

# **PERSPECTIVES FROM A RECENT POSTDOCTORAL FELLOW**

**Revitalizing Graduate STEM Education for the 21<sup>st</sup> Century  
National Academies of Sciences, Engineering, and Medicine  
Board on Higher Education and Workforce  
Second Committee Meeting  
March 24, 2017**

**Barbara J. Natalizio, Ph.D.  
AAAS Science and Technology Policy Fellow at National Science Foundation**



# NATIONAL POSTDOCTORAL ASSOCIATION MISSION & VISION

Mission: To ***improve the postdoctoral experience*** by enhancing training and the professional environment to benefit scholarship and innovation

Vision: Working in collaboration with the entire research community, the NPA envisions ***changing the culture*** of those individuals and institutions engaged in the U.S. research enterprise so that the contributions of postdoctoral scholars are fully recognized.

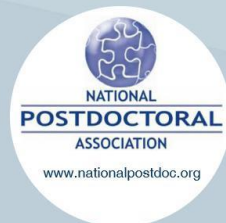
***“Supporting Postdocs,  
Promoting Discovery”***



# National Postdoctoral Association

## 15 years of Enhancing the Postdoctoral Experience

### 2003-2017



#### About Us

The National Postdoctoral Association (NPA) is a member-driven, 501(c)3 nonprofit organization that provides a unique, national voice for postdoctoral scholars. Since 2003, we have taken on the ambitious agenda to enhance the quality of the postdoctoral experience. We have assumed a leadership role in addressing the many issues confronting the postdoctoral community that are national in scope and requiring action beyond the local level.

#### By the Numbers



Estimated number of postdocs, see NPA Institutional Policy Report



Leaders developed: Board and Committee Leaders



Institutions adopting the NPA's Recommendations for Postdoctoral Policies and Practices



NPAW events in 2016. Started in 2009 with Congressional recognition since 2010.



Postdoc offices established. 75 new offices since our founding in 2003.

#### Selected Resources from the NPA



Core Competencies



Family-Friendly Resources



International Postdoc Survival Guide



Responsible Conduct of Research Toolkit

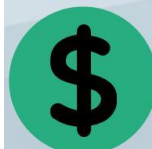


Diversity Programs and Resources



Institutional Policy Database and Reports

#### Collaborative Advocacy Efforts



4 Increases in NIH NRSA Stipend



NIH and NSF Adopt Uniform Definition of Postdocs in 2007



National Summit on Gender and the Postdoctorate



Proposed the Follow-up NAS Report "The Postdoctoral Experience Revisited"



Establishment of NIH Pathways to Independence Awards

powered by



## By the Numbers



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## Selected Resources from the NPA

6

Core Competencies



Family-Friendly  
Resources



International  
Postdoc  
Survival Guide



Responsible  
Conduct of  
Research Toolkit



Diversity Programs  
and Resources



Institutional Policy  
Database and  
Reports



# **NATIONAL POSTDOCTORAL ASSOCIATION CORE COMPETENCIES**

**The six core competencies are:**

1. Discipline-specific conceptual knowledge
2. Research skill development
3. Communication skills
4. Professionalism
5. Leadership and management skills
6. Responsible conduct of research

# NATIONAL POSTDOCTORAL ASSOCIATION INSTITUTIONAL POLICY SURVEY

## Acknowledgements

- Burroughs Wellcome Foundation for their **generous support of this project since 2012**
- The Institutional Policy Survey & Report Taskforce
- All member institutions who responded to the survey



