Mentoring Faculty on Proposal Writing

A Workshop for Department Chairs
Pam O’Neil

- Associate Provost
- PI and Director of the ADVANCE Program
NSF ADVANCE Institutional Transformation Award Program:

Funds academic institutions to develop innovative programs to increase the representation and advancement of women in academic science and engineering careers.
ADVANCE Program at Brown:

Supports new initiatives for formal faculty development programs to ensure that all faculty—women and men—have access to the types of resources that cultivate opportunities for success at the highest levels in academia.
### Results from the Tenure-Track Job Satisfaction Survey

<table>
<thead>
<tr>
<th>How Helpful Would You Find:</th>
<th>Female</th>
<th></th>
<th>Male</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>UH</td>
<td>SH</td>
<td>VH</td>
<td>UH</td>
</tr>
<tr>
<td>Formal Mentoring</td>
<td>6%</td>
<td>39%</td>
<td>56%</td>
<td>8%</td>
</tr>
<tr>
<td>Assistance in Obtaining Federally Funded Grants</td>
<td>0%</td>
<td>31%</td>
<td>69%</td>
<td>10%</td>
</tr>
<tr>
<td>Travel Funds to Present Papers or Conduct Research</td>
<td>0%</td>
<td>11%</td>
<td>89%</td>
<td>10%</td>
</tr>
</tbody>
</table>

UH = unhelpful, SH = somewhat helpful, VH = very helpful
ADVANCE Initiatives:

• Mentoring Program
  • Normalizing mentoring
  • Development intra-departmental mentoring

• Research Opportunities Coordinator
  • Full-time altering position working with administrators and faculty
Career Development Awards:

• Fund faculty plans to increase their network of collaborators
  • Travel to meet with collaborators
  • Working groups to develop collaborative proposals
  • Bringing in seminar speakers to reduce isolation
  • International collaborations
Career Development Awards:

• **2007 Winners**
  
  • Carthene Bazemore-Walker, Assistant Professor of Chemistry, $15,000
  
  • Jennifer Dworak and Iris Bahar, Assistant and Associate Professors of Engineering, $8,685
  
  • Rebecca Page, Assistant Professor of Molecular Biology, Cell Biology & Biochemistry, $12,739
  
  • Vesna Mitrovic, Assistant Professor of Physics, $8,800
  
  • Sharon Swartz, Associate Professor of Ecology and Evolutionary Biology, $14,968
  
  • Zhijin (Jean) Wu, Assistant Professor of Community Health, $8,200
Career Development Awards:

- **2008 Winners**
  - Marcy Brink-Danan, Assistant Professor of Anthropology & Judaic Studies, $14,650
  - Erika Edwards, Assistant Professor of Ecology & Evolution Biology, $11,010
  - Diane Hoffman-Kim, Associate Professor of Molecular Pharmacology, Physiology, & Biotechnology, $14,995
  - Kate Lapane, Association Professor of Community Health, $15,000
  - Carmen Marsit, Assistant Professor of Pathology & Laboratory Medicine, $13,000
  - Meenakshi Narain, Associate Professor of Physics, $15,000
  - Ben Raphael, Assistant Professor of Computer Science, $11,453
  - Kristi Wharton, Associate Professor of Molecular Biology, Cell Biology, & Biochemistry, $14,315
  - Jessica Whiteside, Assistant Professor of Geological Sciences, $14,500
Event Speakers

Pam O’Neil
Associate Provost and Director of ADVANCE Program

Clyde Briant
Vice President for Research

Anne Windham
OVPR Proposal Coordinator

Tim Leshan
Director of Government Relations & Community Affairs

Edward Hawrot
Professor of Molecular Pharmacology, Physiology & Biotechnology

Amy Robb
ADVANCE Program Coordinator of Research Opportunities

Mary Hanifin
Executive Director of Corporate and Foundation Relations

Diane Hoffman-Kim
Associate Professor of Molecular Pharmacology, Physiology & Biotechnology

Regina White
Associate Vice President for Research Administration
Clyde Briant, Vice President for Research

- Importance of this workshop
- Department chairs are the first helping hand to reach out to faculty
Anne Windham

- Proposal Coordinator, Research Initiatives
  Office for the Vice President of Research
- Anne_Windham@Brown.edu, 863-2129
The role of OVPR’s Research Initiatives:

“To identify and help secure the resources needed to support the research work of the Brown community.”

