NIH Update for the Council of Councils

January 22, 2013

Lawrence A. Tabak, DDS, PhD

Principal Deputy Director, NIH

NIH › National Institutes of Health

Overview

- FY 2013 budget
- Substance use, abuse, and addiction research
- Communications toolkit
- Implementation updates:
  - Biomedical Workforce
  - Increasing the Diversity of the NIH-Funded Workforce
  - Data and Informatics

The Future of Substance Use, Abuse, and Addiction-Related Research at the NIH

Trans-NIH Substance Use, Abuse, and Addiction Functional Integration

- Based on the activities of the past two years, including the significant strides by NIDA and NIAAA to coordinate substance use, abuse, and addiction research, NIH decided that functional integration is the best option to pursue to support this important area of research

- We believe that we can meet the goals of the SMRB recommendations – to change the status quo – through functional integration. The NIH Neuroscience Blueprint is an example of successful functional integration http://neuroscience.nih.gov/

- Also, given the unique budgetary challenges we face in the coming months, NIH needs to focus its energies on the entire biomedical research enterprise

Trans-NIH Substance Use, Abuse, and Addiction Functional Integration

- Membership from across the NIH

- Steering Committee of NCI, NIAAA, and NIDA Directors to lead the Functional Integration

- NCI, NIAAA, and NIDA Council participation

- Designated staff from NCI, NIAAA, and NIDA (along with other ICs) to support the Functional Integration

- Clear metrics that assist ongoing evaluation to ensure meeting the mission
  - Monitor respective investments in the Functional Integration Resource Pool
  - Strategic Plan will serve as a Blueprint for Functional Integration Steering Committee; additional program-specific metrics to be developed once specific goals are identified

Next Steps

- Implement a regular series of planning and monitoring discussions for the "NIH Substance Use, Abuse, and Addiction Functional Integration Steering Committee" consisting of appropriate senior leadership from NIAAA, NIDA, NCI

- Determine additional areas of intramural research program integration

- Determine appropriate schedule for Joint Council meetings

- Report on progress of activities to all three Councils at the January/February meetings

- Search for permanent NIAAA Director

NIH Communications Initiative

Communications: Arguments for Change

- Budget Climate: Economic times demand a strong case for the value of NIH research

- Communications Climate: Fragmented media world requires a cohesive NIH identity

- Community Climate: Diverse stakeholders with competing interests, but common goals

