Advice on getting up to speed

1. “Surviving and Thriving at Penn” PowerPoint presentation in which Robert Doms, M.D., Ph.D. Chair of Microbiology at Penn provides advice for new faculty on getting their Research enterprise up to speed.

2. Making the Right Moves: A Practical Guide to Scientific Management for Postdocs and New Faculty. Developed by the Howard Hughes Medical Institute and recommended by the School of Medicine Dean, Arthur Rubenstein, MBBCh. Provides tips on a range of topics, including setting up your lab and getting the mentoring you need.

3. The following book can be ordered over Amazon:
   
   At the Helm: A Laboratory Navigator, Kathy Barker.

4. Five Steps to Recruiting Employees to the School of Medicine

   Click HERE

   Developed by the School of Medicine Training Office, the presentation at this link offers step-by-step guidance on recruiting, interviewing, and hiring.

Where can I get feedback on my grant?

VIRGA (Voluntary Internal Review of Grant Applications)

Administered by the Research Program Development office, this service matches grant-writers with established investigators who will read the specific aims section. For information, contact rpd@mail.med.upenn.edu

Your peers!

Even if their science is not closely related to yours, peers can provide general feedback on your abstract and specific aims. Testing the clarity of your writing on them will serve as a good test of whether you will succeed in communicating with study section members, for, typically, members of NIH study sections will have backgrounds that are only generally related to your own. Moreover, if you read your peers’ grants, it will be easier for you to ask them to reciprocate by reading yours.

Advice for less experienced grant-writers

Click HERE for a cheat sheet. (PDF)

Guidelines for conversations with tenure-track faculty

Teaching a course can increase your “face time” with graduate students who

Tenure track Years 1 – 3 Bailey
Primary emphasis: Establishing a reputation as an independent investigator

“The most important order of business is getting the lab or research program up and running.”

~ Virginia Man-Yee Lee, Ph.D., Professor, Pathology and Laboratory Medicine

Mentors should encourage their mentees to round out the work they did during their fellowships so that they can begin to establish their reputations as independent investigators. Most new faculty on the tenure track arrive at Penn with a research plan in mind, and the sooner they can set this plan in motion the better.

Setting the science in motion

“During your first year, hiring the best lab person and equipment.”

~ Amita Seghal-Field, Ph.D., Professor, Neuroscience

The first order of business should be getting the experimental systems up and running. Knowing how to handle the nitty-gritty, from ordering equipment to hiring postdocs and technicians to recruiting graduate students can make or break a new faculty member’s ability to get up to speed quickly. Mentors can provide this kind of practical information. Departmental business administrators (BAs) are an excellent resource too.

In selecting staff for the lab, many faculty prefer graduate students, for graduate students can contribute to shaping the science. They have chosen science as a career and have a vested interest in learning to integrate the literature, design experiments, and interpret the data. Moreover, as entrance into Biomedical Graduate Studies continues to become more competitive, our pool of grad students has become increasingly impressive – but it is a relatively small pool.

Given the competition for grad students, mentors should encourage their mentees to make themselves visible to grad students.

[See below.]

Coaching Tip

Competition for graduate students can be intense. Mentors can help mentees make themselves visible to graduate students by encouraging them to do the following:

- Join at least one graduate group.
- Join an affinity group
- Give chalk talks
- Volunteer to teach first-year seminars
- Cultivate rotation students
- See whether there are T32 grants you can join

Crossing departmental and school boundaries, these groups of faculty within Biomedical Graduate Studies can provide you with exposure to a wide range of grad students in addition to colleagues with whom you may want to collaborate.

Less formal than graduate groups, a number of joint lab meetings have sprung up around shared interests including HIV, virology, immunology, and cardiac development. These groups meet regularly for brown-bag lunches at which grad students present their data.

Generally about 10 minutes long, these talks provide you with a forum to “advertise” your lab’s research to grad students.

All About Grants tutorial

Link to the NIAID (National Institute for Allergy and Infectious Diseases) website which provides on-line tutorials on preparing RO1 grant applications.

