Gainfully employed: Application preparation to navigating negotiations

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Virginia Commonwealth University
Richmond, VA

EXPERIMENTAL BIOLOGY 2007
Graduate Student/Postdoctoral Starting Faculty Transitions
April 30th, 2007
Is this the career for you?

What Professors Do

A few words are in order about the job that you are applying for. Professors are expected to —

- **Teach** undergraduate students and graduate students with enthusiasm and popularity
- Cheerfully **serve** on committees that further the aims of the institution (the more the merrier!)
- **Write proposals** which
- Bring in **external research funds** to
- **Teach and support graduate students**, who
- **Perform research**, which is then
- **Published** in refereed journals
- This leads professors to **speak** at
- And **organize** national and international meetings in their fields.
- **Consult** in their spare (??) time, to enhance contacts with the industrial world and broaden their knowledge
Steps to an Academic Position

- A year in advance
  - Mentor, Papers, Grants

- Application
  - Cover letter, CV, Research & Teaching Plan, References

- Interview
  - Schedule, “On” time, Selling vs. Consuming

- Negotiations
  - Essential needs

- Starting out
A year (or more) in advance

- Talk with your mentor
  - Career plans
  - Timeline for finishing projects & publishing
  - Develop projects that can “leave” the lab
    - Overlap is fine but you must show independence.
  - Technique? Homologue?

Let your potential references know you will soon be on the job market. They may receive inquiries for applicants via the “grapevine.” Go to meetings, volunteer to give a talk and network with potential employers.
A year (or more) in advance

- Papers

Publications should show productivity

1st, middle, or last author

Researcher, collaborator, leader
A year (or more) in advance

Grants

Are you fundable?

- Pre-doctoral or post-doctoral training grant
- Intramural grants
- K series (mentored) award

NIH (http://grants1.nih.gov/grants/new_investigators/index.htm)
  - K awards from individual institutes
  - K99 Pathway to Independence
Applying

- What type of institution, research:teaching ratio, geographically limited, personal limitations?
- Most positions are advertised late summer/early fall with an anticipated start the following fall.

Advertisements

- Scientific Journals
  - ScienceCareers.org
- The Chronicle of Higher Education
- Departmental Websites
City of Hope
Division of Molecular Medicine

The Division of Molecular Medicine at City of Hope http://www.cityofhope.org/molecularmedicine invites applications from qualified individuals in the area of structural biology for a tenure-track faculty position at the Assistant Professor level beginning Oct 1, 2007. Outstanding candidates with research experience in protein X-ray crystallography are encouraged to apply. Candidates with combined expertise in both X-ray diffraction and NMR methods are preferred. Demonstrated excellence in innovative research and commitment to graduate level education are essential. Selection will be based on the candidate's record of research accomplishments, potential to develop a vigorous and extramurally funded research program, and integration with Developmental Cancer Therapeutics, a translational research program focusing on molecular-targeted small molecule drug discovery within City of Hope's Comprehensive Cancer Center. Experience with and/or strong interest in directing an X-ray core facility is essential. Applications must include: (i) current Curriculum Vitae, list of publications, and extramural funding history; (ii) brief (max. 2 pages) statement of research interests; and (iii) three letters of recommendation sent directly to the search committee on the candidate's behalf. Applications and supporting materials should be addressed to:

Molecular Medicine Faculty Search Committee
Blah, Blah, Blah

Review of completed applications will begin immediately and continue until the position is filled.
City of Hope, a non-profit research and educational institution, and an NCI-designated Comprehensive Cancer Center, is located 25 miles northeast of Los Angeles. City of Hope offers a competitive salary and benefits package. EEOE.
While a nicely prepared application will obviously not get you a job, a poorly prepared one makes a bad impression no matter how many papers you have published.

–J. Walter, Harvard Medical School

No typografical ewors!!!!!
Application

- Cover letter (1 page)
  - Mention advertisement and that you ARE applying
  - Brief (extremely!!!) background on research accomplishments and research plans
  - Commitment to academic/research career, look forward to discussing application, please contact if any questions

Remember that the recruitment committee sees >100 to 350 applications. Long letters will not be read.

