

Research Funding Strategies:
Thoughts on the Impact of NIBIB
(National Institute for Biomedical Imaging
and Bioengineering)

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and
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Goals

- To prompt discussions about NIBIB , deliberations within the AAPM, changes of the organization of AAPM
- To provide information so you can make decisions

One Hundred Sixth Congress
of the
United States of America

AT THE SECOND SESSION

Begun and held at the City of Washington on Monday,
the twenty-fourth day of January, two thousand

An Act



To amend the Public Health Service Act to establish the National Institute of
Biomedical Imaging and Bioengineering.

*Be it enacted by the Senate and House of Representatives of
the United States of America in Congress assembled,*

SECTION 1. SHORT TITLE.

This Act may be cited as the "National Institute of Biomedical
Imaging and Bioengineering Establishment Act".

APPROVED
DEC 29 2000


Speaker of the House Pro Tempore

President of the Senate Pro Tempore

William J. Clinton



**Board of Directors of the Academy of Radiology Research
April 29, 2001**

History: National Institute for Biomedical Imaging and Bioengineering?

- Philip F. Judy is AAPM Representative on the Board of Directors of Academy of Radiology Research (ARR).
- The ARR is considered the “moving force” for the creation of NIBIB.
- The creation of NIBIB was not expected by NIH professionals or the biomedical imaging research establishment.

Politically Correct Speaking of the
abbreviation for National Institute of
Biomedical Imaging and
Bioengineering - **NIBIB**

- Do not make it a word.
- Say each letter - N.I.B.I.B.

Outline of Presentation

- History of Academy of Radiology
- Public Law 106-580 (HR 1795)
- NIBIB
 - Mission
 - Organization
 - Budget
- AAPM activities

Academy of Radiology Research (ARR)

- Founded 1995
- All medical imaging specialty societies (including the AAPM) were invited to join with RSNA, ARRS, AUR, ACR as members of ARR
- Goal to create a National Institute of Biomedical Imaging

ARR Broad-based Members

- American College of Radiology
- American Roentgen Ray Society
- Three groups that meet at the AUR
 - Association of University Radiologists
 - Association of Program Directors in Radiology
 - Society of Chairmen of Academic Radiology Departments
- Radiological Society of North America

AAR Member Societies

- American Academy of Oral and Maxillofacial Radiology
- American Association for Women Radiologists
- American Association of Physicists in Medicine
- American Osteopathic College of Radiology
- American Society of Emergency Radiology
- American Society of Neuroradiology
- Society for Health Services Research in Radiology
- Society for Pediatric Radiology
- Society for the Advancement of Women's Imaging

ARR Member Societies (continued)

- Society of Breast Imaging
- Society of Cardiovascular and Interventional Radiology
- Society of Computed Body Tomography and Magnetic Resonance
- Society of Gastrointestinal Radiologists
- Society of Nuclear Medicine
- Society of Radiologists in Ultrasound
- Society of Skeletal Radiology
- Society of Thoracic Radiology
- Society of Uroradiology

Supporting Societies

- American Society of Radiologic Technologists
- Association of Educators in Radiological Sciences

Pre-ARR History

- ~1975 - 1995 Conjoint Committee on Diagnostic Radiology
 - ACR, AUR, SCARD
 - Early era (James Youker was Chairman from 1979-1985)
 - Contemporary - (Charles Putman was Chairman from 1985-1995)

Conjoint Committee Accomplishments

- Medical imaging research moved from NIGMS to NCI (~1978-1981)
- 3 Medical Imaging Priorities Conferences as required by Congressional Legislation
 - Most recent was 1994
 - AAPM cosponsored the most recent conference
- Intramural presence at the NIH Campus
 - Laboratory of Diagnostic Radiology Research

Limitations of Conjoint Committee

- Narrowly based (just ACR, “AUR”)
- Diffuse activities
 - There was a desire to focus on an effort to create an imaging Institute.
- Limited resources

Academy of Radiology Research - 1995

- Budget about \$500,000 per year
- Goal to create the *National Institute of Biomedical Imaging*
- Radiation oncology societies choose not participate

Alliance with AIMBE

~1998

- AAPM is member of AIMBE
(www.aimbe.org - Bioengineering organization that ran the World Congress with AAPM)
- Goal of the alliance was to create the ***National Institute of Biomedical Imaging and Bioengineering***

Textbook political process

- In fact, the legislative history will be case study in new textbook on political science.
- Representatives responding to constituents request (~200 House Cosponsors)
- AAR resources were not spend on political donations

Jan 2001- NIH's initial effort

- Donna Dean is appointed NIH's "contact person" for NIBIB.
(Nothing could be "officially" done until NIBIB has budget.)
- Internal NIH committee appointed
(5 Institute Directors + NIH staff)
- ARR&AIMBE appointed a joint committee to advise NIH

April 7-8, 2001 - AAPM Long Range Planning Meeting

- Donna Dean makes presentation at the LRP Meeting (she will repeat at AAPM Annual Meeting)
- As decided at LRP, Charles Coffey has appointed Ad hoc Committee on Imaging within the AAPM (Richard Morin is Chair).

