

ASLO activities focus on meeting the needs of early career members

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Early career scientists face an evolving and rapidly changing world of scientific careers. Today, early career researchers compete in the job market with the largest group of new PhDs in history, work in an increasingly interdisciplinary and variable international setting, and contend with massive changes to the structure of both academic and non-academic careers. In contrast to earlier times, scientific careers are much more diversified and do not follow a single concept anymore. The ASLO Early Career Committee, made up of a selection of early and mid-career members of ASLO, is working to help prepare early career aquatic scientists for these multiple and often confusing challenges and demands.

At the 2019 Aquatic Sciences Meeting in San Juan, Puerto Rico, the Early Career Committee facilitated several activities geared toward early career ASLO membership. The week began with an informal mixer on Monday night, where early career scientists gathered to socialize and network with peers, members of the ASLO team, and senior scientists. Later in the week, during the Wednesday lunch break, the Early Career Committee hosted a workshop with a panel discussion on *How to Successfully Write Proposals and Receive Funding*.

In preparing the panel discussion, the ASLO Early Career Committee tried to cover a broad diversity in the panelists' geographical origin, career stage, type of funding body addressed and their different roles in the grant writing and evaluation process (e.g. as applicants, reviewers, board members and decision makers). The five invited panelists were:

- Tom Battin, École Polytechnique Fédérale de Lausanne, Switzerland; Tom has worked and successfully received project grants in several European countries and at the European Union level. He contributed a European perspective to the discussion.
- Sudeep Chandra, University of Nevada, USA; Sudeep has worked at the US National Science Foundation (NSF) and has received numerous grants both from NSF and non-government organizations. He contributed expertise on different application strategies for large versus small-scale grant proposals.
- Roxane Maranger, Université de Montréal, Canada; Roxane is president-elect of ASLO and has extensive experience both as applicant and board member of the Canadian Natural Sciences and Engineering Research Council as well as former head of GRIL (Groupe de Recherche Interuniversitaire en Limnologie) in Quebec, Canada.
- Michael E. Sieracki, NSF; Michael is a program director for Biological Oceanography at NSF and gave extensive information on the innerworkings of NSF program offices and review panels and their criteria in selecting proposals for funding.

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- Grace Wilkinson, Iowa State University, USA; Grace is an early career researcher who recently acquired funding from NSF and other US funding sources and was able to provide first-hand experience on successful grant application strategies.

The discussion was chaired by the head of ASLO's Early Career Committee, Hans-Peter Grossart from the Leibniz Institute for Freshwater Ecology and Inland Fisheries, who also contributed his views on the European funding environment.

The diverse panel of experts provided a perspective on the similarities and differences among funding programs relevant to the majority of ASLO early career members. The workshop drew over 150 participants (Fig. 1), emphasizing that grant-writing and acquiring funding are topics of highest priority for early career scientists. Thanks to many questions from the interested and attentive audience, the discussion covered a wide range of relevant topics. In particular, the panelists shared tips they learned while working as program officers and panelists for granting agencies as well as being scientists at the same time. Thus, all panelists shared their individual and valuable strategies for earning support at the early career stage. Much of the advice provided was relevant and comprised several general hints regardless of funding agency, including:

- Have a long-term plan for your scientific ideas and think about how to best achieve it at the different stages of your career
- Do not hesitate to contact program officers directly to identify how your work relates to the specific call or thematic focus of their unit; but approach them with respect and don't wait until the last minute
- Scale your work so that you can pursue grants of different amounts, with some being used as seed grants for larger work
- Diversify your portfolio of potential funding sources
- Provide a conceptual framework and clear structure so that your proposals are easily followed by reviewers and evaluation panels; in particular for applied proposals, start with the core idea up front
- Write with the perspective of your reviewer in mind – what do they need to know about your planned project?
- Provide all information to make your proposal exciting and interesting for reviewers and funders
- Be opportunistic by remaining open to new collaborations and funding sources outside your main focus
- Use listservs such as Ecological Society of America's ECOLOG-L, social media (follow Twitter accounts of funding agencies to receive information on recent calls) and network with colleagues to keep up to date on funding opportunities
- Be prepared for questions; how will your research address foundation missions?
- Last but not least: Adhere to the instructions specified for the program; many proposals are eliminated for formal reasons before scientific excellence is even evaluated