How to write a letter:
http://owl.english.purdue.edu/handouts/pw/p_basicbusletter.html
Microsoft Office 2000 Letter Wizard
Application

CV

Sections

Contact information
Education
Positions
Awards
Grants
Publications
  Peer-reviewed, Reviews, books (chapters)
Abstracts/Meetings
References
Pre & post-doctoral fellowships

**Curriculum Vitae**

A. B. Scientist

Any Road
Anywhere, Earth 00000
Tel: 003-000-0000
Fax: 777-777-7777

Email: abscientist@uniiversity.edu
URL: http://a.b.scientisthome.org

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**Education & Employment:**

2004-Present
Outstanding University, Good Place, Earth
Post-doctoral Fellow
Supervised by Dr. Nobel Material
The role of important protein in vital pathway

1999-2004
Really Good University, Brilliant, Earth
Ph. D. in Biochemistry
Advisor: Dr. Excellent Mentor
Mechanism of something in Protein X

1995-1999
Grand College, Education Bastian, Earth
B. S. in Biochemistry, summa cum laude

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**Honor & Awards:**

Teaching Awards, Awards from Societies, etc.

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**Grants:**

Active
Grant & funding institution, dates of support, total funds

Pending
Granting institution, date of proposed support, total funds

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**Teaching Experience:**

Formal
Semester, Year
Course title or topic & target audience

Informal
Semester, Year
Supervised undergraduate summer intern, J. Doe

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**Publications:**

Pre-reviewed

Review
1.

Books and Book Chapters
1.

Submitted
1.

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**Presentations:**

Select abstracts of XX presentations. (*) indicates invited symposium speaker.
1.

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**References:**

Full addresses with phone and email contact information
Application

- Research summary (2 pages)
  - Short term goal
  - Long term goal
  - Technique
  - Independence from mentor
  - Funding
  - Problem, key unanswered questions & significance
  - Research Plan with specific aims
  - Figure(s) are good
  - Don’t forget references

- Teaching Philosophy (1 page)
  - What courses would you teach/develop?
  - Why do you want to be a professor?
  - What experience do you have?
Application

References

Mentor
Collaborator
Ph. D. Advisor

Discuss your recent accomplishments & career goals with letter writers so that they can convey your expertise, experience and work style in their letters. Provide them with a current CV & published papers.

“Bad planning on your part does not necessarily constitute an automatic emergency on my part.”

Ask for letters of reference early!!
Application

- Have someone read your complete application for spelling and grammar errors.

- Electronic submission – Make a pdf. Files are less likely to become garbled in the transmission.

- Did you include all the requested materials?

- After submission you should receive a confirmation postcard or letter indicating that your complete application has been received.
Interview

- Phone interview
- On-campus interview
  - Meet with Faculty
  - Meet with Dean
  - Research seminar
  - Chalk talk
**Interview**

### 20 people on the schedule

**Thursday, January 19, 2006**
- 8:15 a.m.: Breakfast - Newton Raphson will meet in the lobby of the Respectable.
- 9:45: Pete O'Tube, 332D Hallowed Hall. O'Tube will escort to Dean Noe.
- 10:30: Dean Jess A. Noe, College of Engineering.
- 11:10: Oki will escort from Dean Noe.
- 11:15: Kerry Oki, Associate Head of Department.
- 12:00 noon: Lunch - Faculty Club [Kerry Oki, Ken Deed]
- 1:15 p.m.: Monty Carlo, 122 HH.
- 2:00: C. D. Point, 248 HH.
- 2:45: Tim O'Shenko, 332C HH.
- 3:30: Seminar preparation, 248A HH. O'Shenko will escort to seminar.
- 4:00: Seminar, "Evaluation of Composite Interface Properties Using Clever Experiments," 218 HH. O'Shenko will escort to reception.
- 5:00-6:00: Reception, 158 Hallowed Hall. Jenny Rater will escort from reception to dinner.
- 6:30: Dinner, Wholey Cow Steakhouse [Jenny Rater, Will Burn]

