

## **ASMS 2016 Workshop Report**

### **Analytical Lab Managers' Interest Group**

Organizers: Allis S. Chien, Brett S. Phinney

1. Title of workshop: ***Protocol Resources for Proteomics and Metabolomics***

Speakers/Discussion moderators:

- Emily Chen, PhD, Columbia University
- Allis Chien, PhD, Stanford University
- Brett Phinney, PhD, University of California, Davis

2. Date of workshop/meeting

Monday June 6, 2016

5:45-7 pm, Room 303A

3. Estimate of attendance

About 60

4. Summary of program and discussion

The workshop opened with a brief introduction about protocol challenges in core labs. A free live poll (directpoll.com) was used to engage workshop participants and gauge the state of the community. The live polling activity was well received; highly recommend use in future workshops. In a nutshell, participants went to a specific URL from their mobile device of choice, and as questions were shown on the room's projection screen, they could tap in their answers and see the responses being collated in real time on the big screen. Questions included "Are you bothered by the issue of scientific reproducibility?" (Mostly "yes", a few "no", but nobody responded, "don't think it is an issue".) "Do you think there is sufficient detail in general to reproduce published results?" (100% "no" response). "Do you think other labs can reproduce your results?" Of 11 online protocol resources, Nature Protocols was by far the most used, followed distantly by Lipid Maps, JOVE, and Nature Protocol Exchange.

A few slides were used to talk about the role of protocols in replicability and reproducibility, and to illustrate the many elements that need to be addressed for an effective protocol. The bulk of the workshop time was spent in broad discussion of numerous questions, including:

- Other sources of protocols? Protocols.io, application notes from vendor, Google, Within (for bioinformatics), YouTube videos, community discussion forum, direct communication with the original paper authors
- Elements of a good protocol? Completeness; specific details; part numbers (mixed opinion); explanations to promote understanding; calling out critical steps; indicating good pausing points; safety information

- Elements of a good protocol resource? Usefulness of endorsements, indication of popularity; could be as simple as a You Tube-like “times viewed” counter; “freshness” indicator; ability to annotate and view others’ annotations; ability to adapt and re-post variations on protocols; ability to reference the online protocol in a publication
- Other points: Importance of recording what didn’t work; the need for and key elements of data repositories; step-by-step instructions don’t replace the need to understand the science behind the protocol

Finally, workshop attendees were asked to participate in a follow-up survey:

**<http://tiny.cc/ASMSLabManager>**

In addition, Malgorzata Klosek, Director of the Division of Construction and Instruments in the NIH ORIP, was in attendance and took a few minutes to draw attention to and request responses for an open RFI: NOT-OD-16-091, Data Annotation in Biomedical Core Research Facilities and Related Needs for Community Education and Training.

Logistical notes: The room was a good size for participation (not too big). The wireless microphones were essential. Theater-style seating was not ideal for the broad discussion. Consider alternative layouts, e.g. facing rows, arcs around a center space.