- Proposal writing support
- Management of restricted submission funding opportunities
- Management of internal funding (Seeds & Salomons)
Proposal Writing Support:

- General editing
- Developing management & evaluation plans
- Developing plans to address broader impact issues
- Garnering institutional data and letters of support
Management of Restricted Funding Opportunities:

Government Agencies (NSF, NIH, NEH)

Private Foundations (Burroughs Wellcome Fund, John Merck, Gerda Henkel Prize)

General announcement made to all relevant faculty

Invitations for nominations from department chairs

http://research.brown.edu/rschadmin/funding_awards.php
Management of Internal Funds:

- **Salomon Grants**
  - Up to $15,000
  - Usually 1 investigator
  - Preference given to junior faculty and those who have not recently received a Salomon Grant
Management of Internal Funds:

- **Seed Grants**
  - Up to $100,000
  - Multi-investigator; interdisciplinary projects
  - Potential for external funding support
Proposal Writing Workshops:

• What would you like to see?
• What does your faculty need?
Issues of Concern:

• Overall budget tightening
• Research funding tightening
• Number of grant applications going up
Budget Tightening:

- President’s Budget—focus on the war
- Deficit / debt / economy
- Congressional Pay-Go Rule
Current Research Funding Climate

Where Brown Gets Its Research Funding:

FY 2006 Proposals
56.2% NIH/DHHS
12% NSF
2.5% DOE

FY 2006 Awards
45.5% NIH/DHHS
16.6% NSF
3.1% DOE

FY 2007 Proposals
54.8% NIH/DHHS
15.1% NSF
1.5% DOE

FY 2007 Awards
43.9% NIH/DHHS
15.9% NSF
3% DOE
FY 2008 Appropriations:

- NIH—$29.5 Billion
  - Flat growth over FY 2007
- NSF—$6.06 Billion
  - 2.5% over FY 2007
- DoE—$4 Billion
  - 5.8% over FY 2007

Office of Science

- NASA—$17.3 Billion
  - 3% over FY 2007
President’s Proposed FY 2009 Budget:

- NIH—$29.4 Billion
  - 0% increase
- NSF—$6.8 Billion
  - 13% increase
- DoE—$4.7 Billion
  - 18.9% increase

Office of Science

- NASA (Science, Aeronautics & Exploration)—$8.3 Billion
  - 20.6% decrease
Current Research Funding Climate

NIH Funding, Percent Increase Constant Dollar

Tim Leshan
President’s FY09 Budget Represents a Loss of More Than $3.6 Billion Purchasing Power Since FY03
Number of Research Project Grants 1998-2007

Source: NIH Office of Extramural Research Website

Tim Leshan

Source: NIH Office of Extramural Research Website
Current Research Funding Climate


Source: NIH Office of Extramural Research Website
Current Research Funding Climate

A Broken Pipeline?

Flat Funding of the NIH Puts a Generation of Science at Risk.

A Follow-up Statement by a Group of Concerned Universities and Research Institutions

March 2008
Conclusion:

• Decreased funding—increased demand
• Brown has increased its visibility on these issues, but plans to do more
• Potential for the new Administration
NIH Grant Mechanisms and Strategies:

• General importance of seeking out information and advice from NIH program officers—whether to go with an RO1 or R21 can depend on the institute

• E-mail first with a one-page summary and then follow up with a phone call

• Program officers can help identify appropriate study sections for review and other program officers with portfolio interests in the relevant
NIH Grant Mechanisms and Strategies:

• Put forward the most compelling arguments that you can without worrying about possible overlap issues—those can be dealt with later

• Significance and impact remains a major criterion for study section scoring

• Resubmissions: The response to previous critiques remains a criterion and so it’s important to emphasize how you are incorporating the suggestions from the critiques in your revision
Funding Opportunity Resources

Amy Robb

- Research Opportunities Coordinator for ADVANCE Program
- Amy_Robb@brown.edu or Research_Opps@brown.edu; 864-3453
Databases for finding research opportunities:

- Sponsored Programs Info Network (SPIN)  
  http://research.brown.edu/rschadmin/spin.php
  - SPIN Plus
  - Genius
  - SMARTS
- Grants.gov
Grant Proposal Mentorship should focus on:

- Writing proposals that target appropriate audiences
  - Scientific language
  - Keywords
- Promoting junior faculty networking with federal agencies
  - Utilizing senior faculty and institutional relationships
- Making junior faculty available to collaborators
  - Directory of Research and Researchers at Brown
    http://research.brown.edu/research/search.php

Clyde Briant
Corporate & Foundation Relations offers:

• A comprehensive set of services:
  • Proposals that reflect the priorities of the Plan for Academic Enrichment; or
  • Other $500,000+ projects designated as priorities by the President or the Provost
• Limited services for all other projects
Contact CFR prior to submission to ensure that:

- No conflicts exist
- Your proposal meets the funder’s guidelines
- Existing relationships are leveraged
Broader Impact: Existing Resources

