NIH: The View from 10,000 Feet

NIH Tribal Consultation Advisory Committee Meeting

September 29, 2015

Lawrence A. Tabak, DDS, PhD
Principal Deputy Director, NIH
Department of Health and Human Services
U.S. Dept. of Health & Human Services

Secretary of Health and Human Services

- Administration for Children and Families (ACF)
- Administration on Aging (AoA)
- Food and Drug Administration (FDA)
- Health Resources and Services Administration (HRSA)
- Indian Health Services (IHS)
- National Institutes of Health (NIH)
- Centers for Disease Control and Prevention (CDC)
- Agency for Toxic Substances and Disease Registry (ATSDR)
- Substance Abuse and Mental Health Services Administration (SAMHSA)
- Center for Medicare & Medicaid Services (CMS)
- Agency for Healthcare Research and Quality (AHRQ)
Francis S. Collins, MD, PhD
16th Director of the National Institutes of Health

- A physician-geneticist noted for his landmark discoveries of disease genes and his leadership of the international Human Genome Project
- Served as director of the National Human Genome Research Institute
- An elected member of the Institute of Medicine and the National Academy of Sciences
- Awarded the Presidential Medal of Freedom in November 2007; received the National Medal of Science in 2009

No one can whistle a symphony; you need a team to make that kind of music!
NIH: Steward of Biomedical & Behavioral Research for the Nation

NIH’s mission is to seek fundamental knowledge about the nature and behavior of living systems…

…and the application of that knowledge to enhance health, lengthen life, and reduce illness and disability.
NIH’s Impact on U.S. Health and Medicine

Cardiovascular disease death rates have fallen >70% in the last 60 years

Cancer death rates now falling ~1% per year; each 1% drop saves ~$500 billion

HIV therapies enable people in their 20s to live to age 70+
Understanding the Dual Nature of NIH

Intramural Research
• Approx. 6,000 scientists
• Approx. 11% of NIH’s budget

Extramural Research
• Supports research and training of scientists located in universities, medical schools, hospitals, and research institutions throughout the United States and overseas
  • >2,500 institutions
  • >400,000 scientists & research personnel
  • Approx. 70,000 applications and 40,000 awards annually
  • Approx. 81% of the NIH budget

All of NIH Fosters communication of medical information.
Understanding NIH Basics

- What does NIH Fund?
  - Research projects of high scientific caliber
    - NIH does not offer grants to pay for service delivery
  - Investigator initiated research
  - Unique research projects

- Who can apply?
  - Scientists at various career stages as permitted by the funding opportunity announcement
  - Public or private, for profit and not for profit organizations, including federally recognized tribal organizations.
Key Elements of NIH’s Approach to Supporting and Conducting Biomedical Research

- More than 60% of NIH funding is used to support ideas from researchers (investigator-initiated research)
  - Research to improve public health outcomes
- NIH develops major initiatives to foster the acceleration of knowledge
- Funding decisions are made through consideration of:
  - Scientific merit as determined by rigorous peer review
  - Scientific opportunity
  - Public health needs
  - The current portfolio of funded work
Initiates grant proposal:
- New project
- Continuing project

NIH Grant Proposal

Scientific Review Panel
Scientists evaluate scientific merit of grant proposal

Program Officer
Main contact for applicant
Helps interpret review results

Institute National Advisory Councils
Assess programs
Approve applications
Public members

Institute Director
Makes final decision
Allocates funds
Provides annual justification to Congress

Congress

Funds

Researcher

Helps interpret review results
Key Elements of NIH’s Approach to Supporting and Conducting Biomedical Research

- NIH ensures that the most rigorous and innovative science is supported
- Each year, NIH:
  - Issues ~1,000 Funding Opportunity Announcements
  - Reviews 70,000 – 80,000 applications
  - Recruits ~22,500 reviewers
  - Runs ~2500 review meetings
Key Elements of NIH’s Approach to Supporting and Conducting Biomedical Research