The mission of the National Institute of Biomedical Imaging and Bioengineering is to promote fundamental discoveries, design and development, and translation and assessment of technological capabilities in biomedical imaging and bioengineering, enabled by relevant areas of information science, physics, chemistry, mathematics, materials science, and computer sciences. (From NIBIB Mission Statement, March 5, 2001)

Support research and research training through existing NIH funding mechanisms, and take the lead in exploring novel approaches for funding technology development and interdisciplinary research.

(From NIBIB Mission Statement, March 5, 2001)

Form partnerships with NIH Institutes and Centers to translate fundamental discoveries into research and applications for specific diseases, disorders, or biological processes. (From NIBIB Mission Statement, March 5,2001)

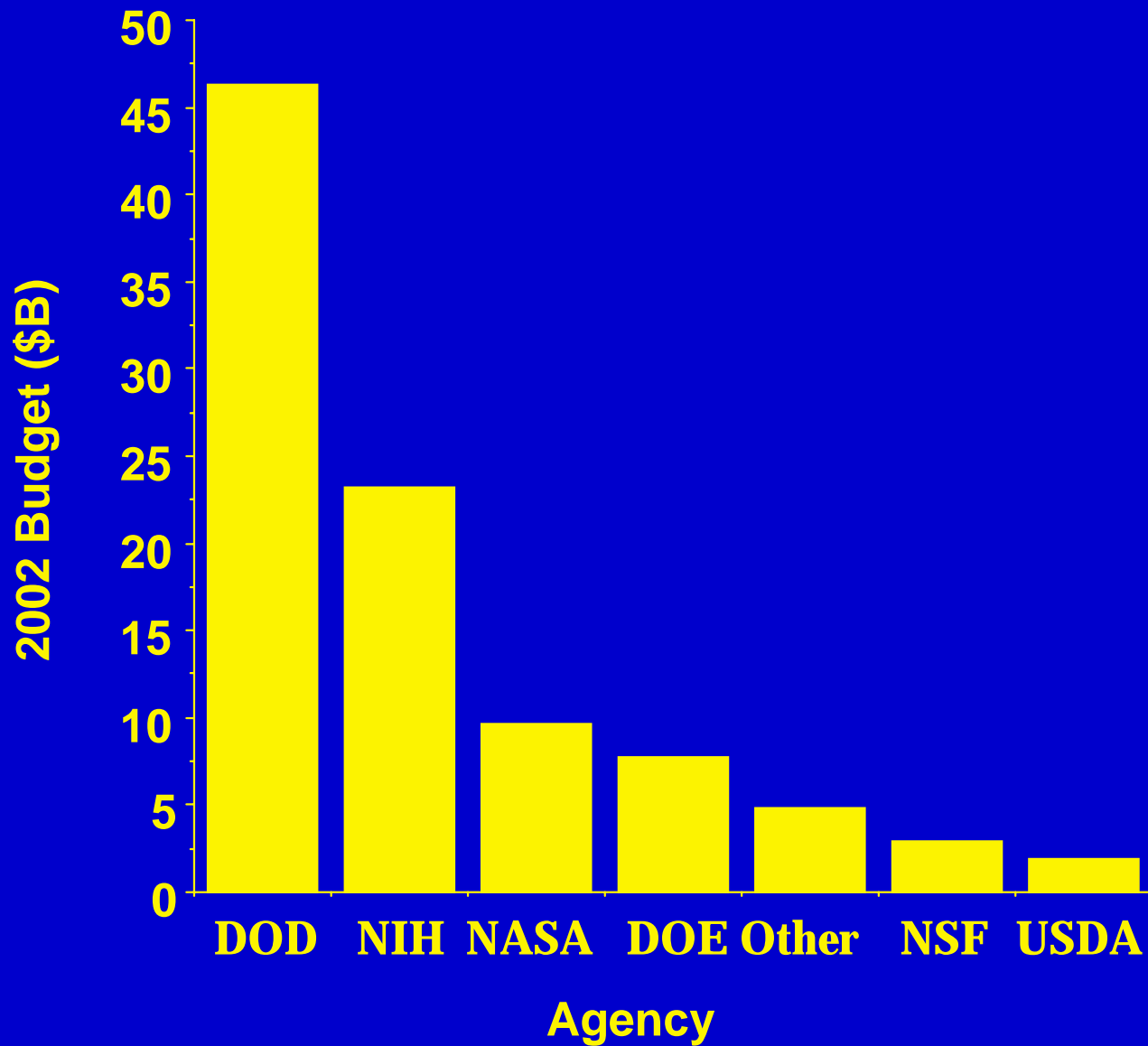
Coordinate with other government agencies to translate fundamental or crosscutting discoveries and developments in imaging and engineering, and related areas of information science and technology assessment, into biomedical applications (From NIBIB Mission Statement, March 5, 2001)

