Maximizing your Mentor Relationships

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Disclosures
Research support: Health & Society Program, Harvard School of Public Health (RWJ Foundation);
UCLA/USC Center for Biodemography (NIH/NIA)
NIH/NIOSH; NIH/NIA
Investigator-initiated research support from industry: Cephalon Inc., Sepracor Inc.
Unrestricted education grants: Takeda Pharmaceuticals
Consulting: Takeda Pharmaceuticals, Dinsmore LLC

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BWH Office for Research
Careers- Center for Faculty Development
Objectives

- Review my science and personal perspective on mentoring
- Introduce the National Postdoc Association
- Provide some postdoc career trajectory data
- Maximizing your mentor relationships
Adequate Sleep Duration and Quality, A Positive Health Behavior Impacting Chronic Disease Risk

Seminar for the The Providence Sleep Research Interest Group (PSRIG)

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Work-Family-Health: workplace, CVD risk, sleep

Exposure: manager openness and flexibility towards employee work-family needs

CVD risk

models control for age, gender, wage, education, race/ethnicity, worksite

Sleep Duration
(actigraphy)

Berkman & Buxton et al, J Occ Health Psychology in press
“Structured Oversight” for postdocs
- Use of an Individual Development Plan (IDP)
- Professional development programming
- PDOs and PDAs

Implementation of recommended ‘best practices’

Enhanced data collection
- Individual, institution and national

Resource development

Community-building
Figure 2-28

Postdocs (thousands)

- All others
- Social/behavioral sciences
- Engineering
- Physical sciences
- Medical/other life sciences
- Biological sciences


Science and Engineering Indicators 2006
Why postdoc?

- **Recent Ph.D.s pursue postdoctoral positions**
  - Out of necessity to promote their career development
  - Because a research job after postdoc(s) requires experience
  - For Time to publish new research

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Stay in academics?</td>
<td>82%</td>
<td>78%</td>
<td></td>
</tr>
<tr>
<td>With definite plans?</td>
<td>15%</td>
<td>30%</td>
<td>35%</td>
</tr>
<tr>
<td>Postdoc:</td>
<td></td>
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</table>

*Life Sciences* 67%

*Physical Sciences* 55%
ARISE:
Advancing Research in Science and Engineering

The American Academy of Arts and Sciences

http://www.amacad.org/arisefolder
## Increasing amount of NIH grant revisions

<table>
<thead>
<tr>
<th>FY</th>
<th>Total</th>
<th>Original</th>
<th>First (A1)</th>
<th>Second (A2)</th>
<th>Third or later (A3+)</th>
<th>Original</th>
<th>First (A1)</th>
<th>Second (A2)</th>
<th>Third or later (A3+)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>1,731</td>
<td>1,492</td>
<td>216</td>
<td>21</td>
<td>2</td>
<td>86.2</td>
<td>12.5</td>
<td>1.2</td>
<td>0.1</td>
</tr>
<tr>
<td>1990</td>
<td>924</td>
<td>535</td>
<td>281</td>
<td>91</td>
<td>17</td>
<td>57.9</td>
<td>30.4</td>
<td>9.8</td>
<td>1.8</td>
</tr>
<tr>
<td>2000</td>
<td>1,716</td>
<td>1,013</td>
<td>532</td>
<td>169</td>
<td>2</td>
<td>59.0</td>
<td>31.0</td>
<td>9.8</td>
<td>0.1</td>
</tr>
<tr>
<td>2007</td>
<td>1,633</td>
<td>453</td>
<td>674</td>
<td>503</td>
<td>3</td>
<td>27.7</td>
<td>41.3</td>
<td>30.8</td>
<td>0.2</td>
</tr>
</tbody>
</table>

The majority of first-time investigators receive their grants only after resubmitting them at least once. In 2007, less than 30 percent of grants to first-time investigators were awarded on their first attempt, compared to 1980 when 86 percent of grants to first-time investigators were awarded on their first attempt. Resubmitted proposals with amendments (A) are A1 (amended once), A2 (amended twice), and A3 (amended three or more times). SOURCE: Data as of January 25, 2008, provided by NIH.
The age distribution of NIH-funded principal investigators (represented by gray bars and line) closely models that of medical school faculty (represented by the dark blue lines). In addition, there has been a dramatic shift to older ages for both the NIH principal investigators and medical school faculty from 1980 (represented by the dashed gray and dark blue lines, respectively) to 2006 (represented by the gray bar graph and solid dark blue line). In 2006 the average age of NIH-funded principal investigators was 50.8 (4), similar to the average of medical school faculty 48.7 (3). For the same time period the average age of first assistant professors was 37.7 (1), but the average age of new principal investigators at NIH was 42.4 (2).