Public Recognition

Legend:
- CDC
- HHS
- NIH
- Other
- FDA
- Do not know

Values: 3%, 6%, 9%, 13%, 19%, 50%
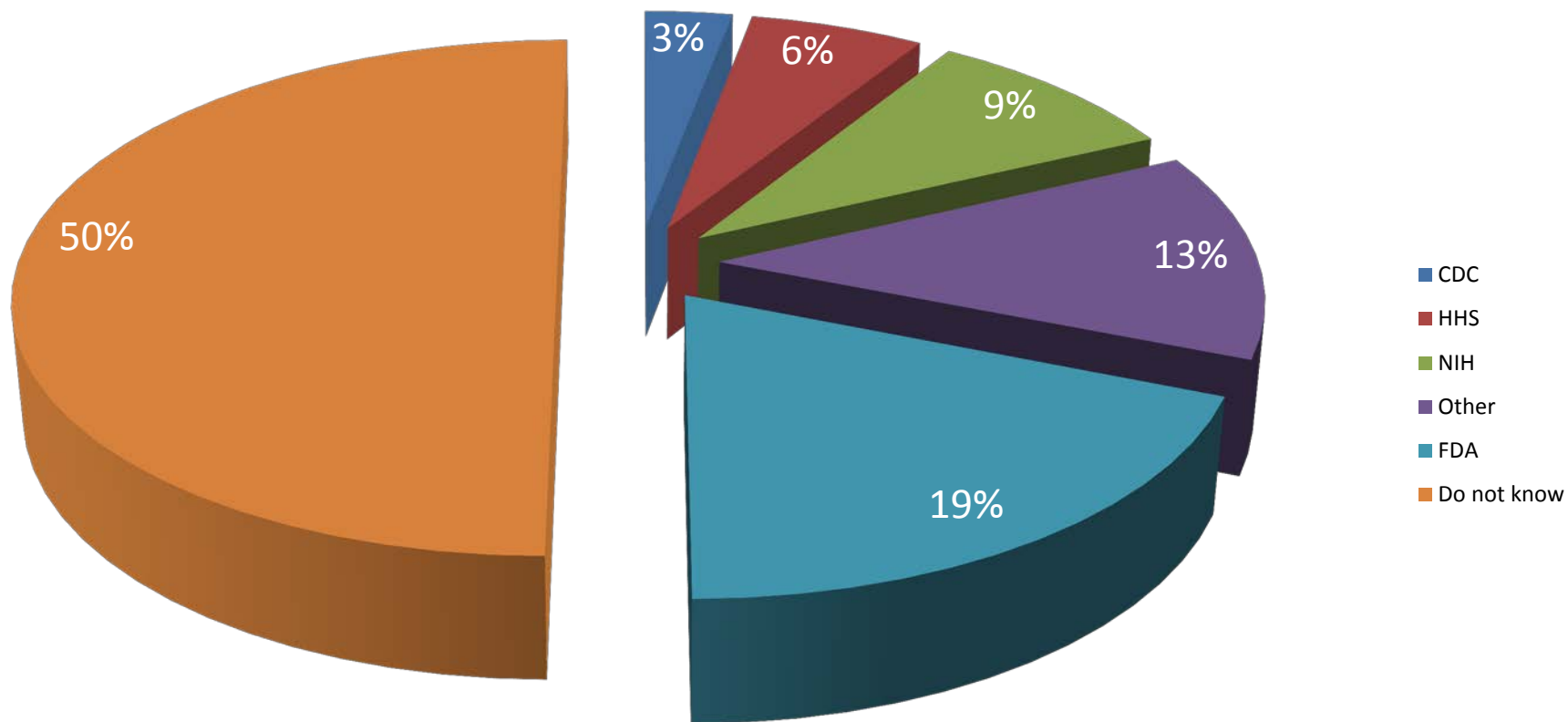
NIH's Fragmented Approach to Public Communication

Quotes from Members

The NIH is "one of the best-kept secrets in Washington."

— Rep. Mike Simpson

(R-ID)

The Challenge

- Communicate the value of NIH research with maximum impact.

Key Strategies

- Fortify NIH identity

- Mobilize NIH stakeholders (grantees, professional and voluntary organizations)

- Leverage traditional and social media

Clear Connection to NIH

NIH Communications Toolkit

- Core Messages/Talking Points
- "Elevator Speech"
- NIH Fact Sheet/PowerPoint slides
- Visual Identity Guidelines
- Standard Operating Procedures for Media Activities
- Best Practices: Working with Grantee Institutions
  - Planning Ahead
  - Funding Acknowledgment
- Best Practices: Working with Stakeholder Organizations
  - Information-Sharing
  - NIH-hosted meetings
  - Collaborating on Local and National Events
  - Coordinated Announcements with Multiple Institutions

Sustaining the Future of U.S. Biomedical Research

Advisory Committee to the Director (ACD) Recommendations

NIH Implementation Plans in Response to the recommendations presented in June 2012 (full reports available at http://acd.od.nih.gov/meetings.htm)

- Biomedical Research Workforce
- Diversity of the Biomedical Research Workforce
- Data and Informatics

Advisory Committee to the Director (ACD) Recommendations

NIH Implementation Plans in Response to the recommendations presented in June 2012 (full reports available at http://acd.od.nih.gov/meetings.htm)

- Biomedical Research Workforce
- Diversity of the Biomedical Research Workforce
- Data and Informatics

WORLD VIEW *A personal take on events*

Reform the PhD system or close it down

There are too many doctoral programmes, producing too many PhDs for the job market. Shut some and change the rest, says **Mark C. Taylor**.

