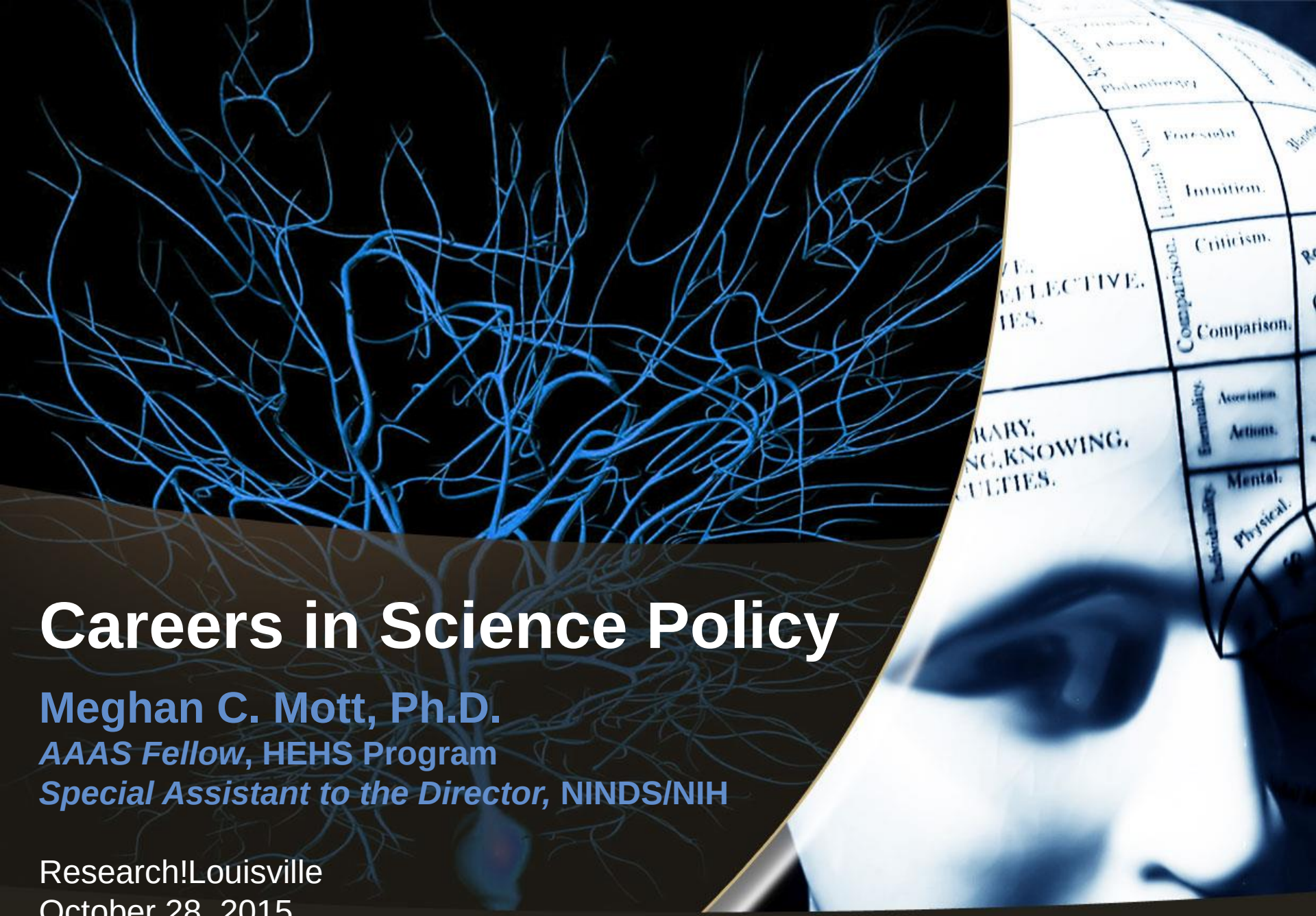


Careers in Science Policy

Meghan C. Mott, Ph.D.
***AAAS Fellow*, HEHS Program**
***Special Assistant to the Director,* NINDS/NIH**

Research!Louisville
October 28, 2015


WHAT DO YOU MEAN YOU HAVE DOUBTS ABOUT BECOMING A PROFESSOR?
SURELY YOU'VE BEEN IN GRAD SCHOOL ALL THIS TIME BECAUSE YOU ASPIRE TO BE JUST LIKE ME?
UH...
HA HA, DON'T ANSWER THAT. I'M JUST KIDDING...
oh. ha ha...
OF COURSE YOU ASPIRE TO BE ME. WHY ELSE WOULD YOU FOLLOW MY EVERY WORD?
it doesn't make sense otherwise, does it?
JORGE CHAM © 2006
www.phdcomics.com

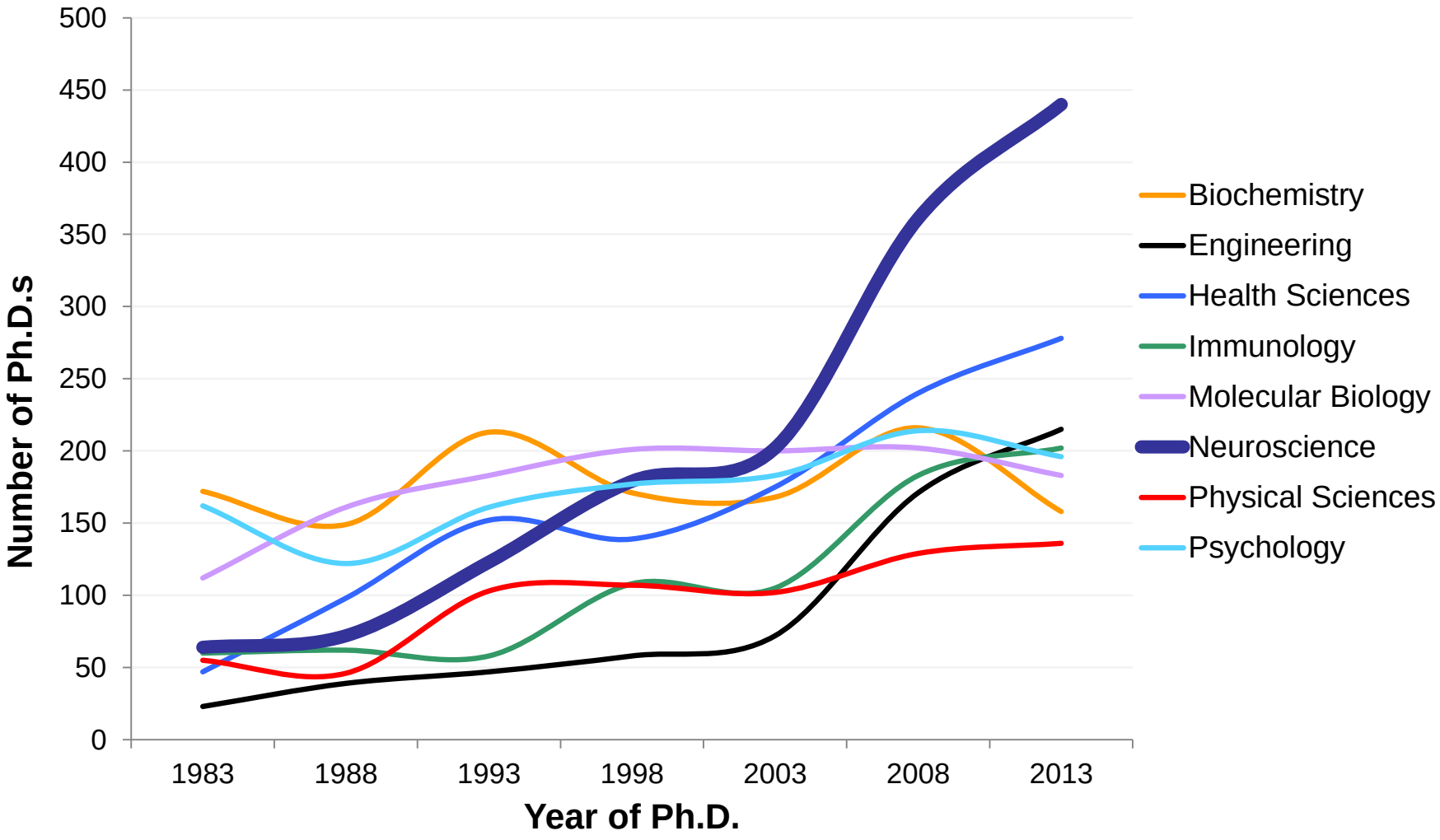
First, about me…

- **Ph.D.**, Anatomical Sciences and Neurobiology
  - University of Louisville School of Medicine
  - *Cytokine Genetics and Expression: Implications of an Immunogenetic Pathogenesis in Autism Spectrum Disorders*
- **Postdoctoral Fellow**, Molecular Physiology
  - *National Institutes of Health, National Institute on Alcohol Abuse and Alcoholism*
    - NIH Fellows Association NIAAA Representative
      - *Co-chair* : Career Development Committee
      - *Co-chair :* Science Policy Discussion Group
    - *Intern* NIH Office of Research on Women's Health
- **Science & Technology Policy Fellow**
  - National Academy of Sciences
  - American Association for the Advancement of Science (AAAS)

Today's Overview

- **Nontraditional Careers**
  - Evolving Trends
  - Developing Initiatives
- **Science Policy**
  - Fellowships
  - Jobs at NIH
- **General Advice**
- **Recommended Resources**

Ph.D. Trends



Fields of Study Reported by Trainees and Fellows Earning Ph.D.s in 2013

Fields of Study	Number of PhDs
Biological/Biomedical Sciences	**2,246**
Neurosciences	440
Immunology	202
Molecular Biology	183
Biochemistry	158
Genetics	153
Health Sciences	**278**
Engineering	**215**
Psychology	**196**
Physical Sciences	**136**
Other	**101**
Total	**3,172**

Note: NIH support includes the following award mechanisms: T15, T32, T35, T90, TL1, TU2, F30, F31, and F32.

