"Running a Great Lab": Notes from Session #5, "Recruiting & Hiring the Best People"

Jan. 29th, 2009 6201 MSB Guest Speakers: Gary Roberts, Bacteriology; Meghan Owens, CALS HR Facilitators: Amy Charkowski, Allen Laughon Organizer: Jennifer Sheridan

Notes from Gary Roberts discussion

Random advice:

- 1. Don't listen to senior faculty. Don't let them scare you. If they make a comment about not being in the lab at 3am, don't let it bother you. GET WORK DONE in the way that works for you.
- 2. Manage your time. Be ruthless. If you decide that you are going to do something, DO IT RIGHT AWAY. If you are not going to do it, get rid of it right away.

Hiring graduate students:

Graduate students do not have a clue—they go where it's comfortable. Students talk to each other, know who has a "comfortable" lab. Students want to do science for the big picture (e.g., "want to cure cancer"). They do not get the connection between the lab work they are doing and the big picture. They do not know that they need to learn to be scientists. You must make that connection for them.

Graduate students LOVE to work in the labs of new faculty, you will have to beat them off.

Q: How to you spot the good students? A: GPA, test scores are not always good indicators—those students are good at SCHOOL, are not necessarily good SCIENTISTS. Look for students who are mature, have motivation, are responsible.

Maturity is key. It may be better to look for students who have done something (anything) between undergrad and grad school. Look for people who want to be there.

Q: Does lab experience as an undergrad count for anything? A: Not really. Still not the same thing as being mature.

Q: Is there a difference between Masters & PhD students? A: Masters students are more clueless, and have less of a commitment to science (and to your lab).

Q: How many grad students should one take on in the first couple of years? A: Be leery of taking on too many grad students at the beginning. They can suck your energy. Grad

students are not a reliable way to get grants and publish. Better to get a postdoc and/or lab specialist.

Q: Is it worth it to recruit grad students? A: No. You want the grad students who come to you. Cites a study that shows the greatest predictor of success in grad school is the date on the application—students who applied early may be the most motivated and want to be there the most.

Q: How long before you know whether a student is good—one month? (i.e., can you tell the good students from a rotation?) A: It is hard to say---the student has to make the emotional transition from "PIs work" to "my work", and that can take time. A rotation might not tell you who the good student is, but it can disqualify a bad one.

Q: Is it useful to have a talk with grad students at the beginning, and set expectations? A: Well, that is fine in theory, but in actuality grad students don't listen to those talks.

Q: What is the best way to structure a rotation—set tasks, see how they handle pressure, turn them loose? A: People use different approaches, trial and error for the individual PI.

Hiring Postdocs

Many of the issues for grad students apply for postdocs. Look for maturity and motivation. Look for publications—shows they can finish things.

It is sometimes hard for junior faculty to get funding for postdocs. How do you counteract this? Set up a mentoring committee for a postdoc that arranges for senior faculty to mentor the postdoc in your lab. Explicitly address this in your application so that the reviewers know you have thought about it. Get letters from the senior faculty showing they are on board. Set up the structure in advance.

Mentoring grad students

Grad students need to become independent. There is a tension; if they are growing as students then they are making mistakes, and then YOU aren't getting any data.

Make your students present regularly. Getting peer feedback is essential. Maybe join forces with another lab for student presentations. Making students do presentations helps them make the transition to making the experiment THEIR project.

Students who drop out are not necessarily failures. Part of the process of grad school is making sure this is the right career for you.

Don't expect students to be like you, and do things like you.

It's okay to treat your students somewhat differently based on their talents, but take care to be equitable. Students over-interpret faculty actions. Students under-interpret faculty direct communications.

Demand that your students grow as scientists.

Best advice: USE the student's committee. Students listen to their committee's recommendations because they are strangers. The same advice given by the PI/advisor is heard much more clearly when it comes from the committee.

Five-year appointments are too much for students. Make it less-it lights a fire under them.

Set work goals around making a scientific argument for a paper, even if you only have 20% of the data in.

Set authorship early—who is first, order of authors, etc.

When dealing with unsuccessful students, it is never quite clear where the line is. Usually around the 2^{nd} year/prelims is where the big decision point is. If it looks bad, start making it clear in the 2^{nd} year, don't drag it out.

Notes from Meghan Owens discussion

Academic staff titles (research specialist, lab tech, scientist, researcher) vs. classified staff

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Q: When do you do a background check? A: At the finalist stage. Felony convictions are looked for—as related to employment. PIs don't see background check, that happens at HR level.