Faculty Development Day 2018

Managing your Research Career – Basic Science

Learn about setting up a basic science lab, finding mentors, staffing your research team, publishing your research, and balancing research with teaching and service

1. **Dave Morgan, PhD:** *setting up a basic science lab, finding mentors, staffing your research team*

2. **Danica Fujimori, PhD:** *publishing your research*

3. **Myriam Chaumeil, PhD:** *balancing research with other academic demands (teaching and service)*

***…*addressing your questions and concerns**

Setting up a Basic Science Lab

Starting up Your Lab – Finding Mentors

- **Find Mentors**
  - Identify senior faculty that are likely to be most helpful to you and your program and are available. Talk with your department chair to identify most suitable individuals.
  - Different people in your mentoring team can have different areas of mentoring expertize (eg, staffing your lab, budgeting, grant writing).
  - Don’t be afraid to seek help beyond your official mentors.

- **Peer group can be particularly helpful**

- **Consider attending faculty meetings for informal mentoring support**
  - Departmental
  - Campus-wide: Mission Bay FFL, Parnassus faculty lunch

Starting up Your Lab – Hiring Personnel

Your success depends on people you hire

Get involved with graduate program(s) of interest by contributing to teaching, both formal and informal.

Reach out to colleagues in the field to solicit postdoc applications. Talk with senior students at conferences. List advertisement on your web page and more broadly online (CCP4 for biochem/structural bio).

Call all of the candidate's references, and be direct with your questions.

Consult mentors and HR to understand the rules regarding each category of employee at UCSF (SRA, postdoc, specialist, which level to hire at). Thoroughly vet the terms of employment, reappointment, and separation.

Be patient.

Starting up Your Lab – Managing

Managing personnel:

Have clear expectations.

Be available for your growing group and provide mentorship, especially to students. In addition to frequent informal interactions, have regular individual or subgroup meetings and group meetings.

For postdocs and staff scientists, if notable performance concerns arise, consult HR immediately. Document.

Helpful Resources

1. **Graduate division:**
   - Graduate program staff
   - Graduate division faculty support and resources web page:

   https://graduate.ucsf.edu/faculty-and-administrators

   student health and counseling: https://studenthealth.ucsf.edu/

   ombuds: http://ombuds.ucsf.edu/

2. **Faculty Staff Assistance Program (FSAP)**

   Outstanding confidential help for faculty and staff: counseling, coaching, dealing with staff performance, traumatic event, anxiety

   https://hr.ucsf.edu/hr.php?org=c&AT=cm&S=Faculty+and+Staff+Assistance

Starting up Your Lab - Authorizations

Authorizations (Ground Rules):

BUA: Biological Use Authorization

IACUC: Animal Protocol

CSA: Controlled Substance Authorization

CUA: Chemical Use Authorization

RUA: Radioactivity Use Authorization

IRB: Institutional Review Board (protecting human subjects)

Meet the officers personally to establish a rapport and review the submission process.

Ask colleagues for examples for boilerplate language.

Do it yourself the first time, then delegate.

Starting up Your Lab - Finances

Grant-writing:

- Ask mentors for help – examples of applications, review of specific aims, advice on funding agencies.
- Check specific opportunities for junior investigators (first 2-3 yrs)
- Meet your pre-award analyst and develop good working relationship.

Familiarize yourself with RDO and PIVOT to identify suitable funding opportunities, and subscribe to funding opportunities listserv.

Research Development Office: https://rdo.ucsf.edu/

Pivot: https://pivot.cos.com/session/login

Funding opportunities listserv: https://listsrv.ucsf.edu/cgi-bin/wa?SUBED1=FUNDING_OPPS&A=1

Enroll in the limited submission opportunities (LSO) listserv to get advanced notice about Young investigator opportunities:

https://listsrv.ucsf.edu/cgi-bin/wa?SUBED1=LIMITED_SUBS&A=1

Identify junior awards that do not limit the number of applications per institution (NIH DP2, NSF CAREER, ACS and DOD Early Awards). Apply for RAP, PBBR.

Ask past recipient/RDO/ pre-award for examples of successful applications.