Career Outlook

The Economist

Doctoral degrees

The disposable academic

Why doing a PhD is often a waste of time

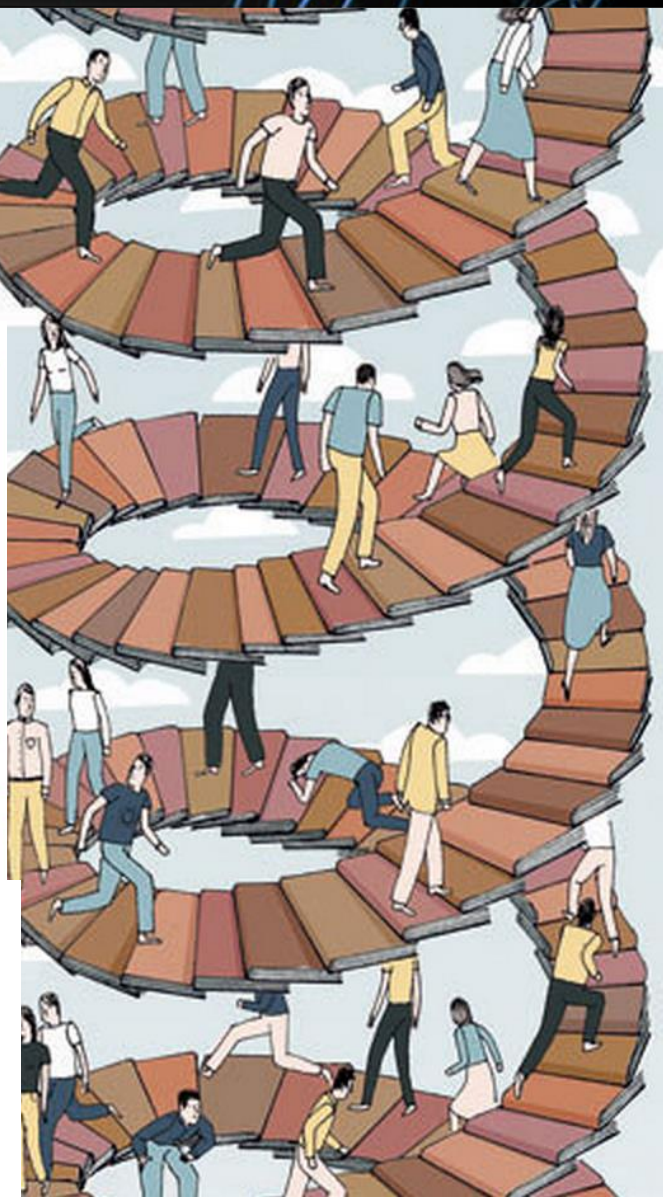
Dec 16th 2010 | From the print edition

The Atlantic

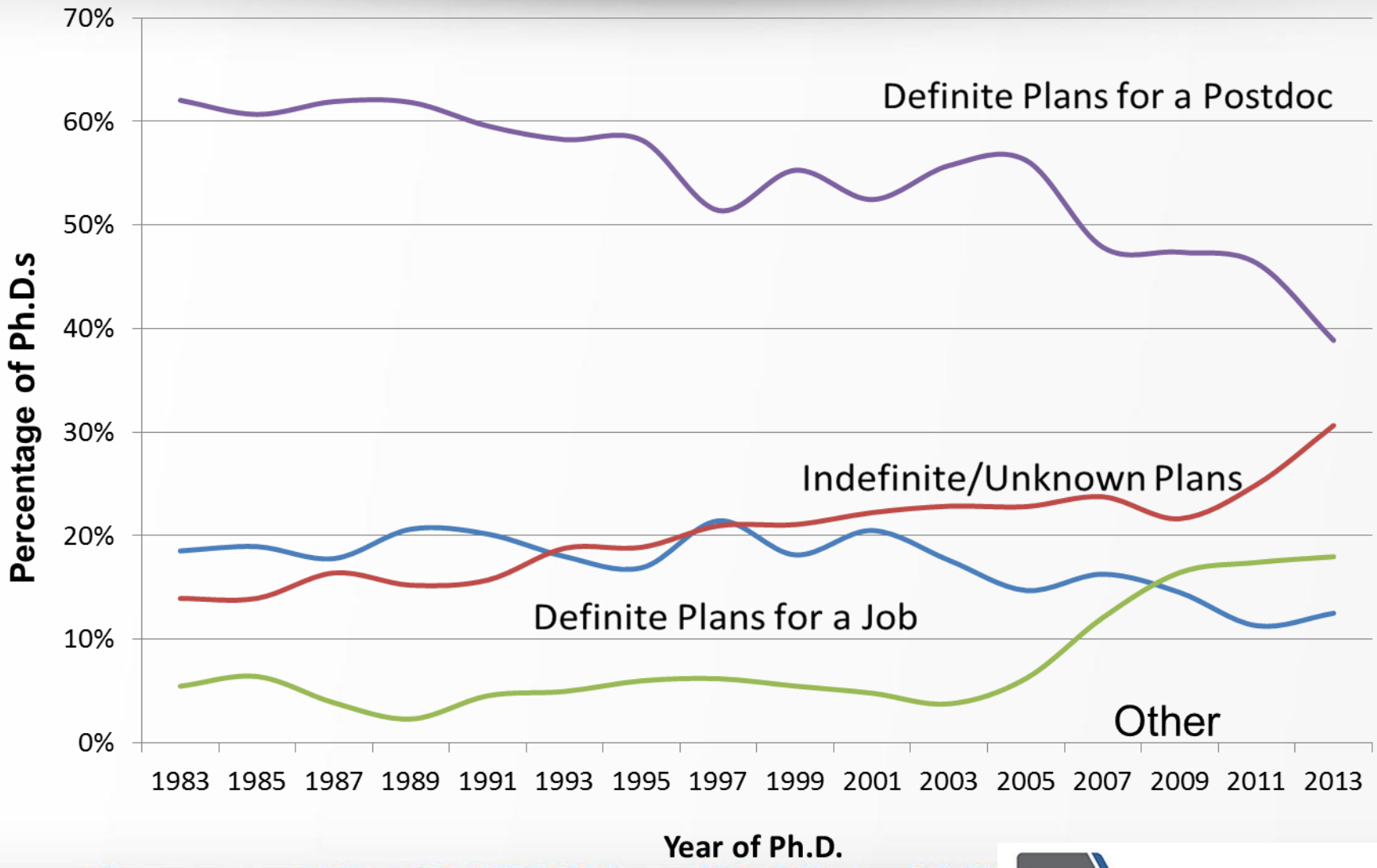
The Myth of the Science and Engineering Shortage

American students need to improve in math and science—but not because there's a surplus of jobs in those fields.

MICHAEL S. TEITELBAUM | MAR 19 2014, 7:46 AM ET



Post-Ph.D. Plans of Trainees and Fellows, 1983-2013



NIH National Institutes of Health
Office of Extramural Research

Mismatch of Supply and Demand

- **Doubling of NIH budget** fueled expansion
  - Fc
- **Malt**
  Mo
  nee
- **Hyper-competition**
  Low success rates breed conservative science, feed fads for translation and overstated results, and lead to irrational overvaluing of high impact journals

"The training pipeline produces more scientists than relevant positions in academia, government, and the private sector are capable of absorbing."


PERSPECTIVE

CrossMark

rom its

t of Systems Biology, Harvard
8540; and [b]National Cancer

ch 7, 2014)

nsustainable hypercompetitive
n—and making it difficult for
annot be solved with simplistic
of the US biomedical research

the NIH budget ended, the
research dollars grew much
e supply. The demands were
ge part by incentives for in-
ansion, by the rapid growth of
workforce, and by rising costs
Further slowdowns in federal
ed by the Great Recession of
the budget sequestration that
013, have significantly exacer-
oblem. (Today, the resources
e NIH are estimated to be at
in constant dollars than they
The consequences of this im-
e dramatic declines in success
grant applicants and dimin-
scientists to think and perform
rk.

medical scientists have discovered many of the fundamental principles that instruct cell behavior in both health and disease, providing a framework for exploring biological systems in great depth: the genetic code, the sequence and organization of many genomes, the cell's growth and division cycle, and the molecules that mediate cell signaling. Many diseases—infectious, hereditary, neoplastic, circulatory, and metabolic—are now approached and often prevented, controlled, or cured with measures based on these and other discoveries.

The American public rightly takes pride in this and has generously supported research efforts through the National Institutes of Health (NIH) and numerous other federal agencies, foundations, advocacy groups, and academic institutions. In return, the remarkable outpouring of innovative research from American laboratories—high-throughput

We believe that the root cause of the widespread malaise is a longstanding assumption that the biomedical research system in the United States will expand indefinitely at a substantial rate. We are now faced with the stark realization that this is not the case. Over the last decade, the expansion has stalled and even reversed.

The idea that the research enterprise would expand forever was adopted after World War II, as the numbers and sizes of universities grew to meet the economy's need for more graduates and as the tenets of Vannevar Bush's "Science: The Endless Frontier" encouraged the expansion of federal budgets for research (1). Growth persisted with the coming of age of the baby boom generation in the late 1960s and 1970s and a vibrant US economy.

