INTRODUCTION

Writing and publishing scientific papers can be difficult for beginning researchers. To help trainees succeed in their efforts to publish, the ASM Committee on Graduate and Postdoctoral Education has offered the ASM Scientific Writing and Publishing Institute (SWPI) since 2010.

PROGRAM DESCRIPTION

The goal of the SWPI is to provide senior-level graduate students and postdoctoral fellows with the skill set needed to publish in scientific journals. The skills emphasized in the program include the ability to 1) craft impactful titles and construct meaningful abstracts, 2) explain research findings, 3) recognize and avoid common manuscript pitfalls, 4) select a journal, 5) suggest a reviewer, and 6) navigate the manuscript review and acceptance processes. The program’s facilitators—ASM members who have published widely, reviewed manuscripts, and served on the editorial boards of prominent research journals—identify these abilities as key for successful scientific writing.

To achieve its goal, the institute plans all activities, feedback, and resources carefully. Before the institute, all participants submit manuscripts for pre-SWPI assessment. During the institute, facilitators emphasize providing substantial time for participants to benefit from didactic instruction, one-on-one feedback, writing practice, and stimulating discussions and interactions. At the conclusion of the institute, participants leave with detailed plans for improving their manuscripts, tools and resources for developing future publications, and a network of peers and mentors for critiques and advice.

A post-event survey takes place at the conclusion of each institute. On average, 89% of participants have reported Institute activity toward developing their skills to write and publish as very valuable to extremely valuable on a scale of one to seven (barely valuable to extremely valuable). Additionally, 100% reported a high to excellent satisfaction rate on a scale of one to seven (unsatisfactory to excellent) when asked to rate the overall quality of the program.

SWPI comprehensive survey

To gain insight into longer-term outcomes and impacts, the Committee conducted a more comprehensive survey in 2015. The comprehensive survey sought to measure the effectiveness, strengths, and weaknesses of the institute; to gather information on the achievements of its alumni; and to highlight opportunities to strengthen the program. Fifty-six (60%) of 93 respondents comprised of the institute’s first five cohorts (2010 to 2014) took part in the survey. About 45% of respondents were postdoctoral scientists, and 18% were graduate students. Twenty percent were employed in the microbial sciences, and 16% were employed outside the microbial sciences. The survey’s key findings include the following:

A large number have submitted manuscripts for publication since attending the institute. Seventy-one percent have submitted one to three manuscripts since attending, with 21% submitting more than three manuscripts. The majority (80%) of respondents have published manuscripts in scientific journals since attending the institute. Fifty-nine percent have published one to three manuscripts since attending, with 21% publishing more than three manuscripts. Twenty-three (25%) have published manuscripts in ASM journals, including 12 as first authors.

The institute is increasing the success rate of young scientists publishing in scientific journals. On a scale of one to five (strongly disagree to strongly agree), most respondents indicated that the institute gave them a greater understanding of preparing a manuscript (89%; average rating, 4.16) and the publishing process (84%; average rating, 4.14). Participants are forging connections that could lead to future collaboration or publication.


Program outcomes

The members of the ASM Committee on Graduate and Postdoctoral Education are pleased with the survey...
findings and feel that the institute's activities over the past five years have been effective in offering in-person training and coaching to graduate students and postdoctoral fellows on the publishing trajectory. One weakness identified by the Committee is that the current economic environment is one of significant budget constraints for prospective participants seeking SWPI-like training.

**Future direction**

To extend availability to individuals at all financial levels and to strengthen the program overall, the Committee is expanding the SWPI to a two-part training initiative comprised of several introductory webinars and a multi-day, in-person workshop. The 2016 webinars and workshop, known as SWPI Online and SWPI Face-to-Face, respectively, will emphasize useful tips and hands-on practice for understanding the scientific writing, publishing, and review processes. SWPI Online will be held in January to March and offer six webinars on didactic components of scientific writing and publishing. SWPI Face-to-Face will take place in August 2016 and focus on intensive writing and one-on-one consultations. Content of the new SWPI has been planned such that participation in both programs is beneficial for attendees, but not required.

The ability to write and publish high-quality scientific papers is essential for a successful scientific career. The SWPI is one initiative contributing to building the research-publishing capacity of beginning investigators. With the program’s recent enhancements, more individuals will be able to benefit from the credibility and authority gained by publishing their work.

ASM offers the SWPI with partial support from the Burroughs Wellcome Fund.