Starting up Your Lab - Finances

Budgeting is critical.

- Arrange regular meetings with your post-award analyst.
- Ask for help in developing budget (pre-award, mentors).
- Encourage your students and postdocs to apply for fellowships (there are many benefits irrespective of funding outcome).

Publishing Your Research

Publishing Your Work

- Educate your trainees – they should be the ones that write the first draft.
- Assert important discoveries clearly, but making claims that work is more important than it is can irritate reviewers.
- Figure preparation is very important but time consuming – delegate.
- Get primary data early and examine figures carefully.
- Have lab provide comments and proofread.
- Involve collaborators into the writing process.
- **Ask colleagues to read!!!**

Making Your Pitch

- **Aim appropriately high.**
  - Every case is unique. Get advice from mentors and peers you trust.
  - Productivity matters
    - Significant paper/year/R01 of funding
    - Impact vs. continuous productivity is discipline dependent
  - Postdoc/student career needs
  - Competition
  - Grants and tenure

- **Rejection is a norm.** Not all rejections mean you cannot resubmit upon revision (write to the editor if need be).

- Additional resources: “Making the Right Moves” - https://www.hhmi.org/programs/resources-early-career-scientist-development/making-right-moves

Making Your Pitch

- **Working with editors**
  - Journals can have professional editors or academic editors
  - Check editors - anyone in your field? Who knows you? Suggest that editor in your cover letter.
  - Pre-submission inquiries can be helpful.
  - Cover letters should have broad appeal, think from editor's perspective. What are major questions in a field that your submission is answering?
  - Cite other (high-impact) work of relevance to your study and what distinguishes your work?

- **Consider preprints servers**
  - Fast way to get your manuscript out
  - BioRxiv: https://www.biorxiv.org/
  - Caution: some journals will not accept work submitted to a pre-print server.

Determining Authorship

- Order of authorship:
  - Is determined by senior author (you)
  - First author(s) “driving” the project
  - Try to address and resolve any conflict early
    - Give writing responsibility to solidify first authorship

- In multi-lab collaborations, involve collaborators. Papers can have more than one corresponding author.

- Manuscript with a previous mentor:
  - Transition period and/or continued collaborations are ok, but make sure to have enough separate publications to show independence from the former PI.

Revisions

- React unemotionally. Be calm, don’t take it personally.
- Run cost/benefit analysis of addressing reviewers’ comments with help from your mentors.
- Do (at least attempt) reasonable requested experiments- you can’t argue everything.
- Write rebuttals for unreasonable or very misguided requests.
- Talk to editors: respectful and direct questions, come up with a list of what is required for resubmission.
- Be respectful in “response to reviewers”.
- If rejected, try to incorporate some suggestions in next submission.
- Turn around quickly. Often only limited reformatting required upon rejection.

Increasing Visibility

- Email a copy of newly accepted paper to:
  - Your mentors inside and out UCSF
  - Department chair
  - Program officers

- Announce publication on lab website and social media if you use them.

Balancing research with other academic demands

Balancing research with other academic demands - teaching and service

- Teaching and service are required in all faculty series. Balance will depend on series that you are in.
- Teaching in graduate programs will help you get exposure to graduate students. Professional school teaching is required.
- In choosing service to be involved in, determine what is important to you and doable with your schedule. Take on service requests that are right and important for you.
- Balance will (initially) depend on your department. Consult mentors, department chair, colleagues.
- Service will evolve over time with rank and step.

Balancing research with other academic demands - teaching and service

- During the early steps of the Assistant rank consider whether the contribution to service can be slightly more limited while the major focus is on establishing a thriving research program.

  Consider:
  Time commitment (remember prep time)
  Importance
  Alignment with what you care about

- Service beyond UCSF can also be valuable:
  - Grant review panels
  - Conference session organization
  - Serving as a guest editor

Balancing Other Aspects

- How much to travel?
  - Being present on campus and at home but building national reputation and visibility.

- How much time to spend on grant writing?
  - Any grant is important. But $25k 10 pg one may not be worth your precious time.
  - Learn to reformat/resubmit unsuccessful applications quickly.

- **Have a LIFE!**

Questions?