In addition to in-person activities, the Early Career Committee had distributed a survey to ASLO's early career membership prior to the Aquatic Sciences meeting. With 251 responses from our community of over 1,000 scientists, we received a large amount of information from active members. The survey highlighted that ASLO's early career community is internationally diverse, with 35 countries of citizenship and 31 countries of work represented. Early career ASLO scientists fill several roles in their current positions, including late-stage graduate students, non-faculty positions such as postdoctoral fellows and research scientists, and faculty positions (Fig. 2). When asked about topics of interest for future workshops and online resources, survey respondents highlighted a variety of professional activities, career information, and advice about maintaining a healthy lifestyle (Fig. 3). The committee will use the results of this survey to focus future activities at conferences on these interests. For instance, "acquiring funding" earned the highest number of responses for this question and drove our decision to choose this topic for the latest conference workshop. The Early Career Committee also plans to broaden our online engagement both on the rejuvenated Early Career website (<https://www.aslo.org/page/early-career-resources>) and via social media (e.g., #ASLOEarlyCareer on Twitter). Feel free to contact the Early Career Committee via email (career@lists.aslo.org) or website: <https://www.aslo.org/page/early-career>.



Figure 1. ASLO early career meeting attendees listen and ask questions to an international panel of researchers who spoke about grant writing and funding acquisition during the early career lunch workshop at the Aquatic Sciences meeting in San Juan, Puerto Rico.