However, eventually, beginning around 1990 and worsening after 2003, when a rapid

tch between supply and demand can be partly laid at the feet of the discipline's Malthusian traditions. The great majority of biomedical research is conducted by aspiring trainees: by graduate students and postdoctoral fellows. As a result, most successful biomedical scientists train far more scientists than are needed to replace him- or herself; in the aggregate, the training pipeline produces more scientists than relevant positions in academia, government, and the private sector are capable of absorbing. Consequently a growing number of PhDs are in jobs that do not take advantage of the taxpayers' investment in their lengthy education

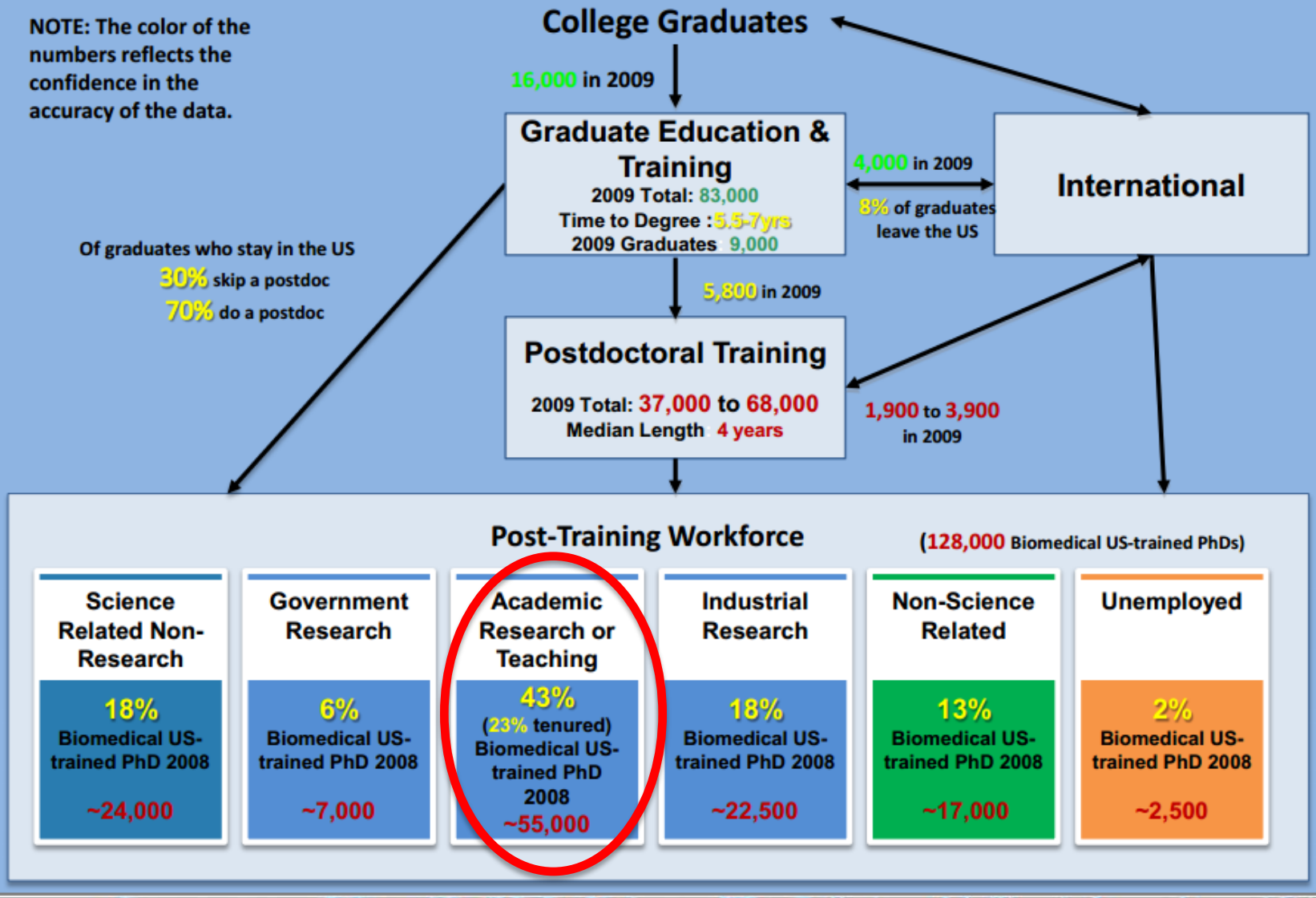
Author contributions: B.A., M.W.K., S.T., and H.V. wrote the paper.

The authors declare no conflict of interest.

This article is a PNAS Direct Submission.

[a]To whom correspondence should be addressed. E-mail: smtg
princeton.edu.

Snapshot of the PhD Biomedical Research Workforce



http://acd.od.nih.gov/Biomedical-Workforce-Update.pdf

BEST

Broadening Experiences in Scientific Training

- **B**roadening **E**xperiences in **S**cientific **T**raining (BEST) Awards
  - 5-yr, 1-time grants
  - 17 awardee institutions:

- Cornell	- Emory
- NYU	- UC Davis
- Virginia Polytechnic	- UC Irvine
- University of Colorado	- Vanderbilt
- Boston University	- U Mass
- Wayne State	- Michigan Sta
- Rutgers University	- UNC
- University of Chicago	- UCSF
- University of Rochester	

http://www.nihbest.org/

The FASEB Journal article fj.15-276139. Published online October 2, 2015.

The FASEB Journal • Life Sciences Forum

The origin and implementation of the Broadening Experiences in Scientific Training programs: an NIH common fund initiative

Frederick J. Meyers,* Ambika Mathur,† Cynthia N. Fuhrmann,‡ Theresa C. O'Brien,§ Inge Wefes,¶ Patricia A. Labosky,‖ D'Anne S. Duncan,# Avery August,** Andrew Feig,† Kathleen L. Gould,#,†† Michael J. Friedlander,‡‡ Chris B. Schaffer,§§ Audra Van Wart,‡‡ and Roger Chalkley#,1

*Health System, University of California, Davis, Sacramento, California, USA; †The Graduate School, Wayne State University, Detroit, Michigan, USA; ‡Graduate School of Biomedical Sciences, University of Massachusetts Medical School, Worcester, Massachusetts, USA; §University of California, San Francisco, San Francisco, California, USA; ¶Graduate School, University of Colorado, Anschutz Medical Campus, University of Colorado, Denver, Colorado, USA; ‖Division of Program Coordination, Planning, and Strategic Initiatives, National Institutes of Health, Bethesda, Maryland, USA; #Biomedical Research Education and Training and ††Department of Cell and Developmental Biology, Vanderbilt University School of Medicine, Nashville, Tennessee, USA; **Department of Microbiology and Immunology and §§Department of Biomedical Engineering, Cornell University, Ithaca, New York, USA; and ‡‡Virginia Tech Carilion School of Medicine and Research Institute, Roanoke, Virginia, USA

ABSTRACT Recent national reports and commentaries on the current status and needs of the U.S. biomedical research workforce have highlighted the limited career development opportunities for predoctoral and postdoctoral trainees in academia, yet little attention is paid to preparation for career pathways outside of the traditional faculty path. Recognizing this issue, in 2013, the U.S. National Institutes of Health (NIH) Common Fund issued a request for application titled "NIH Director's Biomedical Research Workforce Innovation Award: Broadening Experiences in Scientific Training (BEST)." These 5-yr 1-time grants, awarded to 17 single or partnering institutions, were designed to develop sustainable approaches to broaden graduate and postgraduate training, aimed at creating training programs that reflect the range of career options that trainees may ultimately pursue. These institutions have formed a consortium in order to work together to develop, evaluate, share, and disseminate best practices and challenges. This is a first report on the early experiences of the consortium and the scope of participating BEST programs. In this report, we describe the state of the U.S. biomedical workforce and development of the BEST award, variations of programmatic approaches to assist with program design without BEST funding, and novel approaches to engage faculty in career development programs. To test the effectiveness of these BEST programs, external evaluators will assess their outcomes not only over the 5 yr grant period but also for an additional 10 yr beyond award completion.—Meyers, F. J., Mathur, A., Fuhrmann, C. N., O'Brien, T. C., Wefes, I., Labosky, P. A., Duncan, D. S., August, A., Feig, A., Gould, K. L., Friedlander, M. J., Schaffer, C. B., Van Wart, A., Chalkley, R. The origin and implementation of the Broadening Experiences in Scientific Training programs: an NIH common fund initiative. *FASEB J.* 30, 000–000 (2016). www.fasebj.org

Key Words: professional development · career development · Ph.D. · postdoctoral trainee

Over the past decade, several national reports and commentaries reviewing the numbers, composition, career outcomes, and trajectories of the U.S. biomedical workforce have been published that have garnered the attention of the popular media (1–7). Uniformly, these reports point to a large number of predoctoral and postdoctoral trainees, the unusually long training period of this combined traineeship, and the dependence of biomedical research programs upon the contributions of these trainees. According to the 2012 U.S. National Institutes of Health (NIH) Advisory Committee to the Director report, ~23% of the biomedical workforce is currently in a tenure-track faculty position (1). Furthermore, a vast majority of the graduates of biomedical training programs were shown to be in careers other than tenure-track faculty positions. These diverse career pathways include careers in government, regulatory science and academic administration, industry/biotechnology, science writing and communication, public policy, and teaching at primarily undergraduate institutions as well as nontenure-track