SCIENTIFIC AMERICAN™

| Subscribe | News & Features | Topics | Blogs | Multimedia | Education | Citi |

More Science :: Edit This :: February 22, 2010 :: 📣 215 Comments :: ✉ Email :: 🖨 Print

Does the U.S. Produce Too Many Scientists?

American science education lags behind that of many other nations, right? So why does it produce so many talented young researchers who cannot find a job in their chosen field of study?

By Beryl Lieff Benderly

18

Biomedical Research Workforce: The Challenges We Must Solve

- Increasingly difficult to launch traditional, independent academic research career:
  - Rising number of Ph.D.s
  - Number of established researchers staying longer in field
- Long training time, relatively low early-career salaries make biomedical research careers less attractive than other professions
- Training programs offer little preparation for careers outside academia–despite decreasing likelihood of finding an academic position

Biomedical Research Workforce Initiative

- Innovative training approaches

- Awards that encourage independence

- NIH support for postdoctoral stipend/benefits and faculty salary

- Comprehensive tracking system for trainees

- Review and coordination activities

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

Workforce Initiative: Next Steps

- Establish ACD working group on clinician scientists

- Finalize plans for FY13 activities (e.g., RFAs, refine implementation plans)

- Initiate implementation plans

Advisory Committee to the Director (ACD) Recommendations

NIH Implementation Plans in Response to the recommendations presented in June 2012 (full reports available at http://acd.od.nih.gov/meetings.htm)

- Biomedical Research Workforce

- Diversity of the Biomedical Research Workforce

- Data and Informatics

Greater Diversity in Research Workforce is Needed

Science
VOL 333   19 AUGUST 2011

Race, Ethnicity, and NIH Research Awards

Donna K. Ginther,[1]* Walter T. Schaffer,[2] Joshua Schnell,[3] Beth Masimore,[3] Faye Liu,[3] Laurel L. Haak,[3] Raynard Kington[2]†

NEWS & ANALYSIS

BIOMEDICAL RESEARCH FUNDING

NIH Uncovers Racial Disparity in Grant Awards

The initial surprise was that R01 proposals from black Ph.D. scientists (including 45% non-U.S. citizens) were extremely rare. They totaled only 1.4% of all applications, compared with 3.2% for Hispanics and 16% for Asian scientists. (By contrast, African Americans make up about 13% of the U.S. population.) About 60% of all proposals

STUDY AT A GLANCE

83,188	R01 applications from Ph.D.s analyzed
40,069	Unique Ph.D. investigators
1149	R01 applications from black Ph.D.s
337	Expected awards to black applicants if same success chance as whites
185	Actual awards to black applicants

23

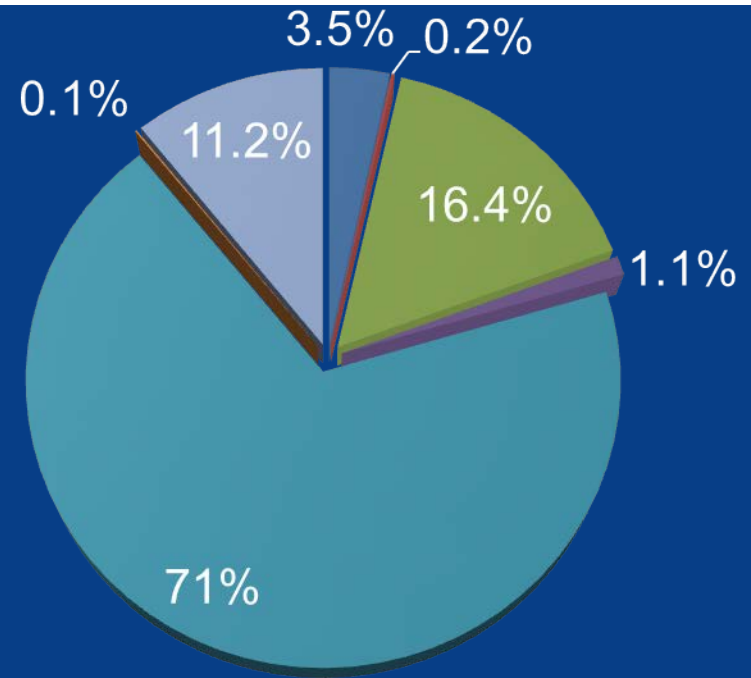# Diversity of the NIH-Funded Research Workforce

