



Introduction to the NIH and the Grant Writing Process



March 6, 2006

WEE06 workshop

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Office of Extramural Research
National Institutes of Health**

NIH Mission

NIH is the steward of medical and behavioral research for the Nation.

Its mission is science in pursuit of fundamental knowledge about the nature and behavior of living systems and the application of that knowledge to extend healthy life and reduce the burdens of illness and disability.

*An agency of the Department of Health and Human Services,
the NIH is the Federal focal point for health research.*





Institutes, Centers & Offices

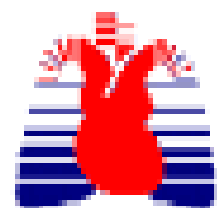
[www.\[Institute\].nih.gov](http://www.[Institute].nih.gov)



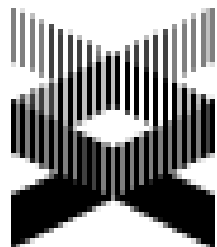
NIDA



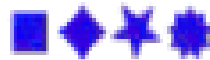
NEI



NHLBI



NHGRI



NIA



NIMH



NIAAAA



NINR



NIAMS



NCI



NIDCD



NIDCR



NIDDK



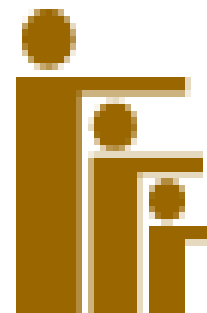
NIBIB



NIEHS



NIGMS



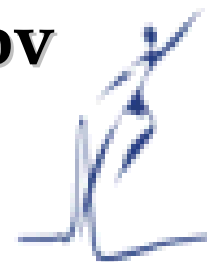
NICHD



NIAID



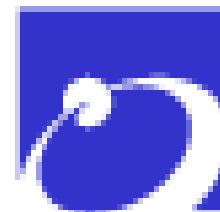
NLM



NINDS



Clin. Ctr.



CIT



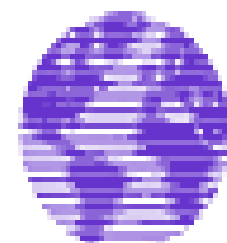
NCCAM



NCRR



NCMHD



FIC



CSR



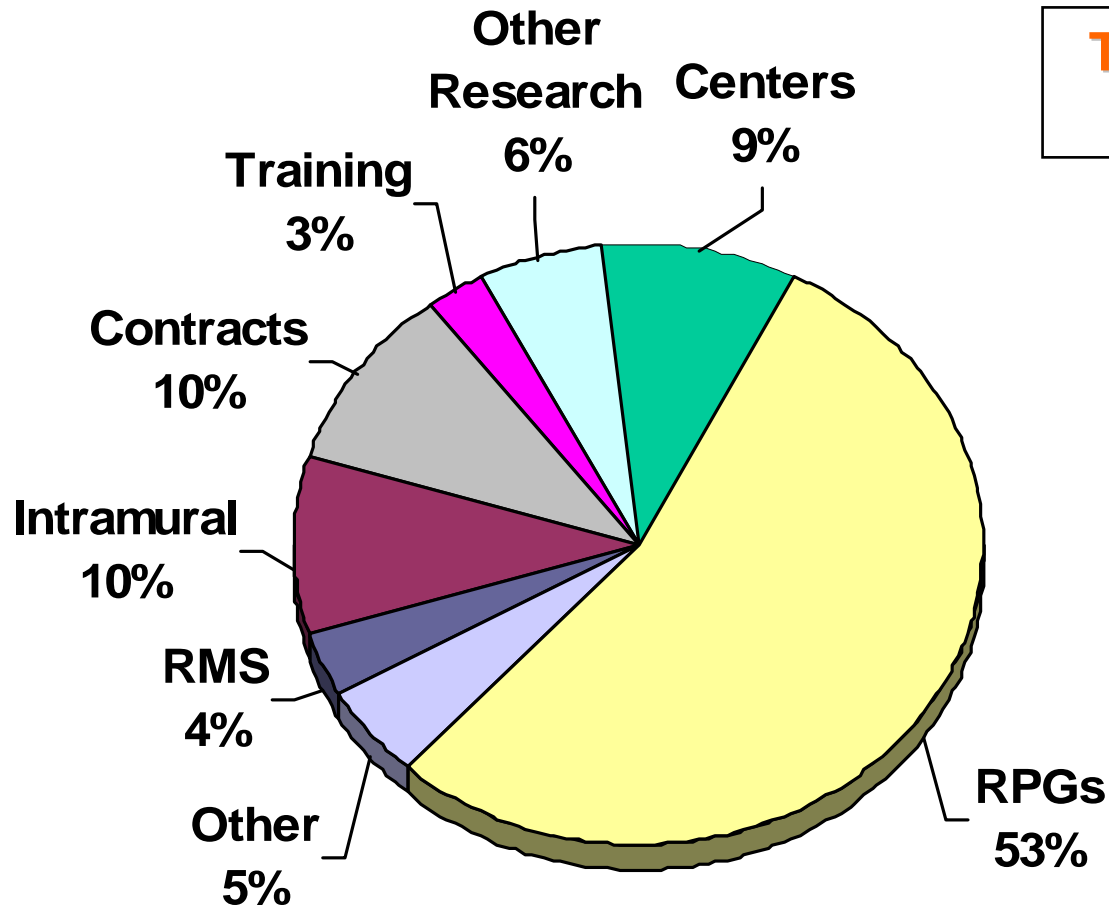
NIH Institutes and Centers (ICs)

