How to Give a Job Seminar and Why It's Not the Same as a Regular Scientific Presentation

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Schrader Career Timeline

Academic
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B.A Ph.D. Post Doc

Asst Assoc Prof

Dean

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Ligand XenoPharm Consulting Corporate

Fishing Guide

OITE Trainees Toolkit Jan 2009
THE OBJECT IS TO GET THE JOB OFFER

That requires a vectorial exchange of scientific information between YOU and the Audience
The Job Search Committee

- Most of the search committee don’t have a clue about your field
  - Few know your boss
  - Few know your techniques
  - None know your jargon
- They have defined criteria to meet
  - What technology you will anchor
  - What project(s) you will serve on to start
  - What headcount you will inherit
  - What scientific resources you will need
  - Whose former lab space you are getting
You Must Stand Out in the Crowd

- Are you just a worker in a big factory?
- What exactly did YOU do?
- Did you think up the ideas or just do what you were told?
- Did you collaborate?
- Did you ride everybody’s coattails?
- Are you a good thinker?
- Can you discuss science interactively?
Before You Go
Presentation Skill

• PRACTICE your seminar, and not just in front of the lab
• It ought to be understandable to a reasonably-well-informed scientist, not just a specialist
• Practice your delivery
  – Tape record, or ask your friends to tell you if you say “ughhh” all the time.
  – Practice with the pointer; don’t use it like a light saber.. It is very distracting!
Before You Go
Preparing the Slides

• SIMPLIFY and LINEARIZE
  – You are trying to educate them about your complex studies.
  – Cut and edit out panels of images, etc., to show ONLY the salient features needed to bring the listener to a solid conclusion.
  – Delete side issues
  – Any slide that you pass over in under 15 seconds is OUT!

• Use procedural cartoons to describe methods
  – Skip the tiny details, unless they are critical and you developed them.
Overview of the Pathway Triggered by Xenobiotic Sensor Proteins

Before You Go
Reviewing the Data You’ll Present

• Don’t try to convince the audience of something that is unsupported by the image in front of them, e.g.:
  – Overlapping SEM error bars mean NO SIGNIFICANT DIFFERENCE, not “slight effect”
  – Gel bands that are not different to the eye can’t be explained away by “it doesn’t show very well in this particular gel, but…”
  – Companies want to see dose-response curves and error bars, not bar charts

• Review the human disease context of your work and be prepared to discuss that aspect if it comes up
Dose-response Curves of Reference Drugs
Gal4-SXR Chimera Assay

Luciferase Activity vs. Concentration (M)

- Hyperforin
- Rifampin
- Clotrimazole
- Dexamethasone
CAR Mediates Liver Enlargement (Hepatomegaly)

![Graph showing relative liver weight (% of body weight) for different conditions.]

- Normal Mouse
- CAR Knockout

- Oil
- PB
- TC

For each condition, the graph shows data for both male (M) and female (F) mice.
Before You Go
Checking for Antagonism

• Are any of the people you’re going to see major players in your field?
  – Don’t give away any of the juicy lab secrets unless you and your boss are in agreement
  – Be sure to know in advance if they are likely to be in agreement with you or not

• Do a quick check for late-breaking articles
  – Someone will want to impress their own boss by asking you about an article that just appeared.
The Job Seminar
Overall Organization and Grammar*

• **FIRST 10 MINUTES** (THIRD PERSON PLURAL: “They did this or that”)
  – History of the field, and where your boss’s lab fits into the story.
  – END WITH where the field stood when you joined the lab

• **MIDDLE 30 MINUTES** (FIRST PERSON SINGULAR: “I did this, I found that, I concluded xyz”)
  – What you and your boss decided you should work on
  – How you approached it, what you found
  – How you interpreted the data and where you went next
  – END WITH what we know now that you’re done

• **LAST 5 MINUTES** (FIRST PERSON PLURAL: “Our lab is planning to do xyz next, following up on my work”)

* Use the ACTIVE VOICE, “we found” not “it was found that”
Expectations During the Seminar

- **MAKE IT FINISH IN LESS THAN 50 MINUTES!**
  - Academics have to get back to something else
  - Company seminars often run over one hour
- **They will interrupt to ask pointed questions**
- **Don’t give answers unless you are sure.**
  - Especially, they may ask questions about drugs or brand names.. Don’t guess
  - Don’t argue or tell them they’re wrong. Stick to your guns, but say “that’s a good point…”
  - If they suggest a good experiment, or ask if you’ve done something, give the answer if it’s been done.
  - Don’t try to snow them by saying that it has been done, because the next question will be “what were the results?"
- **You can’t know everything**
GETTING AN ACADEMIC JOB
The Real World of Academics
You Get Ahead Based Upon Three Aspects of Your Job:

• Research
  – Distinctive area within the department
  – Grants
  – Publications

• Teaching
  – Graduate or undergraduate?
  – Medical curriculum

• Service function
  – Committees
  – Core Laboratory
The Search Committee will be asking themselves “Can this person....”