Hispanic or Latino (of any race)

American Indian and Alaska Native

Asian

Black or African American

White

Native Hawaiian and other Pacific Islander

Other, unknown, not reported and more than one race
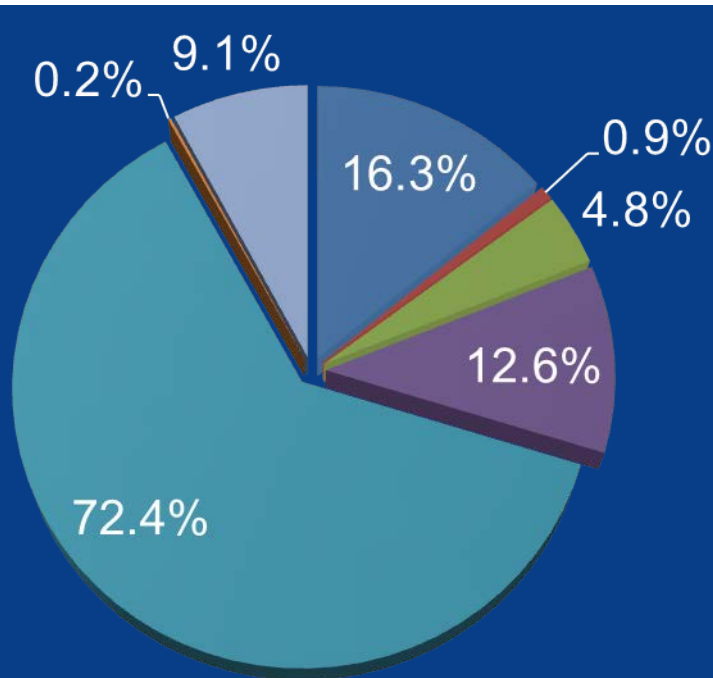
2010 US Census Bureau Report

0.2% 9.1% 16.3% 0.9% 4.8% 12.6% 72.4%

2010 NIH Principal Investigators on RPGs

3.5% 0.2% 0.1% 11.2% 16.4% 1.1% 71%

24

Diversity: The Challenges We Must Solve

- No one set of initiatives will diversify the NIH-funded workforce overnight – this will take time

- There is tremendous mistrust in many of the communities that we must engage with and we must work hard to gain their trust

- Any effort will require the collaboration and cooperation of extramural partners

- Diversifying the NIH-funded workforce and ensuring the fairness of the peer review system are collective responsibilities across the NIH because we will all benefit

Diversity Initiative: Goals

The two main goals of this initiative are:

1. to increase the diversity of the NIH-funded workforce because we have compelling evidence that this will help us accomplish our mission

2. to ensure that all applicants are treated fairly in the peer review system

Diversity Initiative: Overarching Strategy

Four interrelated approaches will be implemented:

- The NIH <u>Bu</u>ilding <u>I</u>nfrastructure <u>L</u>eading to <u>D</u>iversity (BUILD) Program

- The National Research Mentoring Network (NRMN)

- Ensuring Fairness in Peer Review

- Increased Engagement by all NIH Leadership

http://acd.od.nih.gov/Diversity-in-the-Biomedical-Workforce-Implementation-Plan.pdf

Diversity Initiative: Next Steps

- Create an NIH Steering Committee Working Group on Diversity, thus making diversity a core consideration of NIH governance

- Recruit a permanent Chief Officer for Scientific Workforce Diversity

- Finalize plans for FY13 activities (e.g., workshops, RFAs, refine implementation plans)

- Initiate implementation plans

Advisory Committee to the Director (ACD) Recommendations

NIH Implementation Plans in Response to the recommendations presented in June 2012 (full reports available at http://acd.od.nih.gov/meetings.htm)