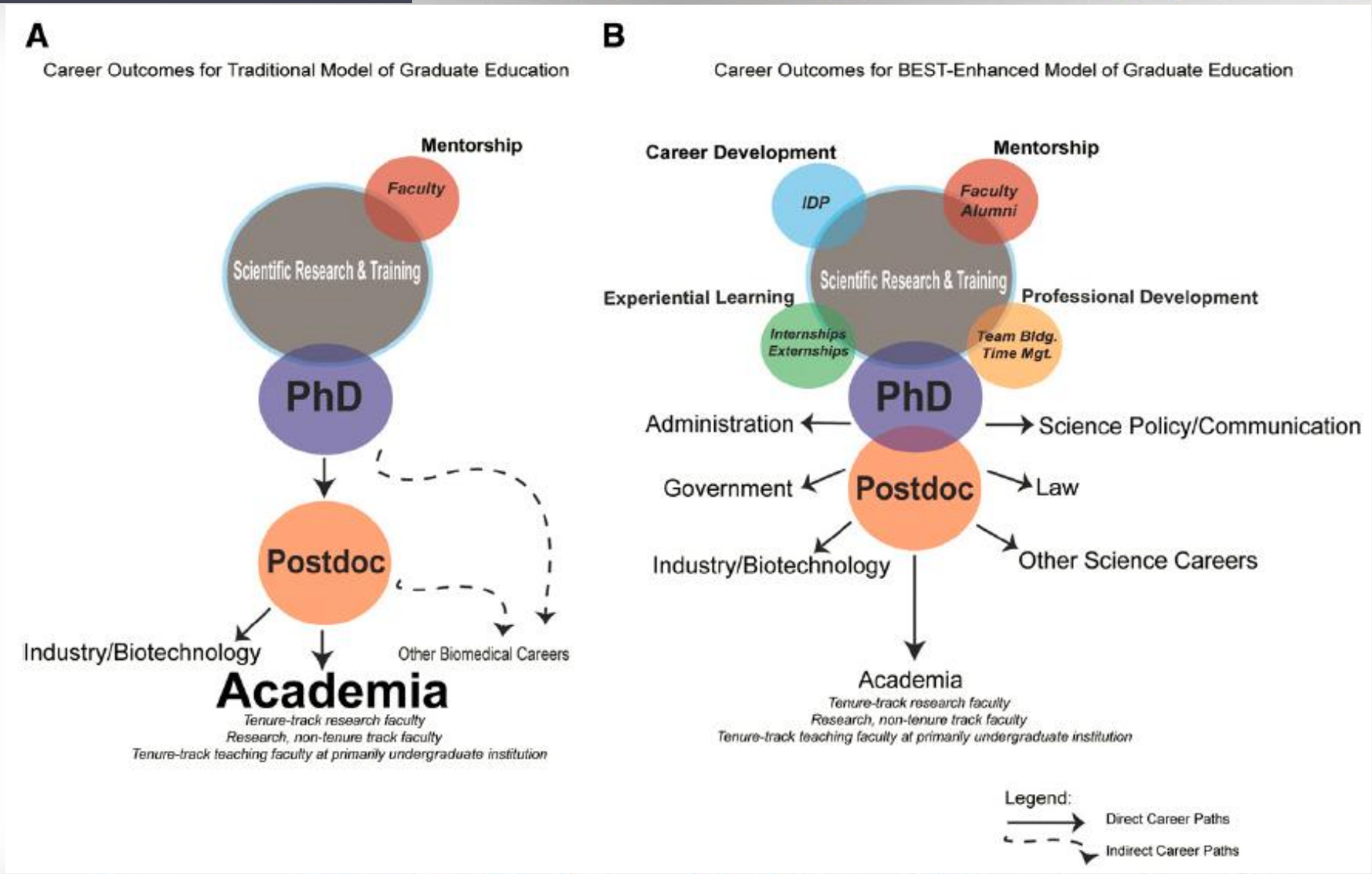
Abbreviations: BEST, Broadening Experiences in Scientific Training; NIH, U.S. National Institutes of Health; RFA, request for application

[1] Correspondence: Biomedical Research Education and Training, Vanderbilt University School of Medicine, Nashville, TN 37232, USA. E-mail: roger.g.chalkley@vanderbilt.edu

doi: 10.1096/fj.15-276139

BEST

Broadening Experiences in Scientific Training



http://www.ncbi.nlm.nih.gov/pubmed/26432783

Career Opportunities

Science Education & Outreach	Academia	Government & Non-profit
Science Communication & Publishing	Industry Research	Business & Commercialization
Law, Policy, & Regulatory Affairs	Academic & Research Administration	Medicine & Healthcare

Transferable Skills

- Critical Thinking
- Problem-solving
- Data Analysis
- Communication
- Management
- Reliability
- Teamwork
- Leadership
- Strong ethics

<u>To develop:</u>

- Volunteer
- Internships
- Fellowships
- Additional Training
- Demonstrated interest in new career path

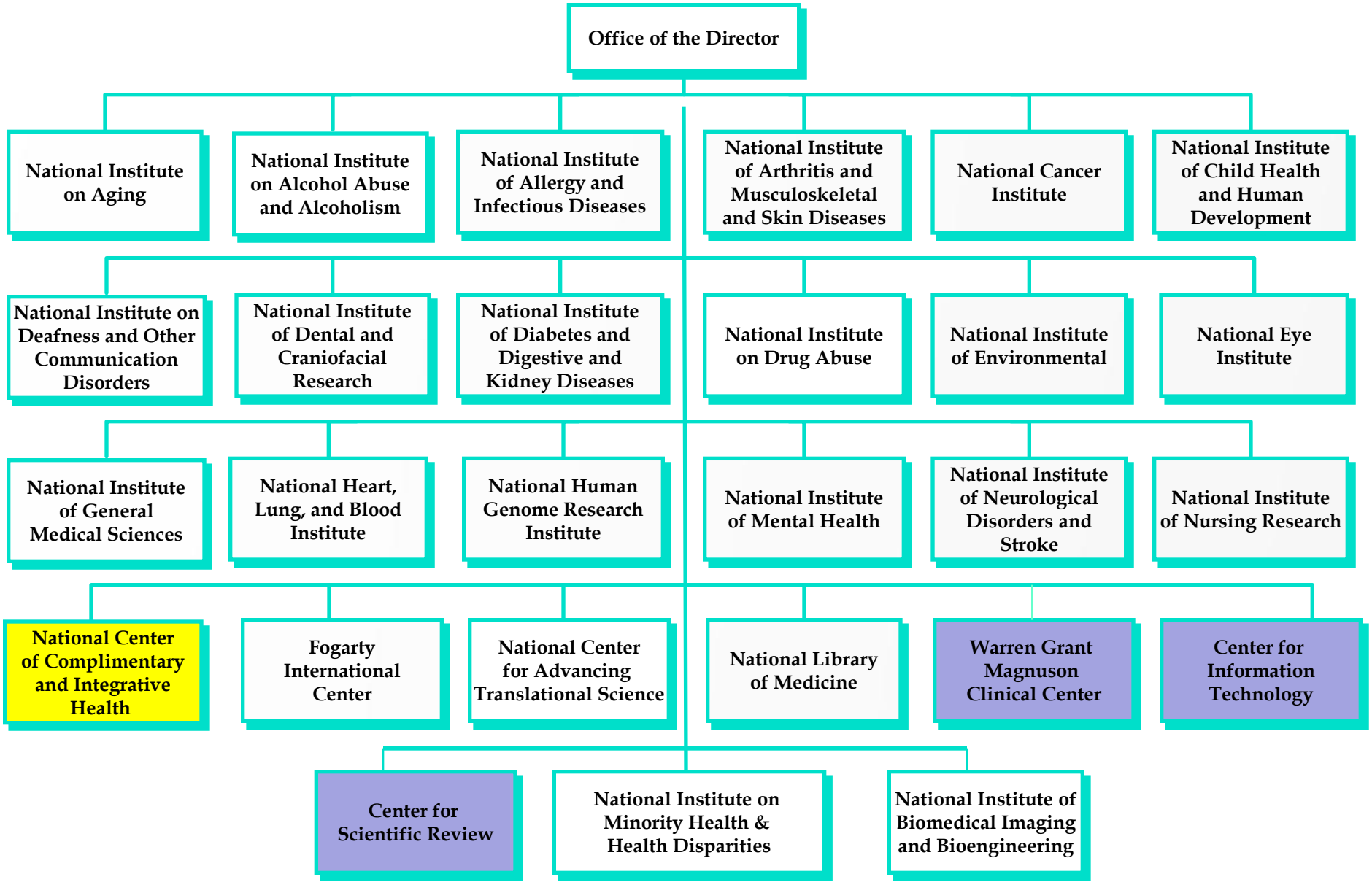
The National Institutes of Health

There are **27** different Institutes and Centers (ICs) and **24** ICs that award grants.

Each one has:

- Different missions
- Different funding priorities
- Different budgets
- Different types of grants they support
- Different procedures for making funding decisions
- Different funding strategies