SOURCE: Data from NIH 2007a.
The Progress Report must describe Mentoring activities including:

- Career counseling
- Training in preparing grant applications
- Guidance on ways to improve teaching skills
- Training in Research Ethics
“Evaluation and Tracking Component:

The application must describe

- a strong evaluation and tracking component ... review and determine the effectiveness of all aspects of the program
- a system for tracking trainees for a 10-year period following their completion of the program completion to determine success or failure of the program.
- information on program publications, grant proposals, and awards, and career trajectory of trainees who were supported by the program.
- a prospective evaluation plan for process and outcome measures”
“Evaluation and Tracking Component: (continued)

- Outcome measures ... may include
  - relevant positions obtained
  - current activities related to research
  - publication record
  - success rate of applying for and
  - obtaining Federal and non-Federal research grant support

- The evaluation and tracking report should be included annually as part of the Progress Report, in future competing continuation applications, and as part of the Final Progress Report.”
Critical Resources on mentoring

Worth your time

- *A brief history of mentoring.* Barondess JA. TACCA 1995

- ARISE Report. American Academy of Sciences


- *(Mentees)* nationalpostdoc.org

- *Mentoring in Academic Medicine: A Systematic Review*  
  Sambunjak et al JAMA 2006
RESEARCH ENTERPRISE
SYSTEMIC FACTORS

INSTITUTION
• policy and procedures
• norms and culture
• supportive environment

LABORATORY
• Mentor/Supervisor
• Colleagues
• Staff and Facilities
• Funding / Resources

FUNDERS

INSTITUTION

• policy and procedures
• norms and culture
• supportive environment

LABORATORY
• Mentor/Supervisor
• Colleagues
• Staff and Facilities
• Funding / Resources

SOCIETIES
• Interpersonal exchange
• Group participation

• HARVARD
• Catalyst?
• Intellectual capital

INDIVIDUAL-LEVEL FACTORS

CHARACTERISTICS
• Age
• Sex
• Nativity

SES & BEHAVIORS
• Income
• Education & Training
• Employment
• Family

INDIVIDUAL BEHAVIORS
• Work Ethic
• Motivation
• Work to Live?
• Health Behaviors

TRAINING OUTCOMES

Satisfaction
Productivity
Funding
Network

Exchange

Transformational Findings
Annual Career Conference:

BWH POSTDOC policies in effect NOW

- http://bwhbri.partners.org/OPRC/Benefits_And_Policies.asp
Leadership and HMS promotion criteria?
Annual Career Conference: POSTDOC Responsibilities

Required;
- Abide by, adhere to and comply with all policies, rules, regulations, standards and guidelines
- Complete Intellectual Property certification
- Demonstrate professional workplace behavior

Recommended and Expected;
- Take proactive ownership of career development and research training
- Participate in the Annual Career Conference
Serve as primary agent for guidance and supervision of advanced training and scholarly pursuits of Postdoc

Detail the responsibilities and expectations of Postdoc

Provide Postdoc mentorship and guidance toward achieving independence

Provide career advice and job placement assistance

Participate in Annual Career Conference
WHAT IS AN IDP?

Individual: Unique training and career goals of each fellow

Development: Improvement / maturation needed to achieve the individual’s goals

Plan: Specific steps rather than a random walk
OBJECTIVE RESULTS

- Sigma Xi Postdoctoral Survey
- Those with a plan were:
  more satisfied
  more productive
  less likely to have conflict with PI
**Individual Development Plan: BASIC STEPS**

<table>
<thead>
<tr>
<th>...for Mentees</th>
<th>...for Mentors</th>
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<tbody>
<tr>
<td><strong>Step 1:</strong> Conduct a “Self Assessment”</td>
<td>Become familiar with available opportunities</td>
</tr>
<tr>
<td><strong>Step 2:</strong> Survey opportunities</td>
<td>Discuss opportunities</td>
</tr>
<tr>
<td><strong>Step 3:</strong> Write an IDP</td>
<td>Review IDP and help revise</td>
</tr>
<tr>
<td>Share IDP with mentor and revise</td>
<td>Establish regular review of progress</td>
</tr>
<tr>
<td><strong>Step 4:</strong> Implement the plan</td>
<td>Help revise the IDP as needed</td>
</tr>
<tr>
<td>Revise the IDP as needed</td>
<td></td>
</tr>
</tbody>
</table>
Step 1. Conduct a Self Assessment

- Evaluate your personal values, skills, and interests.
- Identify your strengths and areas that need improvement.
- Get feedback from lab associates, friends, spouse, parents.
VALUES

- qualities, ideals, or principles that guide how we act
- www.mcw.edu/research/postdoc
  Virtual Career Center
PROFESSIONAL SKILLS

- Core Science Knowledge
- Lab Skills
- Analytical Skills
- Teaching Skills
- Communication Skills
- Management Skills
- Career Development Skills
PERSONAL INTERESTS