- Biomedical Research Workforce

- Diversity of the Biomedical Research Workforce

- Data and Informatics
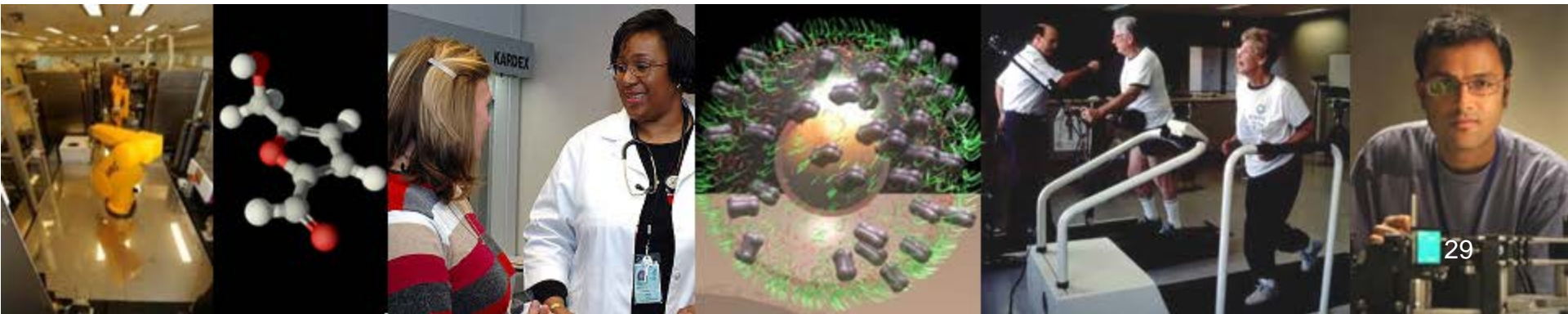
Data and Informatics:
Setting the Stage

A final key strategic challenge is to ensure that [the] NIH culture changes [are] commensurate with recognition of the key role of informatics and computation for every IC's mission. Informatics and computation should not be championed by just a few ICs, based on the personal vision of particular leaders. Instead, NIH leadership must accept a distributed commitment to the use of advanced computation and informatics toward supporting the research portfolio of every IC.

Data and Informatics Working Group, ACD (June 2012 Report, p. 25)

Data and Informatics:
The Challenges We Must Solve

- We must create an adaptive and highly collaborative environment, both within NIH, and the extramural community, to enable optimal use of Big Data

- We must create a governance structure that aligns scientific leadership with resource management and oversight

- By analogy to Peer Review and support for the CSR, we must commit to a shared governance and resource plan to ensure the use and ownership of Big Data among all NIH ICs

Data/Informatics:
Overarching Strategy and Goals

- Two initiatives being proposed to overcome roadblocks
  - Big Data to Knowledge (BD2K) – enable the biomedical research enterprise to maximize the value of biomedical data
  - InfrastructurePlus – create an adaptive environment at NIH to sustain world class biomedical research
- Both led by Trans-NIH Advisory Data Councils
  - Councils chaired by the NIH CIO and Associate Director for Data Science (to be recruited)
  - Councils report to the NIH Director through NIH Steering Committee

BD2K: Four-part Initiative

I. Facilitating Broad Use of Biomedical Big Data

II. Developing and Disseminating Analysis Methods and Software

III. Enhancing Training for Biomedical Big Data

IV. Establishing Center of Excellence for Biomedical Big Data

http://acd.od.nih.gov/Data-and-Informatics-Implementation-Plan.pdf

InfrastructurePlus: Four/Five-part Initiative

I. NIH High Performance Computational Environment

II. Adopt Agile and Cost-Effective Hosting and Storage Approaches

III. Modernize the NIH Network

IV. Implement an Information-Rich Environment of Systems, Applications, and Tools

V. Proposed Expansion of Informatics Research in the Clinical Center – for further discussion

http://acd.od.nih.gov/Data-and-Informatics-Implementation-Plan.pdf

Data Initiatives: Next Steps

- Constitute Governing Boards (Advisory Data Councils) for the proposed initiatives

- Recruit a permanent Associate Director for Data Science

- Finalize plans for FY13 activities (e.g., workshops, RFAs, refine implementation plans)

- Initiate implementation plans