27 Separate Institutes & Centers (IC's):

- Different missions & priorities**
- Different budgets**
- Different ways of deciding which grants to fund**



FY 2005 NIH Budget



**Total Budget =
\$28.7 Billion**

RPG = Research Project Grant
RMS = Research Management Support



How NIH Institutes Adjust Portfolios to Achieve Their Missions

- **Balance between “automatic payline” and “programmatically” decisions**
- **Issue Specific Solicitations:**
 - “Requests for Applications” (RFA’s)
 - “Program Announcements” (PA’s)
- **Supplements to existing grants**
- **Use of discretionary funds**



NIH Award Mechanisms

- **R = Research**
- **T = Training (Institutional)**
- **F = Fellowship (Individual)**
- **K = Career Development**



Types of Research Grants

- **R01**
 - Basic NIH research grant mechanism
 - Biomedical research project with high probability of success, preliminary data
 - Average award = \$ 300k / year
- **R03**
 - Small Research Grant
 - Little of no initial data; fund to proof-of-principle
 - \$275k/year
- **R21**
 - Exploratory/Developmental Grant; High-risk Research
 - Little of no initial data; fund to proof-of-principle
 - \$275k/year, 2-3 years max



Fellowship & Training Awards

- **F31** (Predoctoral NRSA Minority and Disability only)
- **F31** (Individual Predoctoral Fellows)
- **F32** (Postdoctoral NRSA)
- **F33** (Senior NRSA)
- **T32** (Institutional Predoc / Postdoc NRSA)



Career Development Awards

- **K01** (Mentored Research Scientist CDA)
- **K02** (Independent Scientist CDA)
- **K08** (Mentored Clinical Research CDA)
- **K23** (Mentored Patient-Oriented Research CDA)
- **K24** (Mid-career Patient-Oriented Research CDA)
- **K25** (Mentored Quantitative CDA)
- **K99/R00** (Pathway to Independence – PI)



