are unsure where to get involved or what to do, reach out to people on different committees. People are willing to chat and tell you about the work their committee does and the time commitment.

When not volunteering for BPS, what do you work on?

I teach at the Honors College at the University of Houston, which is amazing because I get to help undergraduates of all levels to develop their passion for science. When I'm not at work, I love to bake, cook, read, and travel.

Members in the News


Frances Separovic

Frances Separovic, University of Melbourne and Society member since 1985, was awarded a Docteur Honoris Causa from the Université de Bordeaux.


Petra Schwille

Petra Schwille, Max Planck Institute of Biochemistry and Society member since 1997, received the Tel Aviv University International Prize in Biophysics.

Grants & Opportunities

Elisa U. Pardee Foundation Grants

The Elisa U. Pardee Foundation funds research directed toward identifying new treatments or cures for cancer. Projects are funded for a one-year period, which will allow for the establishment of capabilities for new cancer researchers or new cancer approaches by established cancer researchers. Project relevance to cancer detection, treatment, or cure should be clearly identified.

Who can apply: Investigators at United States non-profit research institutions.

Deadline: April 30, 2025

Website: https://pardeefoundation.org/how-to-apply/

New Joint United States-Japan Postdoctoral Fellowship Program in Bioengineering and Biomedicine

The Global Science Scholars Program is a postdoctoral fellowship program in bioengineering and biomedicine jointly led by the Chan Zuckerberg Biohub Network and the Stellar Science Foundation to advance early-stage careers and catalyze groundbreaking science globally. Participating institutions in Japan and the United States will host fellows for up to two years, providing them with the opportunity to expand their experience in conducting cutting-edge research and state-of-the-art technology development in bioengineering and biomedicine.

Who can apply: Applicants should have received their doctoral degree on or after July 1, 2021, and should intend to conduct research activities in a research institution in Japan or the United States.

Deadline: May 27, 2025

Website: https://www.czbiohub.org/program-ssfcz-global-science-scholars/

Student Spotlight

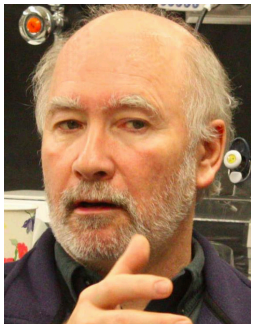

Adeyemi Odudimu

Adeyemi Odudimu
Lehigh University

What do you aim to achieve in your career?

To me, being a scientist is a calling. My career aspiration is to use my research skills as an active scientist majoring in drug research and development to contribute to meeting various unmet medical needs.

J. B. Alexander "Sandy" Ross


J. B. Alexander "Sandy" Ross

J. B. Alexander "Sandy" Ross (1947–2024), a physical biochemist and molecular biologist, died on September 2 of a chronic lung disorder.

Sandy conducted foundational work in the development and application of time-resolved and single-molecule biological fluorescence spectroscopy, which he combined with other biophysical and computational approaches to investigate protein-protein, protein-nucleic-acid, and protein-membrane interactions and dynamics, and structural dynamics in enzyme catalysis.

Sandy's first major interests were music and art. He began playing guitar at age 9 and attended the Academy School of Fine Arts in New York City for several summers as a teenager, where he built skills in painting and sculpting. His interest in biochemistry emerged during his undergraduate studies at Antioch College. However, art remained a lifelong passion and influenced his science. He loved to imagine macromolecular structures and dynamics in three dimensions—dancing molecules as he referred to them—much as he created the clay and wood sculptures that fill his house. Music, too, remained a lifetime passion. In addition to guitar, Sandy played Highland bagpipes, Scottish and Northumbrian smallpipes, and Irish pipes, much to the delight of his many scientific friends and colleagues. A criterion in relocating to pursue his scientific career was the existence of a bagpiping community that offered the opportunity to play in pipe bands.

After doing alternative service during the Vietnam War as farm manager and biology teacher at Scattergood Friends School in West Branch, Iowa, Sandy earned his PhD in 1976 under the supervision of *David Deranleau* and *David Teller* in the Department of Biochemistry at the University of Washington School of Medicine in Seattle, where his work in peptide spectroscopy and subsequent foundational development of fluorescence as a tool for probing structure and dynamics is widely considered classical in his field. Subsequently, he conducted postdoctoral research in physical chemistry and spectroscopy at low temperatures with *Alvin Kwiram* at the University of Washington, and worked on development of fluorescent probes for investigating protein structure with *Ludwig Brand* at Johns Hopkins University.