## History

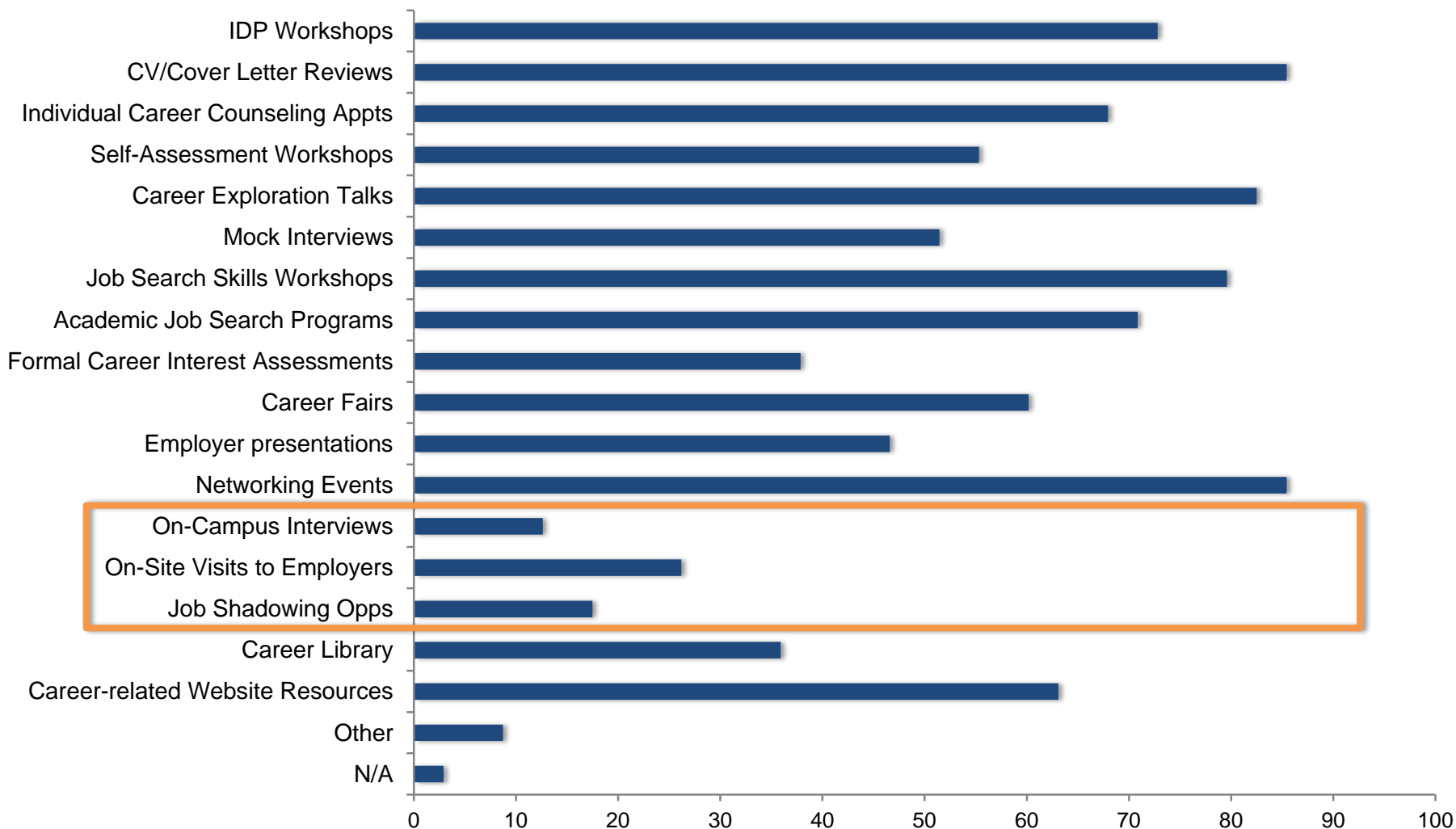
**2013** - First round of data collection