The National Institutes of Health



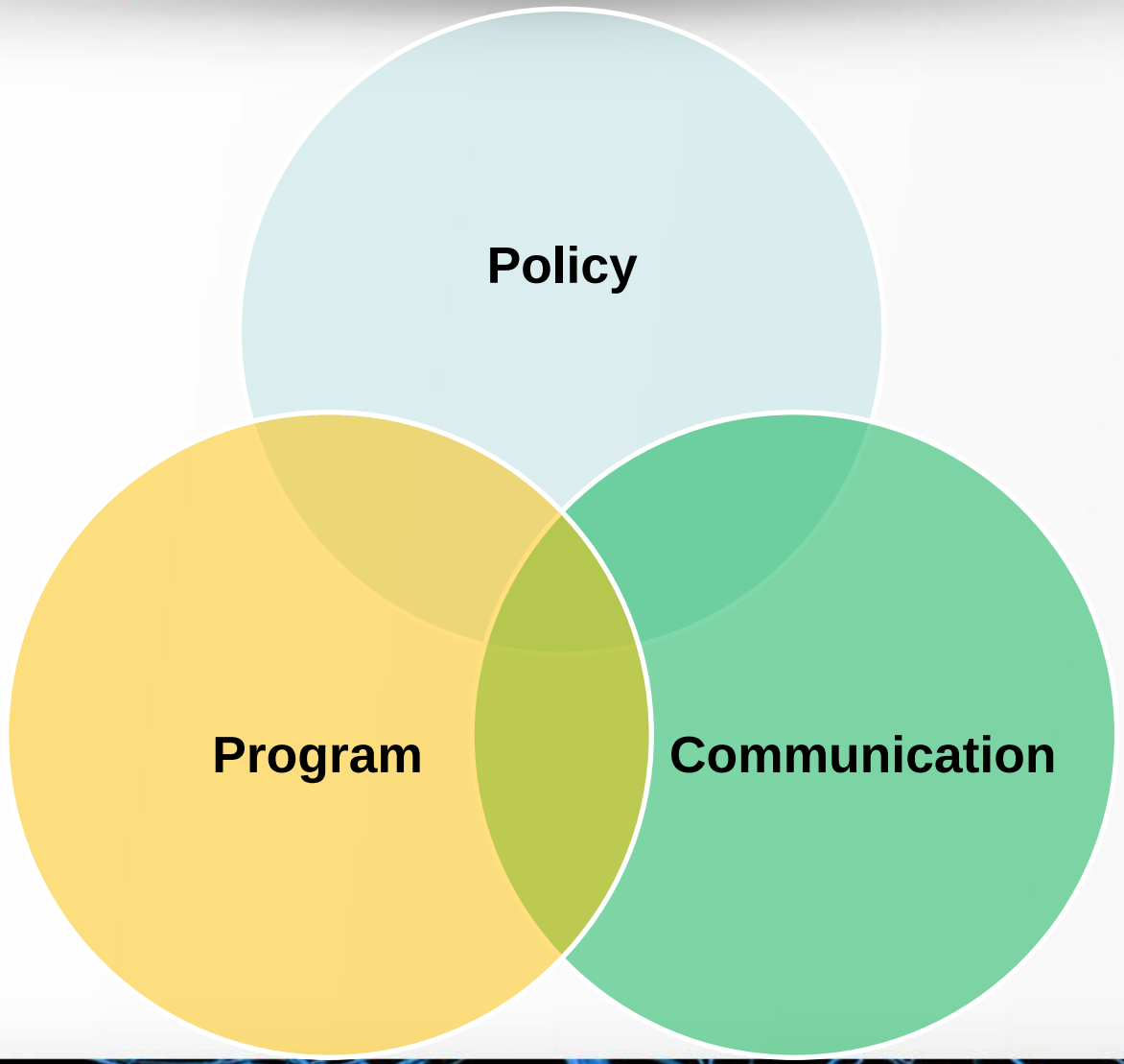
Science Policy

- Area of public policy informed by science and technology for the benefit of society
- Policy for Science
  - Establishes guidelines and regulations for conduct of science
  - Sets funding priorities and directions for research
  - Develops STEM educational programs
- Science for Policy
  - Inform the development, decision-making, implementation, and evaluation of policies, programs, and regulations for scientific research
  - Science and technology advisors for Congressmen
- Bridge between policy world and scientists
- Communication skills are key
- Fellowships

Hot Topics in S&T Policy

- Climate change
- Dual use research
- Synthetic biology
- Nanotechnology
- Neuroscience
- Animal research
- Informed consent
- Infectious disease/pandemics
- Training the biomedical workforce
- Energy security and alternatives
- Human subjects research
- Healthcare

“Policy” at NIH



Who influences S&T Policy?

Graduate Fellowships

- **Science Policy**
  - STEM Presidential Management Fellows Program
  - The National Academy of Sciences Science & Technology Policy Graduate Fellowship Program
  - American Association for the Advancement of Science (AAAS) Science & Technology Policy Fellowships
- **Science Communication**
  - AAAS Mass Media Science & Engineering Fellows Program
  - National Cancer Institute (NCI) Health Communications Internship Program

PMF STEM Program

- Presidential Management Fellows Program
- Leadership training in public policies and programs at Federal agencies
- Pilot STEM track for fellows to:
  - Manage R&D programs
  - Perform cutting edge R&D
  - Develop technically informed policies
  - Respond to disasters
  - Lead the federal S&T enterprise

AAAS Mass Media Program

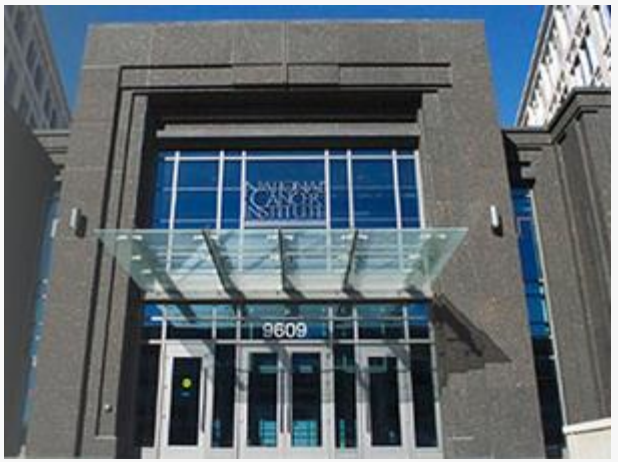
- AAAS Mass Media Science & Engineering Fellows Program
- Places undergraduate, graduate and post-graduate science, engineering and math students at media outlets
- Next round: Applications due **Jan 15, 2016**.

National Cancer Institute

HCIP

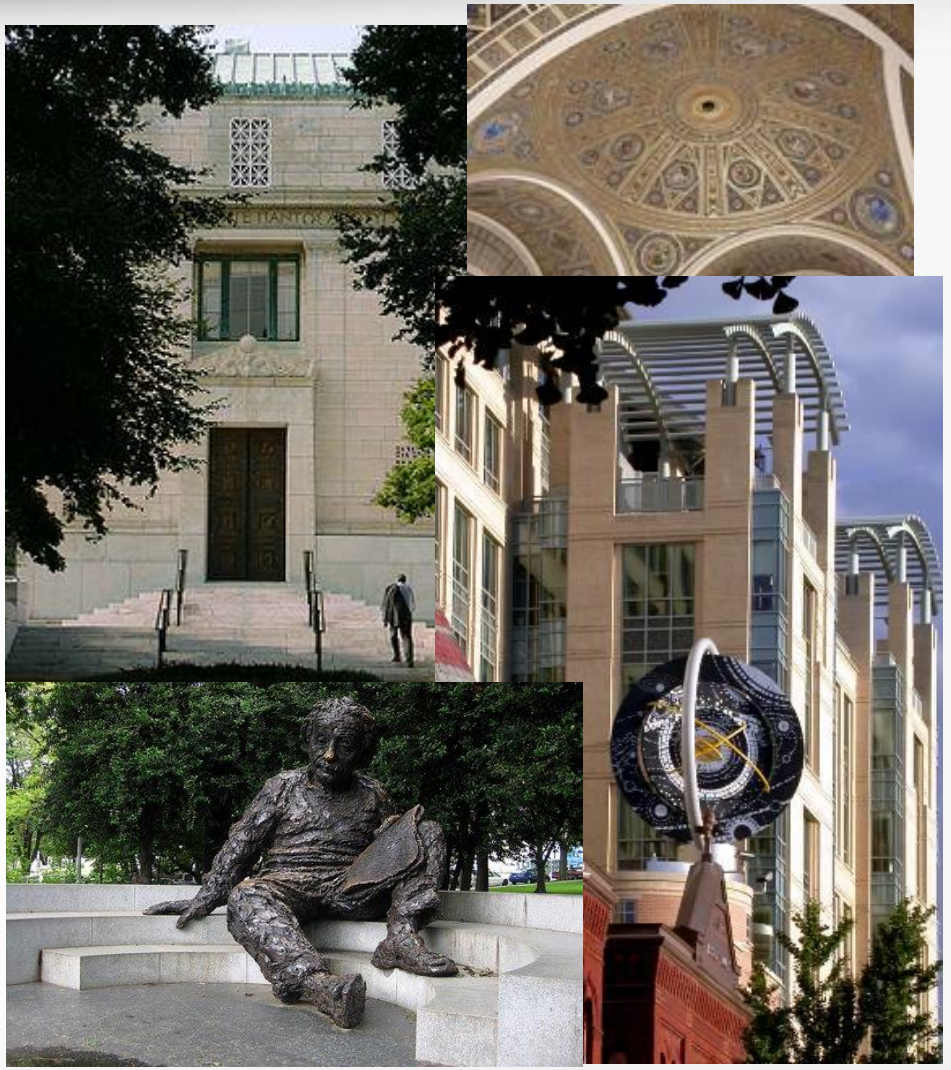
Health Communications Internship Program

- Six month to 1 year internships at NCI
- Tracks: Health communications & Science writing
- Plan, develop, and promote cancer education programs and materials (including Web-based) for the public, cancer patients, or health professionals
- Gain experience in pre-testing and evaluating cancer prevention and treatment messages, publications, materials, and programs that reach the American public
- Participate in professional meetings and training seminars
- Applications due in **March**



NAS Fellowship Program

- Christine Mirzayan Science & Technology Policy Fellowship Program
- Provides early career individuals with opportunity to learn about science & technology policy at the National Academies
- 12 week program: January-April
- 2017 fellowship session will open to applicants in the summer, due date **mid-Sept**



INSTITUTE OF MEDICINE
OF THE NATIONAL ACADEMIES

Advising the nation / Improving health

- Established in 1970
- **Health** arm of the National Academy of Sciences
- Private, independent, nonprofit organization
- Both an honorific membership and a policy research organization
- >1,700 IOM members; each year up to 65 new members are elected based on their professional achievement

Fostering Discussion and Discovery

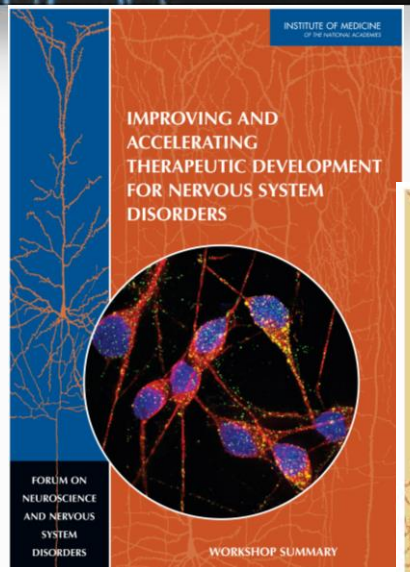
- Consensus Studies
- Forums and Roundtables
- Standing Committees
- Workshops
- Symposia and lectures