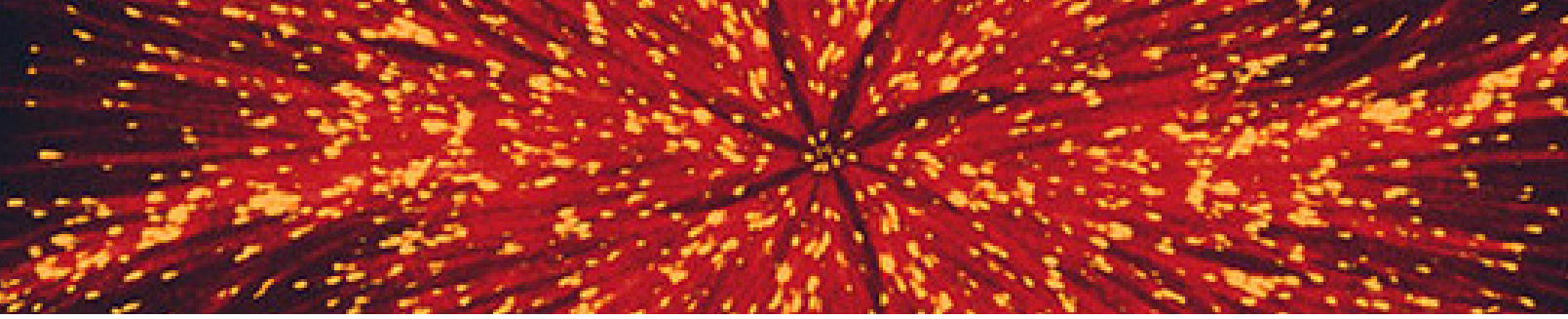
After a National Institutes of Health Fellowship in Laboratory Medicine with *Philip Petra* at the University of Washington, Sandy joined the faculty of the Mount Sinai School of Medicine in New York in 1982 as professor of biochemistry and molecular biology. He also served as co-director of the Biophysics, Structural Biology, and Biomathematics Training Program.

He moved to the University of Montana in 2002 as professor of chemistry and biochemistry and founding director of the BioSpectroscopy Core Research Laboratory. He conducted cutting-edge work in single-molecule fluorescence spectroscopy, combining two-photon excitation and microscopy to investigate molecular structure and dynamics, and incorporating nanodisc technology to explore membrane systems. Sandy collaborated widely, sharing his expertise with a wide group of colleagues and friends. He authored more than 110 research articles and reviews.

Sandy was very active within the Biophysical Society, where he was a leading force for the fluorescence community. He was a founding member of the Biological Fluorescence Subgroup, for which he served a term as chair during its formative years (1998–1999) and chaired both the Jablonski Award Committee and the Fluorescence Young Investigator Award Committee (1996–1999). He was instrumental in launching the *Journal of Fluorescence*, and served as Associate Editor of *Cell Biochemistry and Biophysics* and Executive Editor of *Analytical Biochemistry*, each for more than 20 years. He was a visiting professor at the University of Parma, Italy, a visiting scientist at the National Synchrotron Light Source at Brookhaven National Laboratory, and adjunct professor of chemistry and biochemistry at the University of Lethbridge, Canada.

Sandy was a dedicated teacher and mentor. He was deeply involved in doctoral education, serving as associate dean and dean of the graduate school at the University of Montana (2010–2016) and was a popular instructor of undergraduates as well. Sandy mentored junior colleagues throughout his career and was particularly supportive of women and minority scholars. To this end, he chaired the Minority Affairs Committee of the Biophysical Society (2012–2016). At the University of Montana, he worked with American Indian/Alaska Native graduate students in STEM, serving as director of the Sloan Indigenous Graduate Partnership from 2008 to 2014. He was recognized as Sloan Mentor of the Year in 2010 and received the American Chemical Society Stanley C. Israel Diversity Award in 2014. He was principal investigator of the National Science Foundation Alliances for Graduate Education and the Professoriate grant "Collaborative Research: The Pacific Northwest Alliance to Develop, Implement and Study a STEM Graduate Education Model for American Indians and Native Alaskans" (2014–2019).

Sandy is survived by his wife, Rabbi *Laurie Franklin*; his children Rebecca and Owen; son-in-law *Cosimo Gonnelli*; grandchild *Cora Gonnelli*; brother and sister-in-law *Philip Ross* and *Marianne Ross*; nephews and nieces Neal, Tim, Sonya, and Michelle; and grandniece, Ayla; as well as a host of friends, colleagues, collaborators, and grateful mentees who will remember well his constant smile and twinkle in his eyes.