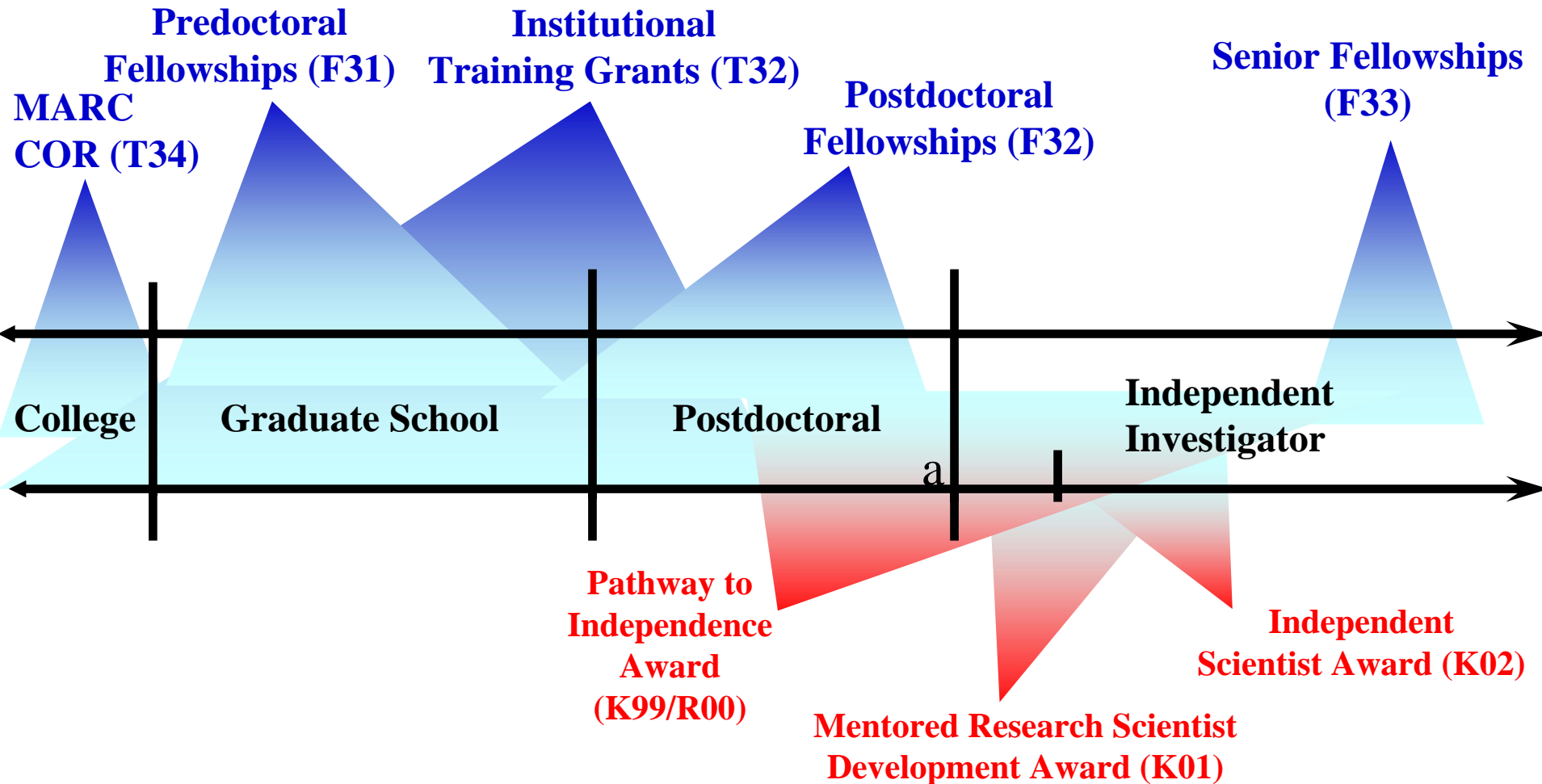
Pathway to Independence (PI) Award: K99/R00

- Intent is to facilitate receiving an R01 award earlier in an investigator's research career.
- Up to five years of support consisting of two phases: 1-2 years of mentored support, followed by up to 3 years of independent support contingent on securing an independent research position.
- Eligible PIs include postdoc candidates who have terminal clinical or research doctorates (including Ph.D., M.D., or equivalent) with no more than 5 years of research training at the time of initial application or resubmission(s).
- It is anticipated that 150 to 200 PI Awards will be issued for this program in the initial year.



NRSA Fellowships and Training Grants (Fs & Ts)

Career Development Awards (Ks)



How Does NIH Support Research and Training?

The Grant Process



The Old Grant Submission

Grant Application
Form PHS 398



Application for a
Public Health Service Grant
PHS 398



The New Grant Submission

Electronic Submission: 424 (R&R)
<http://era.nih.gov/ElectronicReceipt/>

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FIND. APPLY. SUCCEED.SM

Grants.gov allows organizations to electronically find and apply for more than \$400 billion in Federal grants. Grants.gov is THE single access point for over 1000 grant programs offered by all Federal grant-making agencies. The US Department of Health and Human Services is proud to be the managing partner for Grants.gov, an initiative that is having an unparalleled impact on the grant community.

Navigation of Grants.gov is simple. Use the colored tabs and/or links at the top of the screen to access primary sections of the site or the links to the left and below to access information on specific topics.