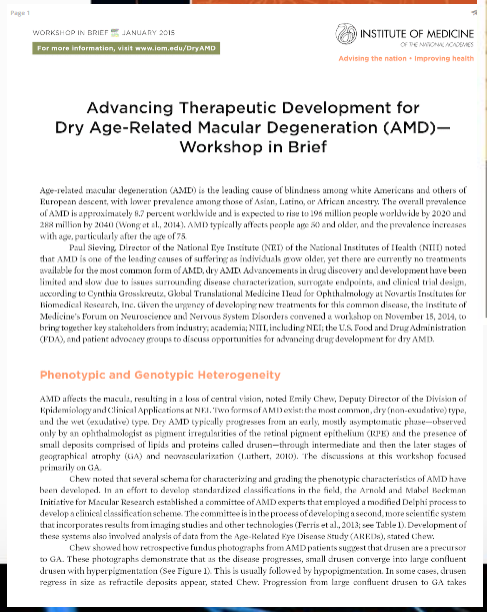
IOM Unit/Placement

Forum on Neuroscience and Nervous System Disorders

- Areas of interest: Nervous System Disorders, Mental Illness and Addiction, Genetics of Nervous System Disorders, Cognition and Behavior, Modeling and Imaging, and Ethical and Social Issues

- Membership: industry, NIH, NSF, foundations, academics, patient groups, and clinicians




WORKSHOP IN BRIEF JANUARY 2015

For more information, visit www.iom.edu/DryAMD

INSTITUTE OF MEDICINE

Advancing the nation • Improving health

Advancing Therapeutic Development for Dry Age-Related Macular Degeneration (AMD)—Workshop in Brief

Age-related macular degeneration (AMD) is the leading cause of blindness among white Americans and others of European descent, with lower prevalence among those of Asian, Latino, or African ancestry. The overall prevalence of AMD is approximately 8.7 percent worldwide and is expected to rise to 196 million people worldwide by 2020 and 288 million by 2040 (Wong et al., 2014). AMD typically affects people age 50 and older, and the prevalence increases with age, particularly after the age of 75.

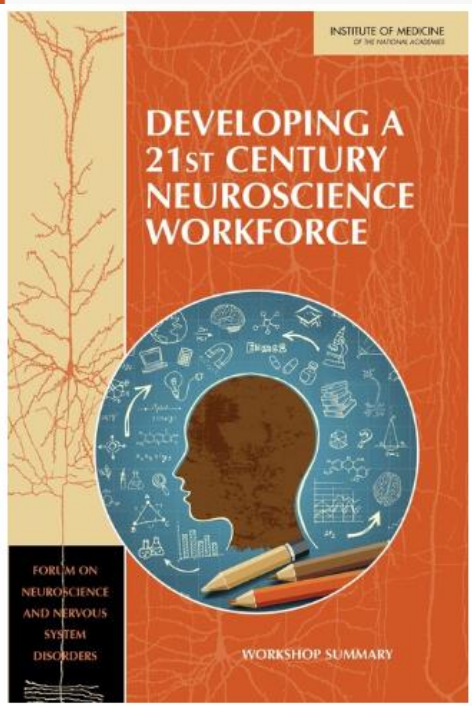
Paul Sieving, Director of the National Eye Institute (NEI) of the National Institutes of Health (NIH) noted that AMD is one of the leading causes of suffering as individuals grow older, yet there are currently no treatments available for the most common form of AMD, dry AMD. Advancements in drug discovery and development have been limited and slow due to issues surrounding disease characterization, surrogate endpoints, and clinical trial design, according to Cynthia Grossniklaus, Global Translational Medicine Head for Ophthalmology at Novartis Institutes for Biomedical Research, Inc. Given the urgency of developing new treatments for this common disease, the Institute of Medicine's Forum on Neuroscience and Nervous System Disorders convened a workshop on November 18, 2014, to bring together key stakeholders from industry; academia; NIH, including NEI; the U.S. Food and Drug Administration (FDA); and patient advocacy groups to discuss opportunities for advancing drug development for dry AMD.

Phenotypic and Genotypic Heterogeneity

AMD affects the macula, resulting in a loss of central vision, noted Emily Chew, Deputy Director of the Division of Epidemiology and Clinical Applications at NEI. Two forms of AMD exist: the most common, dry (non-exudative) type, and the wet (exudative) type. Dry AMD typically progresses from an early, mostly asymptomatic phase—observed only by an ophthalmologist as pigment irregularities of the retinal pigment epithelium (RPE) and the presence of small deposits comprised of lipids and proteins called drusen—through intermediate and then the later stages of geographical atrophy (GA) and neovascularization (Luthert, 2010). The discussions at this workshop focused primarily on GA.

Chew noted that several schema for characterizing and grading the phenotypic characteristics of AMD have been developed. In an effort to develop standardized classifications in the field, the Arnold and Mabel Beckman Initiative for Macular Research established a committee of AMD experts that employed a modified Delphi process to develop a clinical classification scheme. The committee is in the process of developing a second, more scientific system that incorporates results from imaging studies and other technologies (Ferris et al., 2013; see Table 1). Development of these systems also involved analysis of data from the Age-Related Eye Disease Study (AREDS), stated Chew.

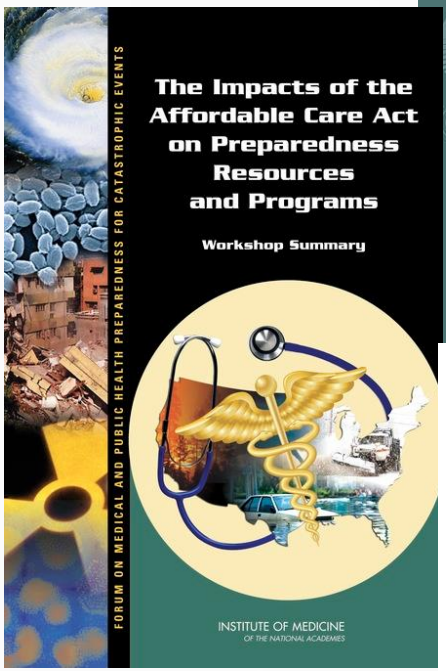
Chew showed how retrospective fundus photographs from AMD patients suggest that drusen are a precursor to GA. These photographs demonstrate that as the disease progresses, small drusen converge into large confluent drusen with hyperpigmentation (See Figure 1). This is usually followed by hypopigmentation. In some cases, drusen regress in size as refractile deposits appear, stated Chew. Progression from large confluent drusen to GA takes

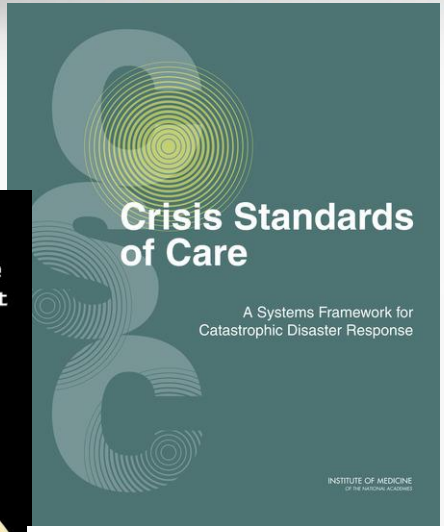


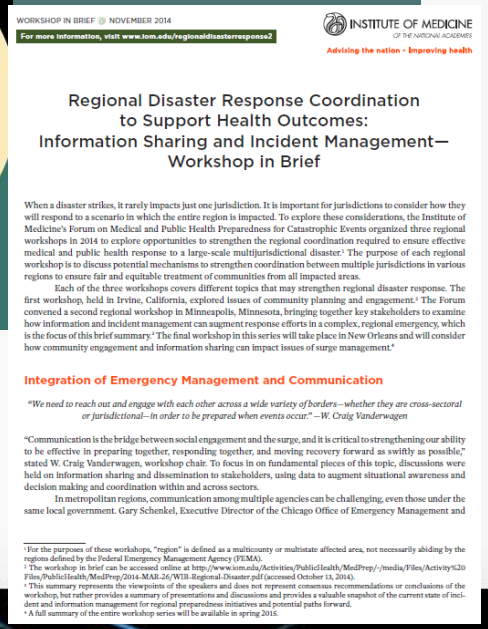
IOM Unit/Placement

Forum on Medical and Public Health Preparedness for Catastrophic Events

- Areas of interest: Personal Protective Equipment, Medical Countermeasures, Biosurveillance, Mass Casualty Incidents, Crisis Standards of Care
- Membership: CDC, NIH, ASPR, DHS, VA, FDA, FEMA, NACCHO, American Hospital Association, United Health Foundation






WORKSHOP IN BRIEF NOVEMBER 2014

For more information, visit www.iom.edu/regionaldisasterresponse2

INSTITUTE OF MEDICINE
OF THE NATIONAL ACADEMIES
Advising the nation • Improving health

Regional Disaster Response Coordination to Support Health Outcomes: Information Sharing and Incident Management—Workshop in Brief

When a disaster strikes, it rarely impacts just one jurisdiction. It is important for jurisdictions to consider how they will respond to a scenario in which the entire region is impacted. To explore these considerations, the Institute of Medicine's Forum on Medical and Public Health Preparedness for Catastrophic Events organized three regional workshops in 2014 to explore opportunities to strengthen the regional coordination required to ensure effective medical and public health response to a large-scale multijurisdictional disaster.[1] The purpose of each regional workshop is to discuss potential mechanisms to strengthen coordination between multiple jurisdictions in various regions to ensure fair and equitable treatment of communities from all impacted areas.