Call for Applications: Editor-in-Chief of *Biophysical Reports*

Open for infinite possibilities

The Biophysical Society is seeking the next Editor-in-Chief for its open access journal, *Biophysical Reports*, to support the Society's strategic goals:

- Foster a Diverse and Inclusive Global Community
- Enhance the Sharing of Knowledge
- Invest in the Future of Biophysics
- Advocate for Biophysics

Biophysical Reports publishes Letters, short Reports, and full-length Articles for rapid publication, which can be written for specialists or general audiences. The journal welcomes submissions describing new results, methods, or technologies. The journal complements *Biophysical Journal* by providing a vehicle for articles with rapid turnaround in a fully open access journal. *Biophysical Reports* publishes original research in all aspects of biophysics, from the molecular to whole-organism levels.

The Editor-in-Chief should embody the scientific standards of the Society, support its mission, and have a vision for the future of the journal. This appointment will begin January 1, 2026, for a single five-year term. This is an exciting opportunity to be at the forefront of biophysics and to lead a high-quality open access publication.

The Editor-in-Chief will:

- Lead the editorial team;
- Recruit exciting manuscripts through attendance at international conferences and scientific meetings;
- Shape the future editorial direction of a journal that is now beyond the startup phase;
- Work with Society Office staff on day-to-day editorial management; and
- Collaborate with staff and the Society's publishing partner, Cell Press, on effective workflows, journal website features, marketing, and social media promotion of the journal.

The successful candidate will have:

- Broad interest across the full spectrum of biophysics,
- Project and/or people management skills,
- Strong organizational skills,
- Strong written and oral communication skills, and
- Interest in engaging with the scientific community.

The Publications Committee welcomes applications from candidates who support and are dedicated to the Society's values. There are no restrictions on scientific interests, background, gender, or geography. To apply, please submit a cover letter outlining the motivations for your interest. We will also accept nominations. We will consider applications until March 1, 2025. Confidential applications should be made to the Publications Committee through the Society Office (jlong@biophysics.org).

Biophysical Society

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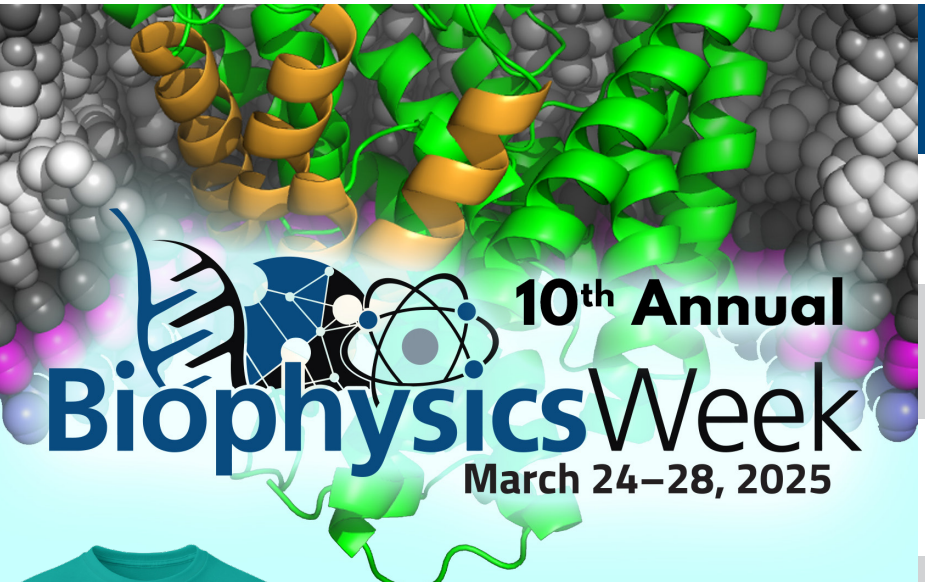
BPS Bulletin
THE NEWSLETTER OF THE BIOPHYSICAL SOCIETY

February 2025



10th Annual Biophysics Week 2025 Shirt – Order Now!

Celebrate the 10th Annual Biophysics Week in style! Order your shirt online by February 21 to ensure delivery in time for Biophysics Week.

Learn more at www.biophysics.org/BiophysicsWeek.

BPS Important Dates

Copenhagen Thematic Meeting Early Abstract Deadline
March 17, 2025

10th Annual Biophysics Week
March 24–28, 2025

***Biophysical Journal* Applications of Coarse-Grained and Multiscale Modeling Special Issue Submission Deadline**
March 31, 2025

Copenhagen Thematic Meeting Early Registration Deadline
April 4, 2025

BPS Awards and Fellows Nomination Deadline
May 1, 2025

Please visit www.biophysics.org for a complete list of upcoming BPS Important Dates.