



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.
 Cold Spring Harbor, New York: Cold Spring Harbor Laboratory Press,
 2002. **Provides a wealth of practical guidance for PI's setting up a lab
 for the first time.**
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

Tenure track Years 1 – 3 Ba:

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

Primary emphasis: Establishing an independent investigator

“The most important order of business is getting

~ Virginia Man-ye Lee, Ph.D., Professor, P

Mentors should encourage their mentees to round out their reputations as independent investigators. Most 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: equipment.”

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

The first order of business should be getting the equipment, ordering equipment to hiring postdocs and technicians able to get up to speed quickly. Mentors can provide them are an excellent resource too.

In selecting staff for the lab, many faculty prefer graduate have chosen science as a career and have a vested interest in the data. Moreover, as entrance into Biomedical Graduate has become increasingly impressive – but it is a relatively

Given the competition for grad students, **mentors should make themselves visible to grad students.**
[See below.]

will become familiar with your research and, as a result, may well opt to do their rotations in your lab. However, you may want to think twice about accepting an invitation to direct a course as this can be an enormously time-consuming commitment and is often better left until after promotion.

Serving on the BGS admissions committee can provide a great opportunity to increase the pool of graduate students in your area of expertise. However, in general, you should limit committee work, particularly early in your career. (You can use your service on one or two committees as a reason for declining service on others!)

If you have unique expertise in a particular methodology or lab technique, you may be bombarded with e-mails asking you to collaborate. Be selective. Favor projects that tie in with your research. Too many unrelated collaborations can diffuse the focus of your research, and when you come up for promotion, the Committee on Appointments and Promotions will want to see that your scholarship tells a coherent story

Independent

can begin to establish research plan in mind, and

most cutting-edge

handle the nitty-gritty, from new faculty member's class administrators (BAs)

shaping the science. They experiments, and interpret our pool of grad students

they can make

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

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

anatomy of an NIH grant, resources to support grant-writers, budgeting, and more.

How to Develop and Write an NIH Grant

PowerPoint presentation by Rita Balice-Gordon, Ph.D. Professor of Neuroscience, offers dos and don'ts for writing each of the major sections of an NIH grant application, along with examples.

Inside the NIH Grant Review Process

Video presentation by the NIH Center for Scientific Review, showing a mock study section meeting. Provides an inside look at how NIH grant applications are reviewed for scientific and technical merit

What Happens After Your Grant is Handed to the FedEx Guy?

PowerPoint presentation by Gary A. Koretzky, M.D., Ph.D., Professor of Laboratory Medicine and Pathology, describing what happens during that black box of time between the moment when grants are handed off to the "FedEx guy" and reviewer comments arrive back in the mail. Also provides advice on resubmitting.

[Click to Close Window](#)

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.

Mentors should help their mentees to strike a balance between focusing their experiments in order to tell an anticipated story and, at the same time, following unexpected leads that the data suggest along the way. **Often it is the most unexpected twists and turns that occur in an experiment that yield the most exciting discoveries.**

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.

Extensive resources on grant-writing are available on the *Advance Faculty Professional Development Program* web site. (See box to the right.) A few words about issues specific to less established investigators follow after the box.

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?

Roll mouse over [HERE](#) for the answer.

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

Myth

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.

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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