

## **ASMS Undergraduate Research Interest Group Report (11<sup>th</sup> Annual)**

### **ASMS 2021 Annual Meeting in Philadelphia, PA**

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The Undergraduate Research Interest Group seeks to support the activities of ASMS who are working with undergraduates in both research and teaching environments. Coordinators and other members of this interest group also support activities targeted at undergraduates at the ASMS annual meetings, including the Undergraduate Poster Competition, the Undergraduate Research Interest Group workshop, providing an introductory “What to See and Do at the ASMS meeting” presentation for undergraduates and other first-time attendees, and a “Meet the Experts” session designed to facilitate more direct interaction between active ASMS members and undergraduate students. Due to challenges imposed by COVID-19 pandemic, the “Meet the Experts” sessions were not held, but all of the other activities listed above were successfully implemented.

#### *Workshop*

This year’s workshop was titled “Teaching mass spectrometry: What are the essential skills and concepts that students need to learn at the undergraduate level?” and used a crowd-sourced approach to capitalize on the shared experience of the workshop participants. After a brief introductory presentation about learning theories, participants engaged in small-group discussions of key questions what skills and concepts are essential for novice mass spectrometry learners. The workshop participants drew from their own experience as students, teachers and industry professionals and shared their perspectives with the entire workshop. Data was collected related to these discussion questions that will be collated and shared with the ASMS community to provide further opportunities for promoting growth in the area of undergraduate mass spectrometry research and teaching.

Workshop participants responded to a survey that asked them to respond to the questions “How useful was the information presented by the workshop facilitator?” and “How useful was the information shared by other workshop participants?” on a scale of 1 to 5 with 1 being “Not useful” and 5 being “Extremely useful”. Over 91% of participants answered these questions with a rating of 4 or 5. This enthusiasm represents the great interest among some ASMS members in enhancing undergraduate mass spectrometry research and teaching and suggests that there may be great opportunities to expand the activities of the Undergraduate Research Interest Group.

#### *Undergraduate Poster Session*

Despite the reduced number of in-person attendees at ASMS 2021 caused by the global pandemic there was robust participation by undergraduate students in the Undergraduate Poster Session and competition. Twenty-nine students presented posters on Sunday night during the opening reception on topics that included proteomics, small molecule investigations, imaging MS, method development and applications to environmental and food sciences. Eight judges volunteered to evaluate these posters and four posters were selected for awards. The winning presenters were Ashish Chakraborty (Microorganisms and the Microbiome), Cameron Shedlock (Imaging MS: Small Molecules), Nancy Abdelrahman (Lipids: ID and Structural Analysis) and Makalya Baxter (Fundamentals: Ionic Clusters). This competition was made possible by the invaluable contributions of the poster judges, ASMS staff and the impressive student participants.