**Friday, January 20, 2006**
- 7:30 a.m.: Breakfast - Carmen Vortex will meet in the lobby of the Respectable.
- 8:15: Leah Punoff, 250 HH.
- 9:00: Will Burn, 362E HH.
- 9:45: Gil Airkin, 332F HH.
- 10:30: Clay Potts, 250 HH.
- 11:15: S. Broken, 212 HH. Broken will escort to lunch.
- 12:00 noon: Lunch - Faculty Club [S. Broken, C. D. Point, I. M. Shore]
- 1:15 p.m.: I. M. Shore, 266 HH.
- 2:00: Frank Stein, 266 HH.
- 2:45: Lois Cost, 352 HH.
- 3:30: Tour of Laboratories w/Gene Poole and Leah Punoff.
- 4:30: M. N. Charge, Head of Department, 208 HH.
- 6:00: Dinner, Classy Restaurant [M. N. Charge, Della Kitt]

**Sunday, January 22, 2006**
- 6:00 a.m.: A-1 Limousine will pick up at Respectable Hotel.
- 7:00: Depart Somewhere Airport.

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**Faculty who share common research**

- Faculty on recruitment committee
- People of Power

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**The 2 minute drill**

- Will you meet students & post-docs?

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**Can these people be your colleagues?**

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**Taken from Landing an Academic Job J. Dantzig**
Research Seminar

May be your only time to “meet” faculty

Address: What problem, why, significance, progress

Divide your time:

15’ Background Everyone

10’ Approach People in related fields Know field

10’ Results People in your field Expertise

10’ Summary Everyone Big picture

Practice: Give it to someone completely outside your field.

Make eye contact.

Never argue with a questioner.

If interrupted, answer question but if too frequent… “A very good question, allow me to present the remaining data as it will address your concerns.”
Chalk talk

What is your research focus - short-term and long-term?
How will you fund your research?
Is this work independent of your mentor’s work?
What types of studies will your students conduct?
In 5 and 10 years where do you see yourself and your lab?

Can you think on your feet?
Interview

- Seller versus consumer
  - Where is the department/institute heading?
  - Potential collaborations?
  - What are the problems in the department/institute?
  - Tenure process
    - Success rate?

At the end of the interview, you may meet with the chair of the search committee and be given the timeline for their decision making. Remember to write a formal letter thanking that search committee chair and department, express your interest in the position, wait…
Offer & Negotiating

- Essential needs
  - Prioritized list – the deal breakers
  - Start-up funds
  - Office/Laboratory space
  - Teaching load (PUI versus research university)
  - Graduate/post-doc support

Be clear, rational and precise.