- Compete in **science** in your chosen field
- Anchor a **key technology** and/or run a core facility
  - Gene transfer, knockout mouse, tissue culture
- **Teach** a required course, especially in medical school?
  - Histology, anatomy, pharmacology
  - “New curriculum” team-taught combined approach.
  - Does your work have “clinical relevance” to a 21-year-old first-year medical student?
- **Write/think/plan/self-promote** well enough to become **fully funded** from external sources within a couple of years and stay that way?
GETTING A COMPANY JOB
Scientific Research in a Company

- **Good News**
  - Teamwork
  - Fewer pressures to publish
  - Planned approach
  - No budget problems
  - Access to new methodology
  - Stock options, salary

- **Bad News**
  - Shared science
  - Can’t publish the hot stuff
  - More paperwork
  - Deadlines
  - Ultimate control by non-scientists
  - No students, fellows
What A Company Hopes to Find

- TEAM PLAYER
- Reliable
- On-time performance
- Good “people skills”
- Smart, self-correcting
- Able to accept criticism and make corrections
- Future potential
- Excellent scientific capabilities
Research Distinctions Between Early-stage and Late-stage Companies

- **Early-stage (e.g., startup biotech)**
  - Much can be published, presented at meetings
  - Latitude to pick the direction and approach
  - Work much like an academic lab
  - You will multi-task

- **Late-stage (e.g., big pharma, big biotech)**
  - Key work is private, only off-hours science is cleared for public
  - Direction according to team needs and planning
  - Stratified levels of authority like Gov’t.
  - Keep eye on the ball
Homework Before You Visit

• **Corporate Website**
  – Corporate Mission: How do they plan to make money?
  – Scientific Mission: What is their technology base?
    …Is it unique?
    …Is it proprietary?
  – Scientific Founders
  – Scientific Advisory Board Membership
  – Corporate Board Membership
  – Patent Estate

• **S.E.C. 10K Form**
  – Significant matters, compensation of senior management, investors, equity partners
The Job Interview Day:  
Doctoral Level

- No more than a day, maybe a half
- Seminar in biotech, maybe not in Big Pharma
- You may be taking someone else’s job
  - They may not know it
  - They may interview you
- You will meet people on all levels
- You’ll be done before 5 pm
  - Exit interview with HR person
  - No entertainment likely
  - No fraternity rush
- They will collect opinions, usually in writing
Composition of the Search Committee

- Your direct supervisor
- Junior hotshot most familiar with current research in your area
- Other team members with whom you will work
- Some junior people, especially if they are known to be good interviewers
- Human Resources person who guides the process
The Search Committee will be asking themselves “Can this person….”

• IN ACADEMICS
  – Compete in science in your chosen field
  – Anchor a key technology and/or run a core facility
  – Teach a course, especially an entry-level requirement
  – Self-promote to attract attention, fellows and grants
  – Publish often and well
  – Become fully funded and stay that way?

• IN A BUSINESS
  – Know a competitive scientific field
  – Anchor a key technology and/or run a process
  – Communicate effectively by both oral and written means
  – Get along in a team environment
  – Plan and meet timelines
  – Do work that makes money for shareholders
The Job Interview

• Scientific
  – Are you well-versed in your field?
  – Can you discuss the type of work they want you to do?
  – Are you familiar with their published work?
  – Are you familiar with the mechanism of action of their drugs or technology?

• Corporate
  – Are you under/over-qualified?
  – Will you be likely to stay?
  – Are you a team player?
  – Do you look like one of “them?”
Do’s and Don’t

• DO ask about their published work
• DO be sure that you meet your direct supervisor
• DO ask about your opportunities for advancement

• DON’T ask about their non-public work
  – They will not tell you how far along they are
  – They won’t discuss proprietary methods or models
  – Their discussions may seem rather vague compared to discussions in academics

• DON’T expect them to keep the job open while you finish up your work

• DON’T expect to nit-pick over the size of your office, amount of lab space, etc… that only works in academics
What They Don’t Particularly Care About

• Your willingness to stay forever at their company
  – People move frequently, giving only two weeks’ notice

• Your outside life
  – Few will deal with your needs for flexible working time
  – All will deal with staggered start-stop time

• Your other business dealings
  – You are paid full-time; you cannot have dealings with competitors

• Your other scientific interests
  – You can work on stuff after hours; rarely do they want to even know about it.
  – You CANNOT bring or send out clones, reagents, protocols from any outside source… especially ones you made before.
The Job Offer

- It will come from the Human Resources people, not from your supervisor.
- It may come at the end of the day, but usually by FEDEX within a day or two.
- There will be a description of your reporting, your salary, stock options.
- There will be a drop-dead date; it can be slightly extended but not for long.
- Clarify any uncertainties: relocation payments, bonus (rare) or anything else.
Welcome to MicroPanDNALogix

YOU ARE HERE

Staff Scientist
One Assistant

OITE Trainees Toolkit Jan 2009
... and finally,

DON’T SCREW UP!