Common Pitfalls of Grant Preparation

PowerPoint presentation with audio by Ann Kennedy, D.Sc., Richard Chamberlain Professor of Research Oncology, summarizing typical fatal flaws she observed in grants when she served as a member of an NIH study section

Grant-Writing Manual -- School of Medicine

Link to the School of Medicine’s Grant-Writing Manual with information on the NIH review process, the
All this being said, faculty should not overlook the merits of hiring experienced laboratory technicians. Unlike professional lab techs, grad students are with an investigator for only a short period of time. Moreover, they are balancing their career needs with those of their mentor. This means that grad students require more time off a project to attend conferences and courses, and to go to job interviews. By way of contrast, professional lab techs are devoted to the needs of the research group. Any time away from their core work relates to advancing the lab. Perhaps most important, once they master relevant lab techniques, they can teach those techniques to new grad students.

Directing the science

Once new faculty have set their science in motion, they may be tempted to retreat to their offices to focus on grant-writing, leaving lab projects to hum along on their own. However, mentors should encourage faculty to meet with lab members regularly and to monitor the lab’s work closely so that they can keep pushing it to the next phase, troubleshooting as needed, helping to interpret results, and designing the next set of experiments. Ultimately, time spent this way will more than pay itself back.

Funding the science

Some departments are able to provide start-up funds, but the expectation is that faculty on the tenure track secure their own funding early on. The School of Medicine Committee on Appointments and Promotions recognizes that it takes time to generate enough preliminary data to apply for an R01. Therefore, when tenure-track faculty come up for reappointment at year three, COAP will view other competitive, peer-reviewed grants favorably, including VA merit awards, grants from the Department of Defense, and foundation grants. Even so, faculty would do well to apply for a joint R01, as co-PI at this point in their careers. That way, they will have been able to demonstrate productivity when they are ready to apply for their second R01 as PI.

Mentors should make sure that their mentees receive feedback on their grants before submitting them. If mentors do not have the background to provide an in-depth critique of the science, they should find other faculty who do. Then they should contact those faculty themselves, for their mentees may feel reluctant to approach their senior colleagues on their own. Finally, even if mentors are not conversant in mentees’ specific area of biomedical expertise, most likely they can provide feedback on the abstract and specific aims.

Writing scientific papers

Typically, faculty need their first year to ramp their research enterprise up to speed. By the end of the second year, they should have generated enough data to start writing papers – and mentors should encourage them to get going.

Sometimes new faculty wait for a groundbreaking story to emerge from their data, but incremental advances in their area of expertise are worth writing up too. Mentors should point out that any papers their mentees publish, whether or not they are groundbreaking, will signal productivity to COAP when candidates come up for reappointment.

Coaching tip Q & A

Q: My mentee keeps accumulating data. It seems like he’s waiting for an epiphany to suggest the perfect paper. How can I get him to start writing?

A: Suggest that he begin with the figures and place them in logical sequence. Then he can flesh out the story with words.
Myth or fact: Teaching doesn’t really count toward promotion.

(Roll mouse over the correct answer)

**Fact**

Correct! The facts are:
A record of teaching excellence will be crucial at both the School of Medicine COAP and at the Provosts’ Staff Conference, the third and final administrative level of review. At the PSC, deans from a number of schools throughout the university meet and scrutinize candidates’ teaching records to the same extent that they would scrutinize the records of their own faculty.

**Myth**

Incorrect. The facts are:
A record of teaching excellence will be crucial at both the School of Medicine COAP and at the Provosts’ Staff Conference, the third and final administrative level of review. At the PSC, deans from a number of schools throughout the university meet and scrutinize candidates’ teaching records to the same extent that they would scrutinize the records of their own faculty.

Making strategic decisions
The promotions clock ticks quickly on the tenure track, so faculty need to make every decision on how they allocate their time with an eye to both short- and long-term goals. They are likely to be inundated with various invitations, and mentors can help them assess invitations based on their long-term goals. (See box below)

**Assess invitations based on long-term goals**  
(roll mouse over each)

Should I accept an invitation to…

...teach a particular course?  
...serve on a committee?  
...collaborate on a project?

My chief assumes that he should be senior author on all my papers because they “come out of his shop.” What’s standard?

The following statement from Section 1e in the Biomedical Graduate Studies Authorship Policy may be particularly helpful in determining senior authorship:

“General supervision of a research group is not sufficient for authorship.”

Faculty with questions on this policy, may want to contact Susan Ross, Ph.D., Professor of Microbiology, who is knowledgeable about the BGS policy.

Based on guidelines developed by the International Committee of Medical Journal Editors (ICMJE), the BGS Authorship Policy covers a number of topics including qualification for authorship and proper sequence of authors. It is accessible on line at http://www.med.upenn.edu/policy/BGS_author.pdf

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