- **Education Outreach**
  - Tehani Collazo, Director of Education Outreach
    Tehani_Collazo@brown.edu, 863-3074

- **Swearer Center for Public Service**
  - Kerri Heffernan, Senior Associate Director
    Kerri_Heffernan@brown.edu, 863-1529

- **Dean of the College**
  - Karen Haberstroh, Director of STEM Outreach
    Karen_Marie_Haberstroh@brown.edu, 863-2858
Contact CFR

• To discuss your ideas and goals related to private foundation and corporate support, please contact us:
  • Mary Hanifin, Executive Director
    Mary_Hanifin@brown.edu, 863-3904
  • Elizabeth Francis, Director of Corporate and Foundation Relations, Division of Biology and Medicine
    Elizabeth_Francis@brown.edu, 863-2914
  • Meghan Lane Donnelly, Assistant Director
    Meghan_Donnelly@brown.edu, 863-2636
  • http://advancement.brown.edu/campaign/cfr
Case Study

How Nerve Cells Find Their Way: Nerve Growth in Complex Environments

Diane Hoffman-Kim, Ph.D.
Department of Molecular Pharmacology, Physiology, and Biotechnology
Center for Biomedical Engineering
Brown University
Case Study

How a Faculty Member Found Her Way: Faculty Growth in a Complex Funding Environment

Diane Hoffman-Kim
## Case Study

### Apply, Apply, Apply

<table>
<thead>
<tr>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
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<tr>
<td>Searle</td>
<td>Beckman</td>
<td>NSF Career #1</td>
<td>NSF Career #2</td>
<td>NSF Career #3</td>
<td>(Reeve Co-I)</td>
<td></td>
</tr>
<tr>
<td>RI Fndn</td>
<td>Salomon</td>
<td>COBRE GG sub</td>
<td>COBRE prot</td>
<td>Reeve #2</td>
<td>Seed</td>
<td></td>
</tr>
<tr>
<td>Reeve #1</td>
<td>Whitehall #1</td>
<td>COBRE prot</td>
<td>R21 gradient</td>
<td>Whitehall #2</td>
<td>(NSF-nanoCo-I)</td>
<td></td>
</tr>
<tr>
<td>Whitaker #1</td>
<td>Whitaker #2</td>
<td>Salomon</td>
<td>Paralyzed Vets Amer</td>
<td>HHMI</td>
<td></td>
<td></td>
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<tr>
<td>McKnight</td>
<td>R01 micropatt</td>
<td><em>(Seed Co-I)</em></td>
<td>RI-INBRE</td>
<td>(Epscor Co-I)</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>R01 gradient</td>
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<td>NSF-nano</td>
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<tr>
<td></td>
<td>Hood</td>
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<tr>
<td></td>
<td>R21 #1</td>
<td></td>
<td>R21 #2</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>R21 #2</td>
<td></td>
<td>R21 biomim</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>R01 #1</td>
<td></td>
<td>R01 #2</td>
<td>R01 #3</td>
<td></td>
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</tr>
</tbody>
</table>

Diane Hoffman-Kim
The Data:

- Distinct Projects: 6-7 (+ collaborations)
- Applications: 36
- Not Eligible: Career < 2003, Coulter
- Agencies Applied to Multiple Times: 6
- Foundation Applications: 17
- Federal Applications: 14
- Grants Funded: 9
  (3 Brown, 1 sub-project, 2 foundation, 2 federal,)
Interface: Junior Faculty—Funding Agency

- Grant workshops
- Conversations with program officers
- Study section selection
- Identification as junior faculty
- Study section service if possible
Case Study

Interface: Junior Faculty—Department Faculty

- Give junior faculty lists of funding opportunities
- Give junior faculty old grants, responses to critiques
- Read junior faculty’s
  - Grant proposals
  - Specific aims
  - Critiques
- Give junior faculty administrative help
- Recommend junior faculty for study section
- Identify as junior faculty (just say no)
Learnable, Teachable, Valuable (Not Always Obvious) Skills:

- Grantsmanship
- Importance of innovation, translation, mechanism (specifics for your field)
- When to submit initially
- Track record, collaborators, consultants, letters of support
- Resubmit quickly with well-developed response
- Submit same project to multiple agencies
- Balance
- Self-promotion
Case Study

Interface: Junior Faculty—Department Faculty

Persistence, patience, perspective, good humor, & a cup of coffee goes a long way…
• How Does One Mentor for Compliance?
  • The compliance environment
• Responsible Conduct of Research
  • The elements of compliance
• Questions/Hypothetical Situations
Evaluation Form:

- Feedback for today’s program
- Suggest topics for future workshops