

ASMS 2022 Workshop Report
Analytical Lab Managers Interest Group

Organizers: Brett Phinney (University of California, Davis), Ryan Leib (Stanford University)

1. Title of Workshop: ***Best Practices for Maintaining Research Continuity in the Shared Resource Laboratory***

Speakers/Discussion moderators

- Ryan Leib, PhD, Stanford University
- Alexandre Rosa Campos, PhD, Plexium
- Joanna Kirkpatrick, PhD
- Brett Phinney, University of California, Davis

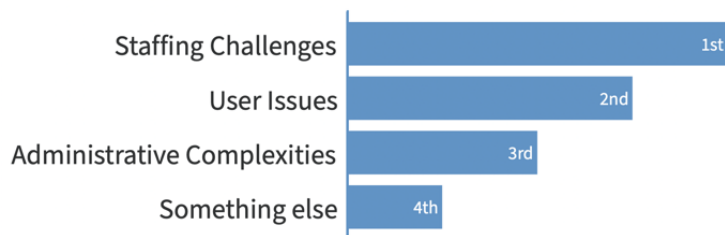
2. Date of workshop
Tuesday, June 7, 2022
5:45 – 7:00 PM CDT
3. Attendance: ~50
4. Summary of Discussion

Maintaining research continuity across changes in techniques, staff, and equipment presents significant challenges for analytical laboratories that generate large data sets for diverse users. Following a brief introduction, participants in the workshop were asked to discuss and elaborate on the major challenges faced by their laboratories in these areas.

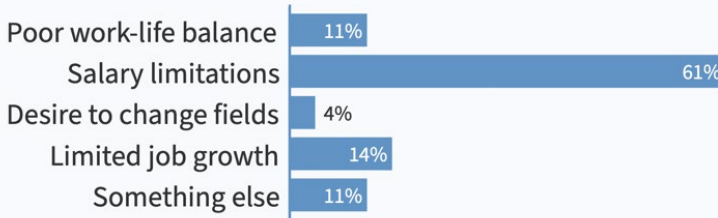
In short, there was overwhelming consistency in the discussion regarding two key unmet needs for shared facilities: 1) having the financial resources to hire and retain high-quality staff to perform research and education tasks, and 2) having the core facility information infrastructure in place to record, in durable and accessible ways, the research process so that it can remain robust and rigorous over time and across scientists. These shared issues underline the importance (and difficulty) of finding and retaining staff that can perform not only research tasks, but also educational and administrative tasks at the level required for cutting-edge research.

To facilitate discussion and spur interaction, several live polls were taken during the workshop. Participants could use mobile devices to input responses in real time. Some of these are detailed below.

What limits your ability to provide great research support?



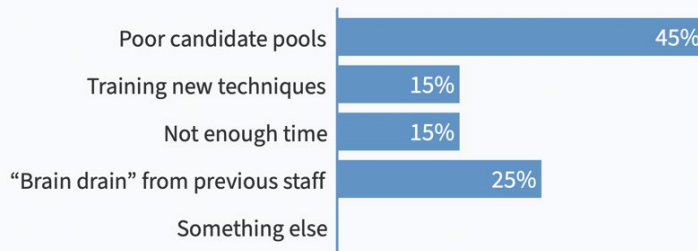
What limits your ability to hire and retain great staff?



The attendees singled out staff as the major limiting factor to providing research support to users, with 69% of respondents putting it as one of their top two concerns. Digging in further, the hiring and retention challenge faced by most attendees appears to be offering competitive salaries to keep high-quality staff in these positions rather than moving to other opportunities (various competitors were mentioned, but the big ones in this audience were biotech and pharma for all levels of staff and administration, and additionally returning to education for junior staff). This was linked to the service center model of cost recovery providing limited opportunities to increase salaries without significant growth of the core.

Looking at staff replacement, the challenge called out was overwhelmingly a limited pool of talented candidates, particularly with the market competition at all levels of skill. This was related to spending more time training less-skilled staff, which is not cost recoverable, only to have successful staff lifetimes be cut short by other opportunities.

What slows down onboarding new staff?



Beyond staffing, a great deal of discussion was placed on user issues, particularly related to improving the education of users. There are generally two models being pursued – one in which the core staff does the majority of the research work directly and one in which core staff focus more on education of users to do much of the work themselves. While both models have roles to play depending on the particular needs of the unique user, the consensus was that if the users are amenable to doing the research following training, this is both pedagogically preferable and more sustainable from a research continuity perspective over time and well worth the investment.

On the administrative side of things, the major concern was sustainability of instrumentation – how to keep up with maintenance costs and pursue successful grant strategies for shared instrumentation.

The final part of the discussion was open-ended regarding what people need most to maintain research continuity. Responses point toward the idea of building out a shared data and information infrastructure to help maintain protocols, streamline training, and keep research information in a reliable place for when it's needed. These management systems, when they exist, were observed to take a lot of time that the shared facility doesn't have to spare, but are also seen as necessary to maintain continuity for such busy core facilities.

What do you need most that you don't have for your facility to maintain research continuity?



The addition of live polling appears to greatly benefit discussion and add new voices to the conversation. This strategy appears beneficial based on this outing, and thus may have use in future discussions.