Each of the three workshops covers different topics that may strengthen regional disaster response. The first workshop, held in Irvine, California, explored issues of community planning and engagement.[2] The Forum convened a second regional workshop in Minneapolis, Minnesota, bringing together key stakeholders to examine how information and incident management can augment response efforts in a complex, regional emergency, which is the focus of this brief summary.[3] The final workshop in this series will take place in New Orleans and will consider how community engagement and information sharing can impact issues of surge management.[4]

Integration of Emergency Management and Communication

"We need to reach out and engage with each other across a wide variety of borders—whether they are cross-sectoral or jurisdictional—in order to be prepared when events occur." —W. Craig Vanderwagen

"Communication is the bridge between social engagement and the surge, and it is critical to strengthening our ability to be effective in preparing together, responding together, and moving recovery forward as swiftly as possible," stated W. Craig Vanderwagen, workshop chair. To focus in on fundamental pieces of this topic, discussions were held on information sharing and dissemination to stakeholders, using data to augment situational awareness and decision making and coordination within and across sectors.

In metropolitan regions, communication among multiple agencies can be challenging, even those under the same local government. Gary Schenkel, Executive Director of the Chicago Office of Emergency Management and

[1] For the purposes of these workshops, "region" is defined as a multicounty or multistate affected area, not necessarily abiding by the regions defined by the Federal Emergency Management Agency (FEMA).
[2] The workshop in brief can be accessed online at http://www.iom.edu/Activities/PublicHealth/MedPrep/~/media/Files/Activity%20Files/PublicHealth/MedPrep/2014-MAR-26/WIB-Regional-Disaster.pdf (accessed October 13, 2014).
[3] This summary represents the viewpoints of the speakers and does not represent consensus recommendations or conclusions of the workshop, but rather provides a summary of presentations and discussions and provides a valuable snapshot of the current state of incident and information management for regional preparedness initiatives and potential paths forward.
[4] A full summary of the entire workshop series will be available in spring 2015.

AAAS S&T Fellowship Program

- Science & Technology Policy Fellowships
- 7 Fellowship Areas
- Opportunity for accomplished scientists and engineers to contribute to federal policymaking process
- 2015 fellowship session is now **open** to applicants (***Nov 1 due date***)

Enhancing Public Policy Transforming Careers

GOAL: Foster scientifically informed, evidence-based policy and practice.

STRATEGY: Engage scientists and engineers from a broad range of disciplines, backgrounds and career stages to:

- Contribute knowledge and analytical skills to the federal government
- Learn first-hand about policymaking and implementation at the federal level
- Build S&T leadership equipped to address complex societal challenges

OUTPUT: Policy-savvy scientists & engineers

Fellowship Areas

Big Data Analytics

Health, Education & Human Services

Congressional

Judicial Branch

Diplomacy, Security & Development

Energy, Environment & Agriculture

Roger Revelle Fellowship in Global Stewardship

Science Policy in Government

Congressional Placements

- Collect and analyze information
- Write: briefs, talking points, speeches, press releases, reports, text for bills, websites
- Meet with stakeholders
- Organize hearings
- Facilitate, negotiate legislation
- Oversight

Federal Agency Placements

- Collect and analyze information
- Write: briefs, talking points, speeches, press releases, reports, text for regulations, websites
- Meet with stakeholders
- Prep for hearings
- Facilitate, negotiate regulations
- Program development, implementation and evaluation
- Interagency collaborations

2014-15 Placements

2014-2015 AAAS S&T Policy Fellows

286 Year-long Fellows
- **170** first year
- **92** second-year
- **6** short-term extensions

247 Executive Branch Fellows
- **239** selected & administered by AAAS
- **8** selected & administered by partner societies

33 Congressional Fellows
- **2** selected & sponsored by AAAS
- **31** selected & sponsored by partner societies

How Competitive Are the Fellowships?

2014-15 Selection Statistics

	APPS	APPS TO SCs	SEMI FINALISTS	INTERVIEWS	FINALISTS
BD&A	48	37	24	21	**16**
DSD	230	159	96	95	**74**
EEA	209	158	96	96	**64**
HEHS	233	117	72	69	**49**
Cong	85	32	12	12	**2**
Judicial	6	6	5	4	**1**
	811	509	305	297	**206***

* includes dual finalists

Alumni Fellows in Government and Academia

Frances A. Colón

Deputy Science and Technology Adviser to the Secretary of State, U.S. Department of State

Arati Prabhakar

Director, Defense Advanced Research Projects Agency, DoD

Kevin Michael Foster

Professor and Executive Director, Institute for Community, University and School Partnerships, UT Austin

Rosina Bierbaum

Dean, SNRE, U. Michigan; Member PCAST

Alumni Fellows in Private Sector and Non-Profits

Alice Chen

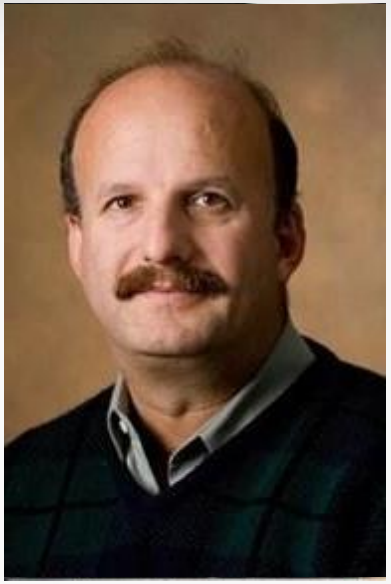
Scientist,
Law Firm of Keller and Heckman

Anish Goel

Director, Technology Policy and Geopolitical Affairs, The Boeing Company

Jessica Tuchman Mathews

President, Carnegie Endowment for International Peace



Steven Buchsbaum

Deputy Director, Discovery at Bill & Melinda Gates Foundation

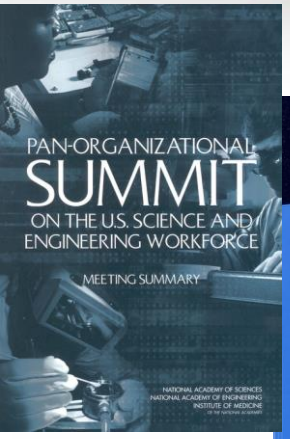
General Advice

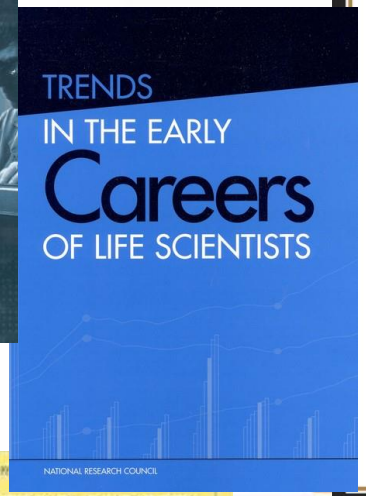
- Evaluate your career goals
- Assess your skills, values & interests
- Talk to a career counselor & research options
- Identify mentors
- Develop an Individual Development Plan (IDP)
  - myIDP.sciencecareers.org
- Gain relevant exposure
- Do Informational Interviews & Network!
- Create a LinkedIn Profile
  - Groups to join:
    - Alternative PhD Careers
    - PhD Careers Outside Academia

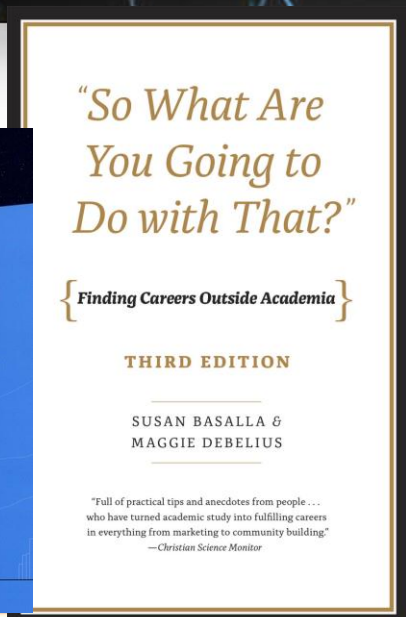
my IDP INDIVIDUAL DEVELOPMENT PLAN
Science Careers

