

CELS Research Committee Meeting Oct. 16th 2019 - Meeting Notes and Discussion

In attendance: Thomas Boving, Niall Howlett (Chair), Jason Kolbe, Elizabeth Mendenhall, Carlos Prada Montoya, Tom Sproul, Carol Thornber (ex officio)

Absent: Mark Stolt

General Discussion

What are the biggest research challenges that you face and what are your expectations for the research committee?

1) Equipment and infrastructure issues

- Need for a more sustainable and long-term plan for (*larger*) equipment
- Promote shared use of incubators and fridge/freezers, in particular -80°C freezers and liquid N₂ storage
- System for temporary storage of equipment periodically not in use
- (*Searchable*) Equipment database; PI/lab, make, model, location, capacity, etc.
- Policy or system for shared instrumentation service/maintenance contracts
- New College of Engineering promoting model of shared instrumentation/space
- Availability of shared equipment advantageous for recruitment of new hires
- Example of deionized water purification systems in CELS - located in almost every lab

2) Networking/Team Science/Collaboration opportunities

- Lack of opportunity within the college for research/scientific interaction
- Particularly acute for new faculty
- Both NIH and NSF are encouraging team science/multidisciplinary approaches to research questions and proposal submission
- The Advance-CTR program offers resources and workshops on the promotion of team science: <https://www.brown.edu/initiatives/translational-research/resources-team-science>
- Can the committee suggest ideas for the promotion of more research interaction across the college? For example, networking activities that are not centered on a single scientific presentation, and instead centered on common methods, approaches, skillsets, social hour, etc.?
- The Provost's Cluster Hire initiative was particularly effective at promoting interaction: the availability of funding and resources (*cluster hire initiative was coupled to guarantee of several new hires*) to promote this kind of activity certainly helps
- The URI SSRIP (Social Science Institute for Research, Education, and Policy) was cited as a good example of a structure that can facilitate interaction and collaboration <https://web.uri.edu/ssirep/>

3) Graduate education, TAs, RAS

- Graduate programs largely driven on a TA model (?) - *would be good to know what the current breakdown is with respect to numbers of graduate students supported by TAs and RAs in CELS - are some programs/specializations better than others with respect to securing RA-support? Does this impact respective TA allocations?*
- Graduate student recruitment: Teaching assistantships not released in a timely manner; we lose many top candidates because of this. How can this be addressed? Is there a Dean's Pledge type mechanism that we could use?
- Some discussion on undergraduate experiential research opportunities and linking this with TA support, to advocate for additional TA resources (?)
- Opportunities for applying for NIH and/or NSF (and other) supported graduate training programs. How do we organize and position CELS to apply for graduate training grants? Advocate for semester release for PI willing to lead. Adopt NIH-driven recommendations for graduate training (*see below*), which could be universally applied across the college and strengthen our chances of being competitive for graduate training programs in general
- How can we stay informed of existing and new opportunities for graduate training programs, e.g. SPIN database, NIH Guide TOC, others, request help from office of sponsored projects to look for opportunities

NIH / NIGMS (National Institute of General Medical Sciences) is emphasizing/mandating that all graduate training programs

- Focus on technical, operational and professional skills development
- Emphasize computational, statistical, and quantitative approaches
- Promote rigor and reproducibility in research (*this should be emphasized throughout the training program and not just check the box for 3 h of RCR training*)
- Teach the responsible and safe conduct of research (*same as above*)
- Promote diversity, equity and inclusion (*gender equity, unconscious/implicit bias, sexual harassment training*)
- Encourage inclusive, safe, and supportive research environments
- Use evidence-based educational and mentoring practices - Advance-CTR (<https://www.brown.edu/initiatives/translational-research/home>) is now facilitating mentoring training throughout the state - encourage CELS faculty to receive mentoring training - how do we select mentors for new faculty?
- Employ cohort-building activities and interventions that enhance the trainees' science identity and self-efficacy
- Provide individualized mentoring and oversight throughout
- Introduce trainees to a variety of scientific research areas and careers (*preparation of trainees for a variety of careers outside of academia was emphasized*)
- Promote graduate student wellness and resilience
- Collect and disseminate data on the success/failure of educational aims; make career outcomes publicly available