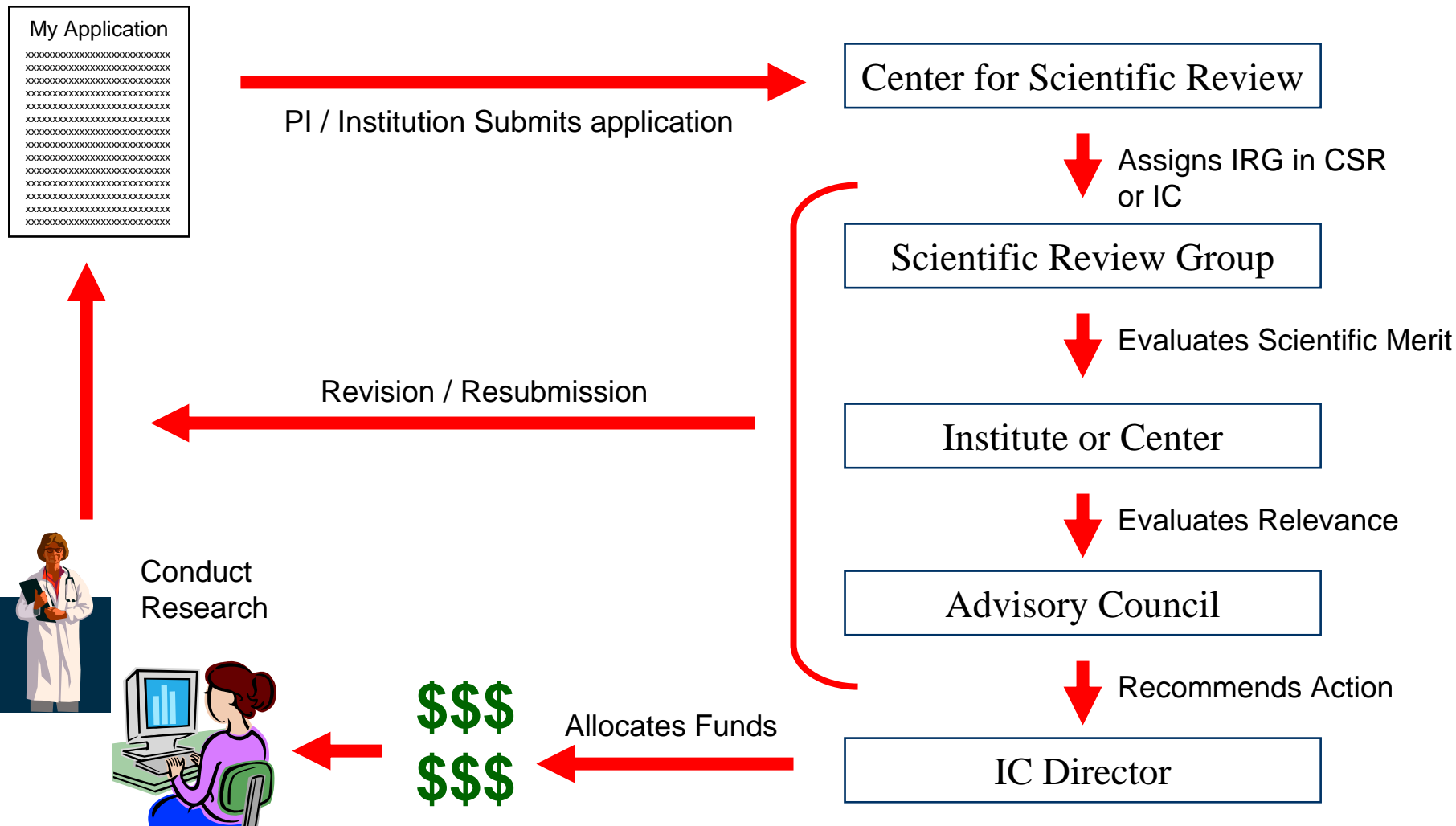
Timeline for SF 424

Initial plans/milestones for submission dates and mechanisms are as follows:

- December 1, 2005—Small Business Innovative Research (SBIR) and Small Business Technology Transfer Programs (STTR) (R41, R42, R43, R44)
- December 15, 2005—Support for Conferences & Scientific Meetings (R13 & U13)
- February 25, 2006—Academic Research Enhancement Awards (AREA) (R15)
- June 1, 2006—Small Grant Programs (R03) & Exploratory/Development Research Grant Awards (R21)
- October 1, 2006—Research Project Grant Program (R01)



The Peer Review Process



Study Section - Participants



Who Do I Call at NIH?