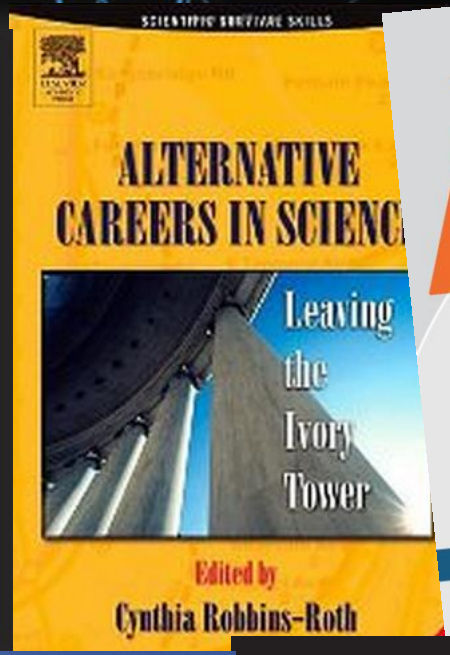
LinkedIn

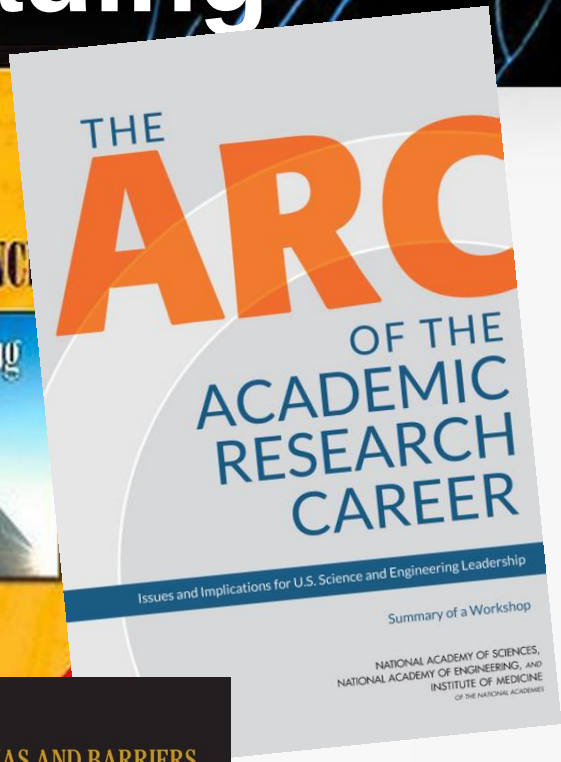
Recommended Reading

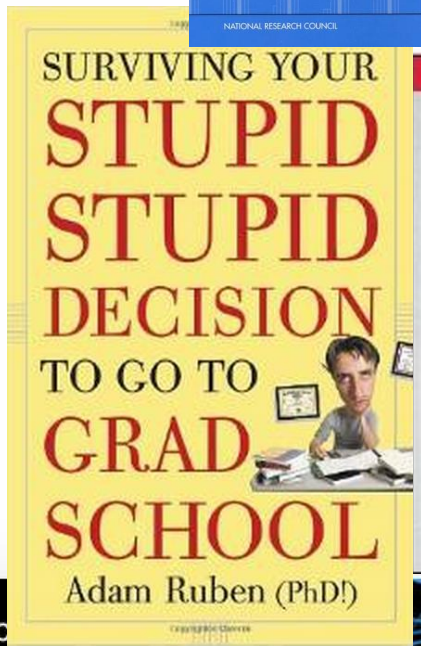


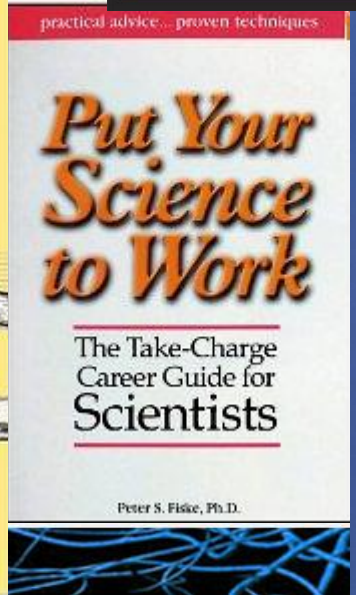


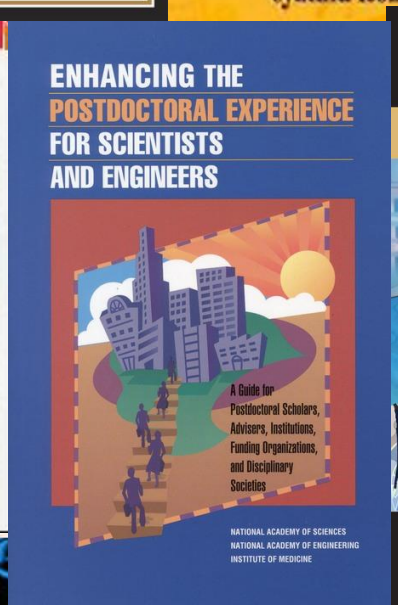


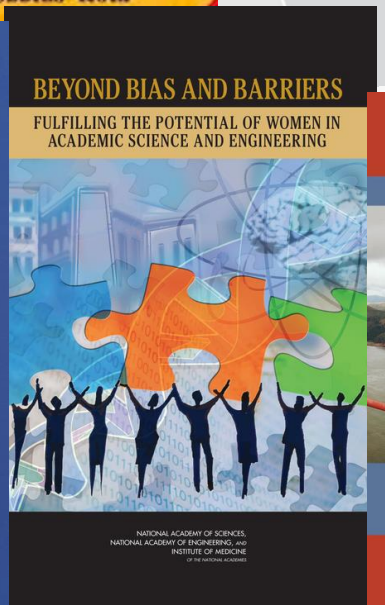


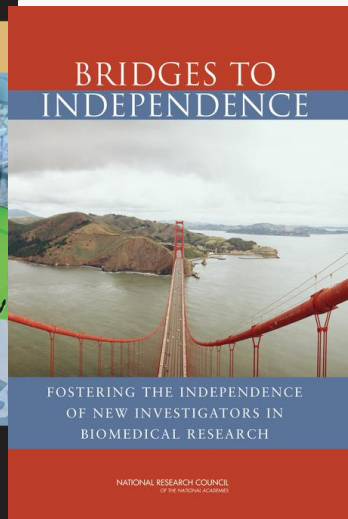




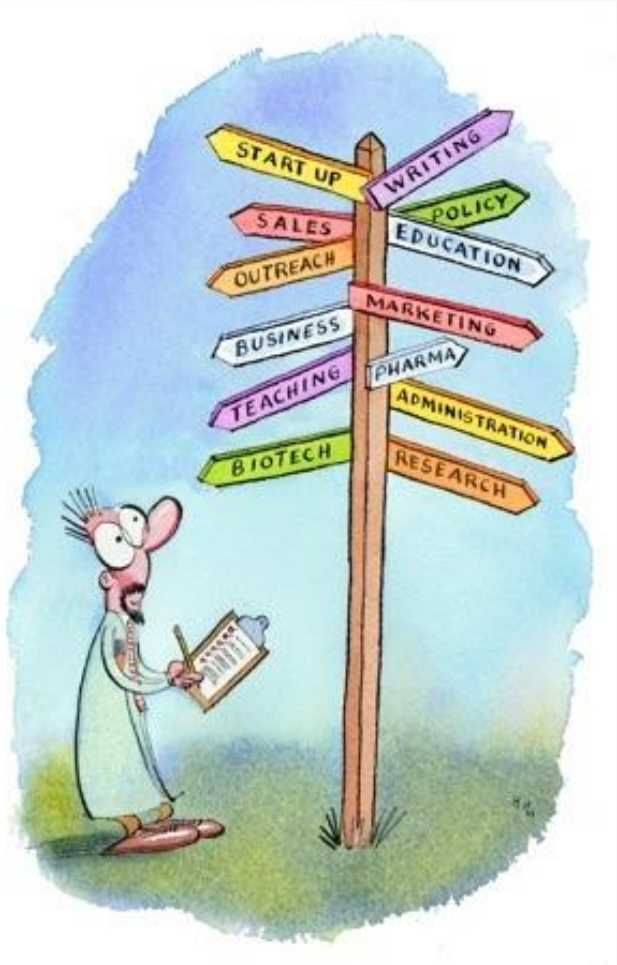








Career Resources



NIH Office of Intramural Training and Education
https://www.training.nih.gov/

Office of Intramural TRAINING & EDUCATION
build your career, shape the future

TRAINEES OUTSIDE NIH

PROSPECTIVE NIH TRAINEES

Bio Careers®
The Career Hub for Postgraduate Life Scientists

Science Careers From the journal *Science*

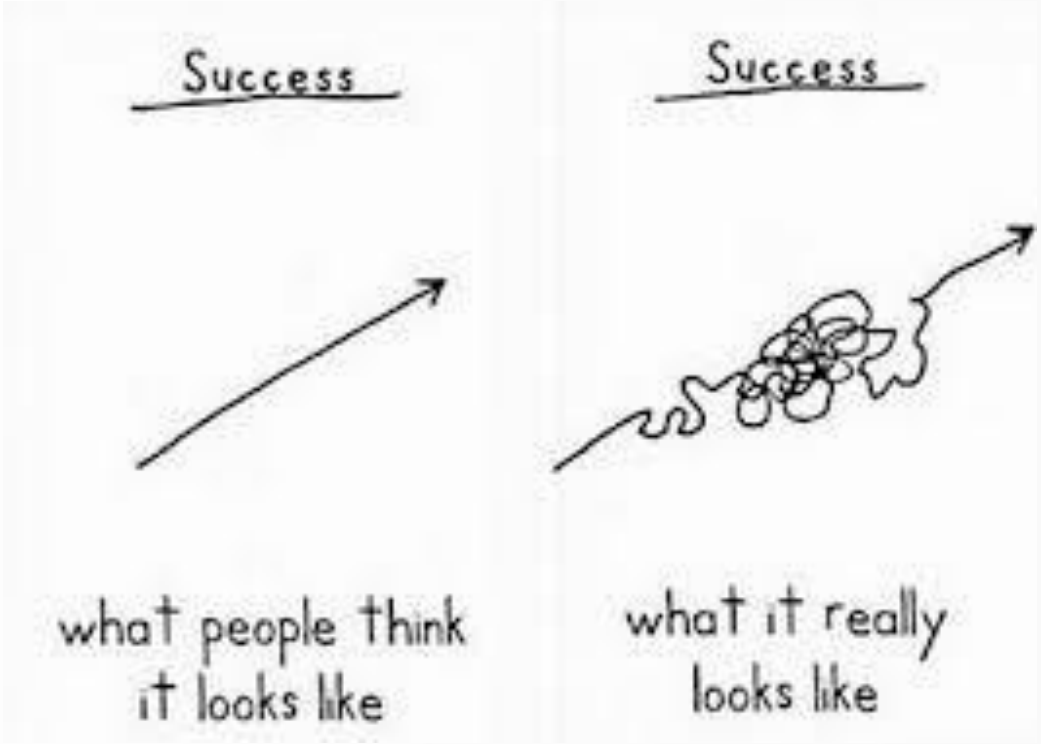
http://sciencecareers.sciencemag.org/

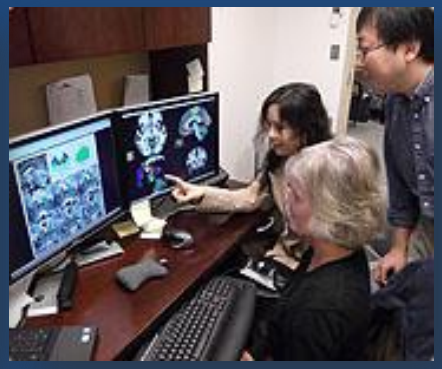
NATIONAL POSTDOCTORAL ASSOCIATION

my IDP INDIVIDUAL DEVELOPMENT PLAN
Science Careers

Thank you!

Email: mottmc@od.nih.gov



NINDS

Seeking Knowledge about the Brain . . .

Reducing the Burden of Disease