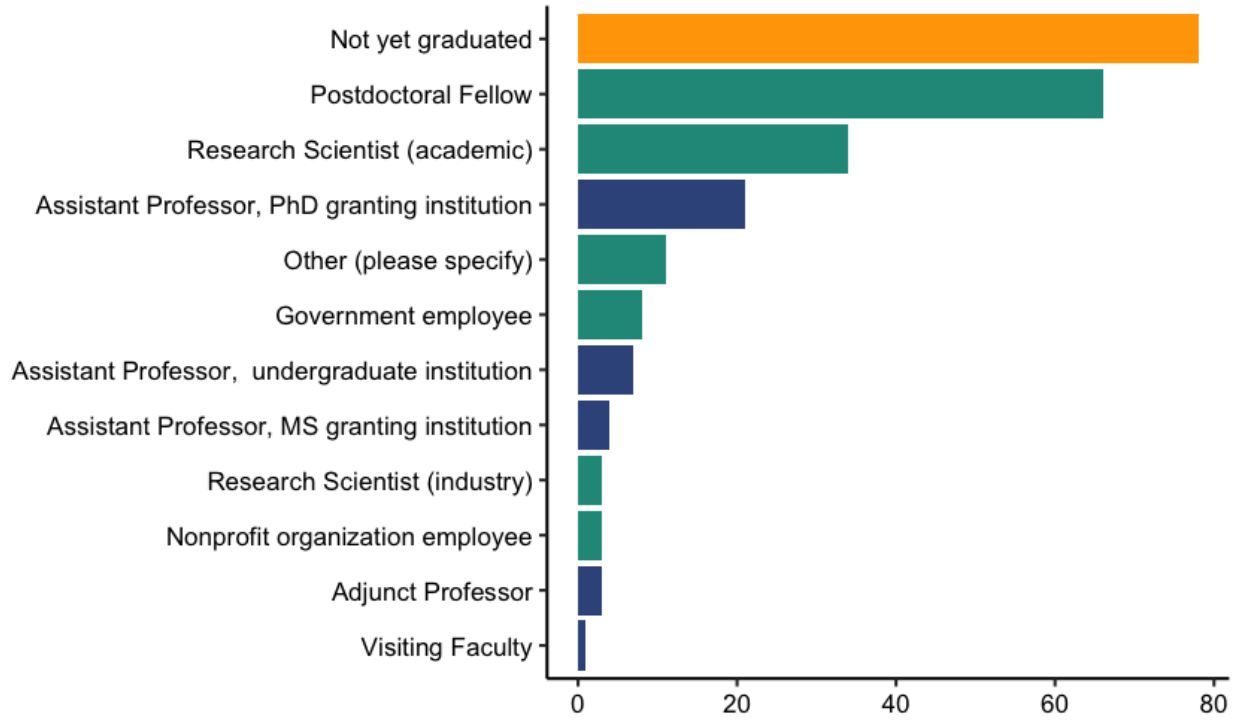


Figure 2. The current position of respondents from the ASLO Early Career survey: gold: late-stage graduate students; green: non-faculty positions; blue: faculty positions. The x axis corresponds to the number of respondents for each category.

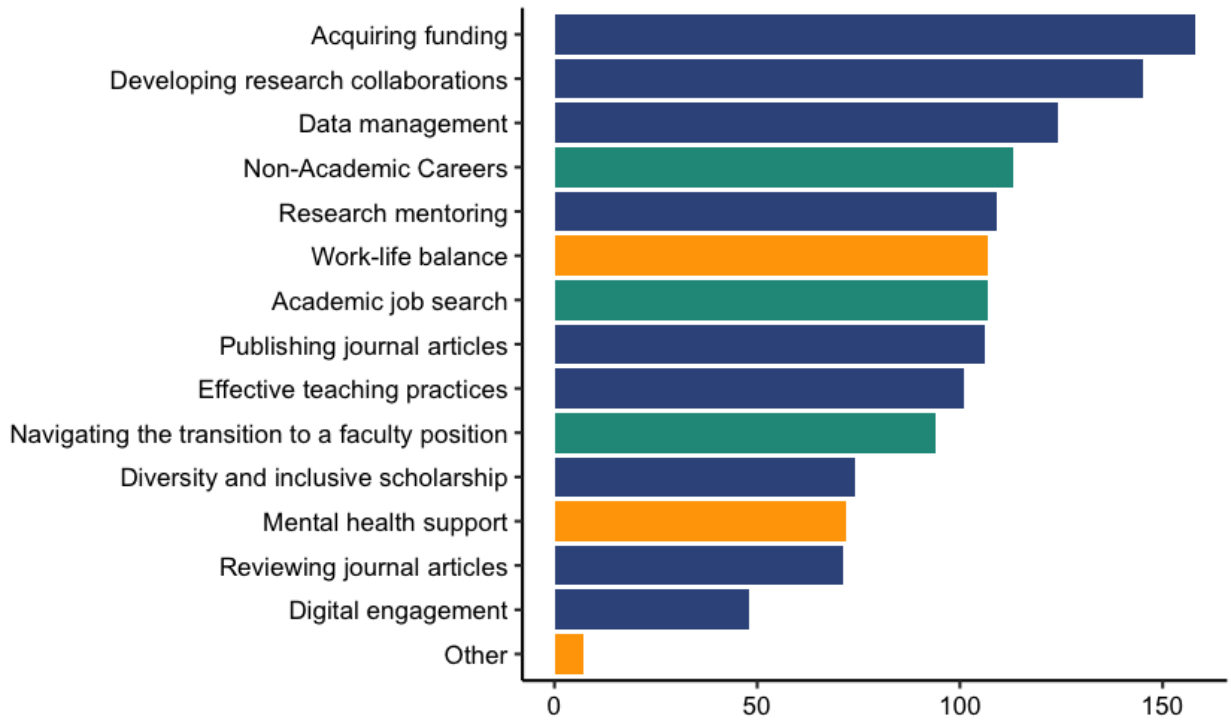


Figure 3. Answers to the question: “What topics related to early career development would interest you?” from the ASLO Early Career survey. The x axis corresponds to the number of respondents for each category. Color code represents type of topic: blue: academic career related; green: career choice strategies; gold: healthy lifestyle.

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