Applying for External Funding

Discussion and a few words about teams!

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The message of the afternoon

Planning
Persistence
Patience

But there is another important P: the People you work with!
There is a lot to know about how to apply for grants.

But we need to acknowledge that it is increasingly difficult to get funded, even for seasoned investigators.

In my few minutes I am not going to focus on the mechanics of how to apply, although I think that information is very important and that we as a community could do better in sharing our collective knowledge of the process.

Instead, I want to focus on what you can do to enhance your science and, as a consequence, improve your chances of funding by forming collaborations with other people.
In the old days, we applied for funding to support the research that we could not otherwise conduct.

We worked largely on our own in our own laboratories. We might have a collaborator or a consultant, but the model was an independent investigator who crafted his or her research program. And largely within our own discipline.

Applying for funding was always a competitive process and persistence was the critical attribute.
Loner Science

The old stereotype was “garage science” in which a single person, usually a quirky older male, cooked up ideas that were brilliant or crazy.

This spoof was not so far from the actual model of apprenticeship science – a student worked with a single faculty member in his (or her!) lab, rather than the garage, and although a team, the team was pretty independent and perhaps in competition with other teams.
The times have changed...

In the old days, we applied for funding to support the research that we could not otherwise conduct.

Now we apply for funding to support our research but also to support our universities. There is pressure on faculty and students to get funding for other reasons.

We worked largely on our own in our own laboratories. We might have a who collaborator or consultant, but the model was an independent investigator crafted his or her research program

Now we work on teams because few of us have all of the expertise that is required and because we work across disciplines.

Applying for funding was always a competitive process and persistence was the critical attribute.

Now it is brutally difficult. For everyone.

But there is a silver lining...
Collaboration.

Collaborations expand the scope of your research, lead to new research directions that you could not have anticipated, and sharpen your thinking because you have built-in critics who are on your team, working towards a common goal.

Good collaborations increase your competitiveness for external funding.

These days, you really have to invest in forming collaborations because science is a team activity, because almost no one alone has all of the necessary technical expertise, and because the most exciting questions are at the interactions across disciplines.

And more than all of this, collaborating can be enormous fun.
How to start a collaboration depends on:

1. Stage of your career
2. Your personality
3. Some luck, persistence, and risk taking
4. Willingness to invest time
5. Mutual benefits
Some ideas for how to start:

1. **Invite others** with related interests to give talks, for coffee or lunch, and to your lab; in most cases, collaborators do not fall from the sky. At the local level, people are busy and there is little infrastructure in place to facilitate seeking out possible collaborators. Visitors from outside the university are often flattered to be invited to give a talk and to meet with students and faculty here. You don’t have to restrict yourself to inviting famous people. This can be a brief visit, e.g., to give a talk or a longer-term visit to your lab. It also increases the visibility of your own research.

   How to pay for visitors? Collaborate with others to cobble together resources. Many departments will contribute small amounts if you acknowledge them on a colloquium flyer and together may provide enough to cover travel and expenses. Not always necessary to offer an honorarium.

   **Be generous with your resources.** It will come around!
2. **Invite yourself** to visit others. This may seem bold but others are often pleased to have visitors stop by and they will often invite you to give a talk and meet colleagues. Short visits can be effective. And you may be more welcome than you realize. But prepare for the visit in advance, read their work and know who is there.

Be generous in meeting with students and other faculty when you visit. Ask other people about their work.

When I first visited the Netherlands in 1989 for a sabbatical, I wrote to everyone from whom I had received a “reprint request” in the past 5 years. I was invited to give talks, visit with colleagues, and conduct research in their labs. That experience changed the course of my research program.
3. **Attend professional conferences** and have a networking plan in place in advance to contact those who might be otherwise difficult to approach without advance planning.

http://www.hunter.cuny.edu/genderequity/

4. At the local level, take the time to **talk to your colleagues** and to **read their work**. If you want to invest in developing collaborations, you need to understand each other. If you are working across different disciplines this will be particularly critical. To develop truly collaborative **cross-disciplinary** research that are mutually beneficial requires an investment
5. **Involve graduate students in collaborations.** They are often the catalysts for creating new bridges when faculty are committed in theory but busy. This is especially true for cross-disciplinary projects.

6. **Plan symposia together.** It’s often a good initial step to test out the waters and to see how well you work together on something that has short-term goals and is less demanding.

7. **Write together.** You learn a lot about other people by writing with them. I often attribute our success within the Center for Language Science to the many failed attempts we made in applying for training grants. We learned an enormous amount about each other in the process and became committed to a common goal. You learn quickly that different people have complementary skills.
8. Be explicit about expectations and crediting, including authorship, PI status on grants, etc. You have to discuss these things in advance and they are not always easy conversations.

If you are junior to your collaborator(s), you may rightly worry about having recognition for your status as an independent investigator and it will be better to have this discussion from the start than to wait until others have invested heavily in the project.

But even senior investigators have needs. Although the more senior of the collaborators may have more responsibility to the junior collaborator than the reverse, everyone has some degree of responsibility to each other.
9. If you actively seek out collaborations, then over the course of your career, it is inevitable that there will be some discouraging experiences. It is important to understand what happened when things don’t work out but also not to overgeneralize about all collaborations.

Most bad experiences are a result of not being explicit about expectations from the start or not knowing your collaborator(s) well enough from the start. But sometimes it’s also a matter of good and bad luck.
10. **A final word about competition.** We are living at a time that is brutally competitive and careerist. There is pressure to publish a lot quickly (see January 29th NY Times on “Perils of Bite Size Science”), endless discussion of the H index and impact factors, and genuine worry about the percentiles required to be funded.

In the end, you need to trust your collaborators and feel that you can share your ideas openly. On occasion, someone may steal an idea that was yours and it will be easy to want to dig a moat around your laboratory and purchase alligators to protect you. But most of us are working on topics that are still in their infancy and being able to share our ideas openly will produce better collaborations and better science.

The rest is just human!
How to do research on bilingualism in Central PA?

Collaborate with others in locations where bilingualism is more prevalent: Urban centers in the US and elsewhere in the world
Bilingualism takes different forms in different places and that requires collaborations here in the US and abroad: We each have something different to contribute to the collaboration.

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This requires local/domestic collaborations and also global collaborations.

The Netherlands
Spain
Sweden
Germany
UK
China
The Penn State Center for Language Science International Bilingualism Network

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