❖ What is your passion?
CAREER SATISFACTION

SKILLS  VALUES  INTERESTS
Step 2. Career Exploration

- Identify realistic career opportunities.
- Determine developmental needs by comparing current skills and strengths with those needed for potential career choices.
Postdoc Career Outcomes

- Share of recent doctorate holders hired as full-time faculty
  - FACULTY All US institutions
    - 1972 74%  
    - 2003 44%  
  - FACULTY Research universities
    - 1972 60%  
    - 2003 31%  
  - S&E PhDs as postdocs
    - 1972 13%  
    - 2003 34%  

- At research universities, faculty-level jobs lacking the possibility of tenure have risen from 55% of new hires in 1989 to 70% in 2003. The probability that a Ph.D. recipient under 35 will obtain a tenure-track job has fallen from 10% in 1993 to 7% in 2003.

- OPTIONS: law, science writing, science policy, and secondary-school teaching.
CAREER PREPAREDNESS KIT

- Books (www.mcw.edu/research/postdoc)
- ScienceCareers.org
- Science Alliance: Careers
- Professional Societies
- Seminars
- Personal Interactions
  - Casual interactions
  - Informational interview
- Mentor
- National Postdoctoral Association
- NSF/NIH Websites
NETWORKING

- Connecting to people with useful information
- Purposeful
- Two way
- 30-second elevator pitch
Scientific Meetings: ideal networking opportunity!

- Read agenda and abstracts prior
- Make it a goal to expand your network
- Poster sessions are optimal
- Go to exhibits
- Attend special interest meetings
INFORMATIONAL INTERVIEW

- Richard Bolles - What Color is Your Parachute?
- Get inside information on career choices
- Analogy to trying on clothes before buying
- Have a list of specific questions
- Not a job interview
Step 3. Write an IDP

- Identify your career trajectory.
- List specific skills and strengths that you need to develop.
- Define the approaches and time frames to obtain the skills (e.g. courses, technical skills, teaching, supervision).
- Discuss draft IDP with mentor and revise.
“The discipline of writing something down is the first step toward making it happen. In conversation you can get away with all kinds of vagueness and nonsense, often without even realizing it. But there’s something about putting your thoughts on paper that forces you to get down to specifics. That way, it’s harder to deceive yourself or anybody else.”

Lee Iacocca
Step 4. Implement Your Plan

- Put your plan into action.
- Revise the plan as necessary.
- Review the plan and your progress with your mentor regularly.
- Formal document helpful.
What have you accomplished over the past year?

How has your plan changed?

What are your plans for the future?
1. Please define the key elements of your current role

2. Please list/highlight your major achievements and new responsibilities and to whom you report for this activity.
   - Administrative
   - Research
   - Teaching
   - Other (please specify)

3. What were your top three professional goals for AY 08-09? Please list and discuss in order of importance. To what degree did you achieve your goals this past academic year?
   (Completely, Somewhat, Failed)
4. What are your top three professional goals for AY 09-10? Please list and discuss in order of importance.

7. Please outline your longer-term career goals, i.e. five years and beyond.
5. What aspects of your position have **provided you with the most satisfaction** in AY 08-09? Please list your top three in order of importance.

6. What aspects of your position or the working environment in AY 09-10 **would you most like to improve/change**? Please list your top three in order of importance.

8. Do you feel that your current work responsibilities **allow for work-life balance**?

9. **What type of support** would be helpful to you in reaching your goals?

10. Do you feel that you have a **career path at BWH**?
BWH FACULTY Self-Evaluation:
Part I: mentoring and leadership

11. Do you have (a) mentor(s)?

12. Please indicate if your mentor(s) is/are advising you in all areas for which you feel you need advice or development or whether you would like additional sources:

13. If you are mentoring any individuals, please list their names and positions. Please do not list trainees unless you are specifically mentoring them.

14. Please describe what type of leadership or participative roles in the division or department are of interest to you.

15. Please feel free to add any additional comments including feedback on the new format.
Applied Socio-ecological Model

**RESEARCH ENTERPRISE SYSTEMIC FACTORS**

**FUNDERS**

**INSTITUTION**
- policy and procedures
- norms and culture
- supportive environment

**LABORATORY**
- Mentor/Supervisor
- Colleagues
- Staff and Facilities
- Funding / Resources

**SOCIETIES**
- Interpersonal exchange
- Group participation

**HARVARD**
- Catalyst?
- Intellectual capital

**INDIVIDUAL-LEVEL FACTORS**

**CHARACTERISTICS**
- Age
- Sex
- Nativity

**SES & BEHAVIORS**
- Income
- Education & Training
- Employment
- Family

**INDIVIDUAL BEHAVIORS**
- Work Ethic
- Motivation
- Work to Live?
- Health Behaviors

**TRAINING OUTCOMES**

- Satisfaction
- Productivity
- Funding
- Network

**EXCHANGE**

Transformational Findings