**2014** - Release of the NPA Institutional Policy Report

**2016** - Second round of data collection

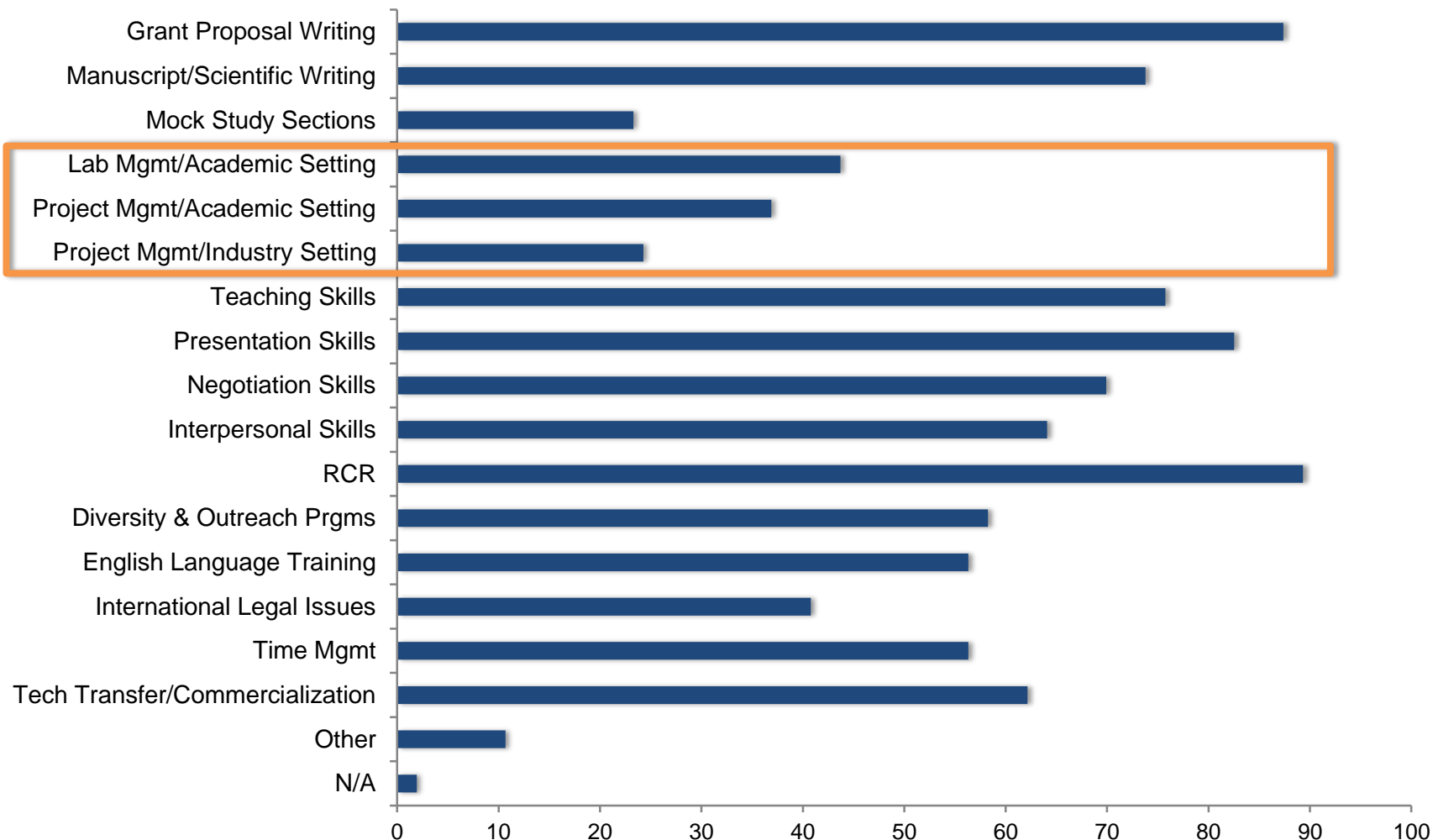


# CAREER SERVICES OFFERED TO POSTDOCS





# PROFESSIONAL DEVELOPMENT FOR POSTDOCS





VANDERBILT  
UNIVERSITY

# VANDERBILT ASPIRE PROGRAM



**Broadening Experiences  
in Scientific Training**



**BRET Office of Career Development**  
Broaden training experiences so trainees  
are empowered to make well-informed  
career decisions with confidence.



**Ongoing Career & Professional Development Activities & Opportunities**



# ASPIRE MODULES

Short, non-credit bearing courses open to BOTH graduate students & postdocs:

- 1) Communication
- 2) Teaching
- 3) Clinical research
- 4) Business & entrepreneurship

Practical Strategies for Strong Writing

Oral Communication Methods

EQ + IQ = Career Success

Biomedical Research and the Media

STEM Teaching in K-12 Schools

Clinical Laboratory Medicine: Applying Your PhD to Patient Care

Introduction to Principles & Practice of Clinical Research

Technology Commercialization

Summer Intensive in Entrepreneurship & Commercialization

Management & Business Principles for Scientists

## OTHER OPPORTUNITIES



Certificate in College Teaching

- Seminar in College Teaching
- College Teaching Practicum



- 6-week business competition
- Interdisciplinary teams
- Learn about commercialization strategies
- Facilitates networking between researchers and business professionals
- Showcases emerging intellectual property from Vanderbilt University

# EXPLORATIONS IN SCIENCE COMMUNICATION



**Vanderbilt Center for  
Student Professional  
Development**



*Communicating Complex  
Ideas Workshop Series*



**Cultivating Ensembles  
in STEM Education and  
Research**



# ENHANCING POLICY, TRANSFORMING CAREERS

## Successful candidates:

- Demonstrate exceptional **competence in their specialty** appropriate to their career stage
- Show an understanding of the opportunities for S&E to support a broad range of non-scientific issues, and display a commitment to apply their scientific or technical **expertise to serve society**
- Exhibit awareness and sensitivity to the political, economic and social issues that influence policy
- Are **articulate communicators**, both verbally and in writing, to decision-makers and **non-scientific audiences**, and have the ability to work with individuals and groups outside the scientific community
- Demonstrate initiative, **problem-solving** ability, **leadership** capacity, and the **flexibility** and willingness to address policy issues outside their scientific expertise