- **Program Staff**
 - Prior to Submission: Scientific Interest & Scope
 - After Award: Research Progress
- **Scientific Review Administrator**
 - During Receipt, Referral and Review Process
- **Grants Management Staff**
 - Prior to Submission & After Award:
Budget and Administrative Issues



Getting involved with the NIH

- **Monitor NIH Web sites and literature**
 - www.nibib.nih.gov
 - **NIH Guide for Grants and Contracts**
<http://www.nih.gov/grants/guide/index.html>
- **Participate in workshops and symposia**
- **Attend NIH Regional Seminars and Grantsmanship Workshops**
- **Stay in touch with NIH staff**



National Institute of Biomedical Imaging and Bioengineering (NIBIB)

NIBIB Mission:

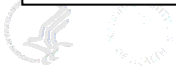
Improve human health by leading the development and accelerating the application of biomedical technologies.

The Institute is committed to integrating the physical and engineering sciences with the life sciences to advance basic research and medical care.



How does NIBIB Support its Mission?

- **Take the lead in exploring novel approaches for funding technology development and interdisciplinary research**
- **Form partnerships with other NIH Institutes to translate fundamental discoveries into applications for specific diseases, disorders, or biological processes**
- **Coordinate with other government agencies to translate fundamental or crosscutting discoveries and developments in imaging and engineering into biomedical applications**