Will expenses to find housing and move be covered?
<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Computational</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer Equipment, Printers, Scanner</td>
<td>$15,000.00</td>
<td>General lab use, documentation, number crunching for xtal data, backup drives</td>
</tr>
<tr>
<td><strong>Crystallization, etc.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>crystallization cabinets, 2</td>
<td>$6,500.00</td>
<td>each</td>
</tr>
<tr>
<td>Stereo Microscope</td>
<td>$7,500.00</td>
<td>Setup for camera and CCTV feed</td>
</tr>
<tr>
<td>Digital Camera</td>
<td>$1,000.00</td>
<td></td>
</tr>
<tr>
<td><strong>Protein Purification</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Akta Chromatography System</td>
<td>$45,000.00</td>
<td></td>
</tr>
<tr>
<td>Cold cabinet to house Akta &amp; 4C storage</td>
<td>$6,500.00</td>
<td></td>
</tr>
<tr>
<td>Chromatography Columns</td>
<td>$15,000.00</td>
<td>GF : preparative grade-med-sm scale S75, S200 &amp; Superose 6, HisTRAP, HIC &amp; ion exchange</td>
</tr>
<tr>
<td>SMART system replacement</td>
<td>$25,000.00</td>
<td></td>
</tr>
<tr>
<td>Power Source and Gel Apparatus</td>
<td>$5,000.00</td>
<td></td>
</tr>
<tr>
<td>Western apparatus &amp; hypercassette</td>
<td>$1,000.00</td>
<td></td>
</tr>
<tr>
<td>Buffer exchange system</td>
<td>$8,000.00</td>
<td>System to exchange media for buffer when protein is expressed in supernatant</td>
</tr>
<tr>
<td><strong>Protein Expression</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incubator/Shakers</td>
<td>$10,000.00</td>
<td></td>
</tr>
<tr>
<td>Orbital Shakers</td>
<td>$2,000.00</td>
<td></td>
</tr>
<tr>
<td>Plate incubator</td>
<td>$2,000.00</td>
<td></td>
</tr>
<tr>
<td><strong>Molecular Biology</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCR Thermocycler</td>
<td>$7,500.00</td>
<td></td>
</tr>
<tr>
<td>Agarose gel box</td>
<td>$1,000.00</td>
<td></td>
</tr>
<tr>
<td>freezer gel boxes, 2-5</td>
<td>$175.00</td>
<td>each</td>
</tr>
<tr>
<td><strong>General Equipment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freezer (-80)</td>
<td>$9,000.00</td>
<td></td>
</tr>
<tr>
<td>Freezer (-20)</td>
<td>$6,500.00</td>
<td></td>
</tr>
<tr>
<td>Non &amp; Refrigerated Table Top Microfuge &amp; minis</td>
<td>$10,000.00</td>
<td></td>
</tr>
<tr>
<td><strong>Other Equipment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>including crystallization tools, dewars, traveling dewars, longterm storage dewars, glassware, cart, ice buckets, etc.</td>
<td>$25,000.00</td>
<td></td>
</tr>
<tr>
<td><strong>Consumables - 2 yrs</strong></td>
<td>$50,000.00</td>
<td>per year</td>
</tr>
<tr>
<td>Total</td>
<td>$367,900.00</td>
<td></td>
</tr>
</tbody>
</table>

**Equipment the lab will need access to but does not necessarily have to own.**

<table>
<thead>
<tr>
<th>Item</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Laminar flow hood for cell culture/incipurators (37C with CO monitor &amp; 27C)/scope for counting cells</td>
<td></td>
</tr>
<tr>
<td>6x1L centrifuge</td>
<td></td>
</tr>
<tr>
<td>ultracentrifuge - 25-100k rpm</td>
<td></td>
</tr>
<tr>
<td>centrifuge - 5-20K rpm</td>
<td></td>
</tr>
<tr>
<td>ice machine</td>
<td></td>
</tr>
<tr>
<td>large dishwasher</td>
<td></td>
</tr>
<tr>
<td>cold room access for mounting crystals at a microscope, running columns, sonication</td>
<td></td>
</tr>
</tbody>
</table>
Verbal discussions allow both sides to present their expectations but when you come to an agreement, GET IT IN WRITING!

Several offers

Compare institutions
Reputation
Quality of students
Collaborations
Teaching load
Facilities
Start-up
Salary
Quality of life/Geography
Gut feeling

"Good negotiations mean good interaction skills,"
Keith Yamamoto, Chair of Cellular and Molecular Pharmacology,
University of California, San Francisco
Starting Out

- LANDING AN ACADEMIC JOB: The process and the pitfalls. Jonathan A. Dantzig
  http://quattro.me.uiuc.edu/~jon/ACAJOB/academic

- Making the Right Moves: A practical guide to scientific management for post-docs and new faculty (Burroughs Wellcome Fund & Howard Hughes Medical Institute)
  http://www.hhmi.org/resources/labmanagement/

- Is work hell? Life in industrial research. John Wilkes
  http://www.hpl.hp.com/personal/John_Wilkes/papers/#CMUemigrationCourse

- Advice. Michael Ernst