Biosketch for ASPET Division Elections

Name: Angeline Lyon

Current Position:

Assistant Professor of Chemistry and Biological Sciences, Purdue University

Degrees/Institutes/Years Earned:

- BA, Biochemistry, University of Texas, Austin (2000-2004)
- PhD, Biochemistry, University of Texas, Austin (2004-2009)
- Postdoctoral Fellow, Structural Biology and Molecular Pharmacology (2009-2014)

Administrative Accomplishments:

I have been active in the Molecular Pharmacology scientific community since my postdoctoral fellowship. I chaired the first Phosphorylation and G-Protein Mediated Signaling Networks Gordon Research Seminar (GRS) in 2012, which showcased the research of trainees and provided networking opportunities in advance of the GRC. I also organized and chaired conference sessions sponsored by other professional groups, such as the American Crystallographic Association.

As an independent investigator, I have served on Diversity Implementation Committees in the Department of Chemistry and in the College of Science at Purdue, wherein we refine strategies to recruit and retain students, faculty, and staff from all backgrounds. I have also actively mentored training events for graduate students and postdoctoral fellows such as The Hitchhiker's Guide to the Biomolecular Galaxy Symposium, which is organized entirely by trainees and includes participants from many institutions in Indiana and throughout the Midwest. I have mentored this event since 2014. I have concurrently sought opportunities to promote early career scientists and trainees at the national level, and will be co-chairing a Spotlight Session on Signal Transduction at the upcoming 2018 ASBMB meeting.

Research Areas:

My lab studies the molecular mechanisms regulating phospholipase C (PLC) function in the cardiovascular system. We use a broad array of biophysical techniques, including X-ray crystallography, single particle electron microscopy, atomic force microscopy, and small angle X-ray scattering, to probe the structure and function of these enzymes alone, in complex with their activators, and on model membrane systems. Structure-based hypotheses are then tested through a variety of biochemical and cell-based assays, and ultimately in cardiomyocytes and whole animals, allowing us to assess our structure-based predictions in a physiologically relevant context. A long-term interest is the development of small molecule modulators to

regulate PLC function. These studies will aid in the identification and development of novel chemical probes that could be used to study and potentially treat cardiovascular disease.

ASPET Member Since: 2009

ASPET Activities:

- Division for Molecular Pharmacology
  - Executive Committee (2012-2014, 2018-2021)
  - Molecular Pharmacology Poster Competition, Judge (2012-2015)
  - Molecular Pharmacology Division Young Scientist Competition, Judge (2013)
- ASPET Tagline and Logo Taskforce, Molecular Pharmacology Representative (2013)
- *Molecular Pharmacology*, *Ad hoc* Reviewer (2014-present)

Other Society Memberships/Activities:

- American Crystallographic Association (2009-present)
- American Heart Association (2013-present)
- American Chemical Society (2014-present)
- American Society for Biochemistry and Molecular Biology (2014-present)

Personal Statement – How do you plan to serve ASPET and the division:

As Secretary/Treasurer, I will focus on efforts to increase and diversify membership in Molecular Pharmacology at the trainee and early career stages. As someone who has greatly benefited from the networking and mentoring opportunities provided via membership in the division and society, it is important for me to make sure these resources are available to others. In addition to ongoing outreach efforts by the division and ASPET, we can learn from other organizations that are working to successfully address the challenge of broadening the expertise and make-up of our membership. For example, I believe that increasing the number of speaker slots for early career investigators would raise the profile and appeal of the division and provide a mechanism to recruit new members from scientific backgrounds outside our traditional purview. I also feel it is critical to increase the diversity of the division to better reflect the changing demographics of our scientific community.