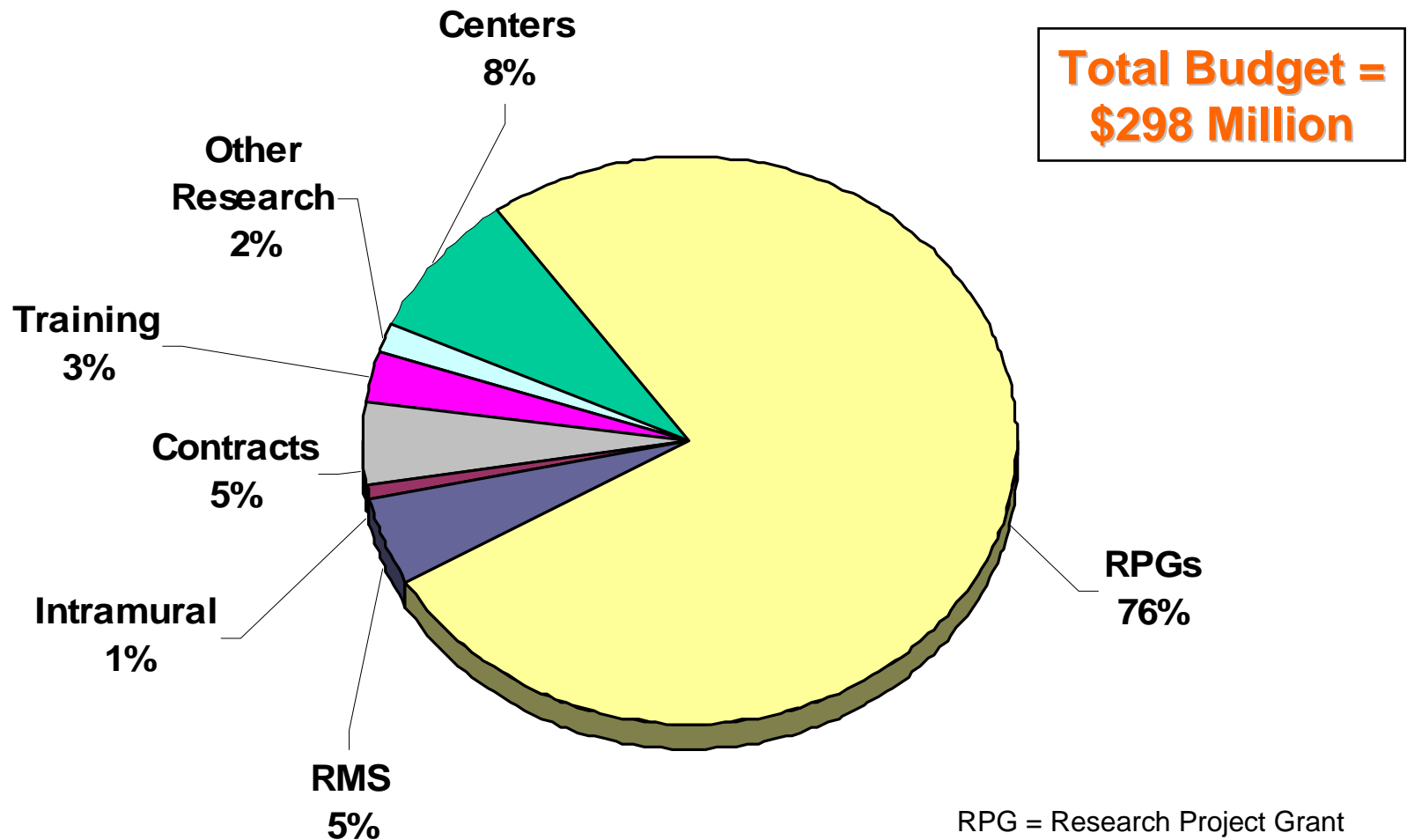


How is NIBIB different?

- **Focus on enabling technologies with broad applications to multiple diseases or biological processes**
- **Multi-disciplinary and collaborative research**
- **Design- and needs-driven research vs. hypothesis-driven**
- **Inter-agency and inter-institute activities**



FY 2005 NIBIB Budget



**Total Budget =
\$298 Million**

RPG = Research Project Grant
RMS = Research Management Support



Current NIBIB Grant Portfolio Areas

- **Biosensors**
- **Biomaterials**
- **Biomechanics**
- **Bioinformatics**
- **Computational Biology**
- **Drug & Gene Delivery**
- **Image Guided Therapies**
- **Medical Devices/Implants**
- **Nanotechnology**
- **Nuclear Medicine**
- **Optical Imaging**
- **Platform Technologies**
- **Rehabilitation Engineering**
- **Surgical Tools & Techniques**
- **Tissue Engineering**
- **Ultrasonics**
- **X ray, EM, Ion Beam**
- **MRI / MRS**



NIBIB Strategic Plan

Interdisciplinary Research Training:

- Goal.** Biomedical research training programs that integrate the physical, engineering, and life sciences
- Develop a cadre of biomedical imaging and bioengineering research scientists to lead the advancement of these growing scientific fields
 - Help bridge the gaps between the biological, physical & engineering sciences by training new students as well as supporting the career development of existing researchers to advance the prevention, diagnosis & treatment of disease

Broad Training Activities

- **NIBIB-NSF Bioengineering and Bioinformatics Summer Institutes Program (BBSI)**
- **HHMI-NIBIB Interfaces Initiative for Interdisciplinary Graduate Research Training**
- **Biomedical Engineering Summer Internship Program (BESIP)**
- **National Research Service Awards Short-Term Institutional Training Grants (T35)**
- **NIBIB Research Supplements to Promote Clinical Resident Research Experiences**



More on the NIBIB Website: www.ninib.nih.gov

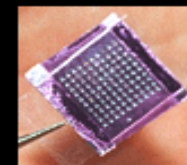
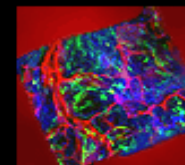
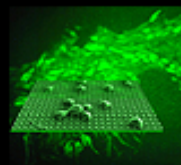
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National Institute of Biomedical Imaging and Bioengineering

NATIONAL INSTITUTES OF HEALTH
U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES



*Improving health by leading the development
and accelerating the application of
biomedical technologies*

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- ▶ Biotechnology Resource Centers
- ▶ Resources for Researchers

▶ Funding

- ▶ Funding Opportunities
- ▶ Grant Application Process
- ▶ Policies For Researchers
- ▶ Funding Strategies & Policies

▶ Training

- ▶ Undergraduate/Graduate
- ▶ Predoctoral

What's New

February 8, 2006

NIBIB Announces
Grantsmanship Seminar in North
Carolina

January 27, 2006

NIBIB Releases Tissue
Engineering/Regenerative
Medicine Meeting Summary

December 16, 2005

NIBIB Announces Workshop on
Improving Health Care
Accessibility through Point-of-
Care Technologies