- Support training and career development, across the U.S. and around the world
- Encourage diversity of research participants and the biomedical research workforce
- Solicit broad input from all stakeholder groups when setting research priorities
Enhancing the Diversity of the NIH-Funded Workforce through Training and Infrastructure Development
The Leaky Pipeline!
Race & Ethnicity Disparities in Neuroscience

Higher attrition rate for URMs compared to Whites at all levels, but is most pronounced at the graduate school to postdoc level

Report of the Advisory Committee to the NIH Director Working Group on Diversity in the Biomedical Research Workforce, 2012.
BUILD, NRMN, and CEC

Building Infrastructure Leading to Diversity (BUILD): provides support to undergraduate institutions (and their pipeline partners) to design, implement, and evaluate innovative strategies to:
- Transform undergraduate research training
- Address barriers to participation
- Enhance faculty development
- Strengthen institutional infrastructure

National Research Mentoring Network (NRMN): provides support for the development of a national network of mentors and mentees from all disciplines relevant to the NIH mission to enhance training, preparation, and career development of individuals from diverse backgrounds in biomedical research.
- Develops best practices for mentoring and provides mentor training
- Provides mentoring, networking, professional development, opportunities for individuals from undergraduate to early faculty level

Coordination and Evaluation Center (CEC): coordinates consortium-wide activities, evaluates the efficacy of the training and mentoring approaches developed by the BUILD and NRMN awardees, and disseminates information to the broader research community to transform biomedical research training and mentoring nationwide.
Native American Research Centers for Health (NARCH)

- Supports collaborations between federally recognized American Indian/Alaska Native (AI/AN) Tribes/Tribal organizations and research intensive academic institutions
- Promotes the training of a cadre of AI/AN scientists and health professionals and supports health research projects prioritized by Tribal communities
IDeA Networks of Biomedical Research Excellence (INBRE)

- A funding opportunity under the IDeA program
- Supports the development of a statewide multi-disciplinary research network of doctoral degree-granting, undergraduate institutions and community colleges
The Native Investigator Development Program

- Launches careers for Native scholars to support independently funded researchers in health sciences and policy to:
  - Establish mentoring relationships
  - Improve the methodological skills of Native investigators
- Requires each participant to submit a competitive application to the NIH
- **48 scholars** supported to date
  - Produced **362 published articles**
  - Secured **$68 million** NIH funding
Research Opportunities at the NIH

- Summer Internship Program (SIP)
  - High school, college, graduate, professional students perform research supervised by NIH investigators
- Undergraduate Scholarship Program (UGSP)
  - Provides support of up to $20,000 per year to eligible undergraduates
- Postbaccalaureate Intramural Research Training Award (IRTA)
  - Graduates planning to apply to graduate or professional school spend 1-2 years working with investigators at the NIH
- Graduate Partnerships Program (GPP)
  - Dissertation research (all or part) is conducted at NIH

https://www.training.nih.gov/programs
NIH Funding Mechanisms Throughout Career Development

Approx. Stage of Research Training Career Level

Funding Opportunity

- Predoctoral Institutional Training Grant (T32)
- Predoctoral Individual NRSA (F31)
- Predoctoral Individual MD/PhD NRSA (F30)
- Postdoctoral Institutional Training Grant (T32)
- Postdoctoral Individual NRSA (F32)
- NIH Pathway to Independence Award (K99/R00)
- Mentored Research Scientist Development Award (K01)
- Mentored Clinical Scientist Development Award (K08)
- Mentored Patient-Oriented (K23)
- Mentored Quantitative (K25)
- Independent Scientist Award (K02)
- Midcareer Investigator Award in Patient-Oriented Research (K24)

Loan Repayment Program (LRP)

Small Grant (R03)

Research Project Grant (R01)

Exploratory/Development Grant (R21)
NIH...

Turning Discovery Into Health

Lawrence.Tabak@nih.gov