

# One Job Title, Many Tracks: How To Prepare for the Academic Career That Best Suits Your Interests

## 2010 ASCB Annual Meeting Panel

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Not all professor positions are created equal...American colleges and universities vary widely in terms of the research, teaching, and service responsibilities a professor is expected to balance. Here are some questions to ask yourself and a prospective employer when considering what type of academic job you may wish to pursue:

About yourself: there are no right or wrong, better or worse, higher or lower value answers to these, but it is very important to do your best to be introspective and honest with yourself so that you follow a path likely to lead to success and satisfaction.

- How much research do you want to do?
- How long do you envision doing research?
- What does a principal investigator (PI) do at different types of schools?
- What does a professor do at different types of schools?
- Which of these types of schools fits me?

### Types of Academic Institutions

**Research University**: the primary focus is on research

- Managing and maintaining a substantial laboratory
- Publishing research in peer-reviewed journals
- Obtaining external funding in support of this research
- Labs consist of postdoctoral fellows, graduate students, undergraduate students, and technicians
- Some teaching and service obligations, but these are not as critical to long-term success as research productivity

**Liberal Arts College**: the primary focus is on teaching, but with significant research and service expectations as well

- In most cases, only undergraduate students (though an increasing number of liberal arts colleges employ postdoctoral fellows)
- Teaching multiple courses and laboratories (2-4) per semester
- Working with undergraduates on research projects
- Some expectations for publication (this will vary from school to school), but the primary research focus is on the undergraduate
- Experience (developing a project, presenting findings at a meeting, etc.)

**Community College:** the primary focus is on teaching, with a lesser emphasis on research

- In most cases, only undergraduate students, including a number of “non-traditional” students (age, background, etc.); also pre-professional students, usually in allied health fields, and may also include various sorts of preparation for technicians
- Teaching multiple courses and laboratories per semester

## **What Should You Do to Prepare for a Job at a:**

### **Research University:**

- Publish papers. This is the currency by which productivity is judged.
- Get your own funding. Obtain postdoctoral fellowships and career development funding. These demonstrate that you have successfully applied for funding (have a track record of independent funding)
- Network. Present your work at meetings, request speaking time, introduce yourself to leaders in your field, and invite them to your poster. Bring copies of your CV and publications.
- Get teaching experience. The requirements and importance of teaching at different institutions varies greatly. On one end of the spectrum, teaching departments (e.g. Biological Sciences) at large undergraduate campuses may require you to teach up to 2 courses per term. Part of your interview will focus on assessing your teaching prowess, either in your research talk or in teaching a mock lecture. Faculty who reside in medical schools or university affiliated institutes generally teach much less, but recover significantly less of their salary from the institution). Prior teaching experience may be as a TA, but having taught a lecture component, or being responsible for exams, grading, and syllabus, may be preferred, depending, again, on the institution (see below).

### **Liberal Arts College:**

- Demonstrate a commitment and capacity for college teaching. Many universities offer opportunities for postdocs to teach sections or classes with Lecturer or Adjunct status. This can give you credibility in applying for positions that involve teaching.
- Seek temporary teaching vacancies at local colleges and universities to develop independent teaching experience.
  - An increasing number of teaching postdocs are now available that provide specific training in both teaching and research, which are ideal for preparing for this kind of position.
  - Visiting professorships at small colleges are often the equivalent of a teaching postdoc...a short-term experience in the life of a liberal arts college academic.
- Develop a research program that can work on a small scale. You may be very interested in cutting-edge HIV research, but can you do this with only undergraduates and a shoestring budget?
  - What model systems and research questions are portable, cheap, and amenable to undergraduate work?
  - What external sources of funding could/would you pursue to support this research?

### **Community College:**

- Demonstrate a commitment and capacity for college teaching. Many of the suggestions above for the liberal arts college track apply here as well. Prior experience, often spending a year or a few years teaching as an adjunct, is often expected, and may be implicitly required. Temporary positions at local community colleges will reinforce your ability to work at this type of institution by providing a direct experience not available in graduate and postdoctoral training.

### **General Hints When Considering What Position Is Right for You:**

- If you are strongest when you can address a narrowly focused picture in detail, this is very good for doing research, but tends to overwhelm undergrads in large doses.
- If you like looking at the “big picture” mostly, this is very good for teaching, especially undergrads.
- If you are working in a teaching department at a large research university, you will be expected to be able to do both of the above.
- Do you like being the boss, supervising people? If so, perhaps having a lab with grad students, postdocs, undergrads, and technicians will suit you.
- Do you mostly like doing bench work, perhaps collaboratively, or perhaps by yourself, rather than telling other people what to do and then trusting them to do it? If so, then perhaps a small lab with less pressure to fund other people’s positions will suit you.
- Do you prefer tying ideas up in papers and grant proposals, or the daily grind of bench work? In a large research institution, PIs usually quickly outgrow benchwork.

### **More Specific Questions:**

- What sort of research do you want to conduct (i.e., high/low tech, high/low capital, and supply expense)?
- Who is at the institution with whom you can collaborate?
- What equipment is already there, that is shared or to be shared?
- How do faculty involve students in teaching and research?
- Are there any grad students?
- Do any other faculty have technicians? postdocs? What is expected of them?
- What sorts of external funding are you expected to obtain for research?
- What sorts of funding do other members of the department have?
- What research support does the institution provide?
- How much of your salary are you expected to bring in from your own grants?
- Are there some faculty members who do no research and some who do externally funded research? How is the teaching load arranged under those circumstances?
- What is the teaching load?
- Are these courses typically all different preparations, multiple sections of the same course, team taught, etc.?
- With whom may you collaborate, from whom may you learn, with whom may you coordinate (book selection, coordinate lab and/or lecture schedule, same or different exams, etc.)
- Do you like working in the lab?
- How do you want to spend your day—at work and at home?
- Motivation: How frequent are the rewards in the work? What counts as a reward?
- Do you have flexibility in terms of where you can live? Do you have a partner to balance into the decision?
- Are you willing to go wherever there is a job?

## What is the Search Committee at a large research institution looking for?

It is not uncommon to have well over a hundred applications that go through an initial screen.

*How do you rise to the top?*

In general:

- Clarity in presentation. Your application materials should be easy to read and digest (may require some tailoring)
- Convey genuine interest in the school/department (a personal touch on the letter can sometimes help; at a minimum don't let incorrect info slip in).
- Demonstrate a clear vision of where you'd like your research to go in the future. Get advice on how much scope to include in your research plans – too little a problem, but too much doesn't look good either.

Specifics:

- A repeat history of productivity is a plus (both graduate and postdoc).  
Note: the focus is on first author research papers, but with these in hand, other publications (non first-author or reviews and methods) help
- Evidence of your own contribution important (helps assessment of future independence).  
In smaller labs, less of an issue; in bigger ones (and/or multiple author papers), may want to explain
- Evidence of scholarly interactions: internal and external presentations.
- Independent funding helpful, but a bridging grant is not a deciding factor.  
(though can't speak for all institutions)
- Record of mentoring (overseeing undergrads etc) and collaborating are pluses.
- Strong letters.  
While this is not entirely within your control, recognizing its importance is added motivation to be indispensable to your advisor, talk with PIs besides your advisor, seek out additional mentors, ask questions at seminars, meet with seminar speakers, etc.

The interview:

- Don't underestimate the importance of polishing your job talk/get feedback.
- Chalk talk preparation. Though "informal", takes preparation/get feedback.
- Be interactive and interested (we're looking for good colleagues; you need to know if good fit).