Encourage and support the development of relevant standards and guidelines that will enable widespread adaptability for biomedical imaging, bioengineering, and related information science and technology and computation, by taking a leadership and coordinating role for the NIH. (From NIBIB Mission Statement, March 5, 2001)

April 10, 2001, Bush 2002 Budget

- \$40.2M for NIBIB
- This budget is for new programs and administration of NIBIB
- \$50M -\$100M (TBD) of existing grants from other institutes will be transferred to NIBIB

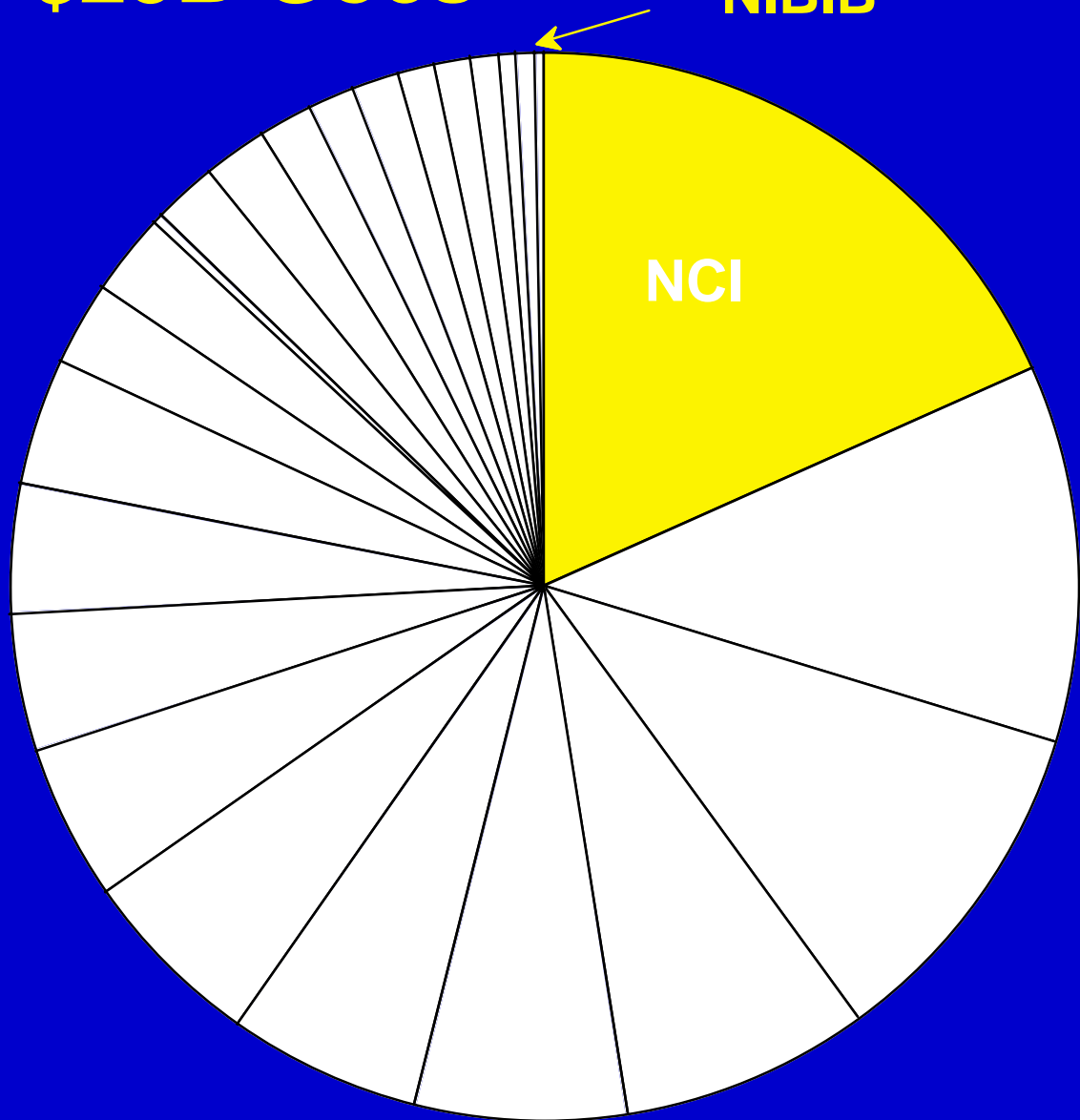
Federal 2002 Research Budget Total - \$96.5



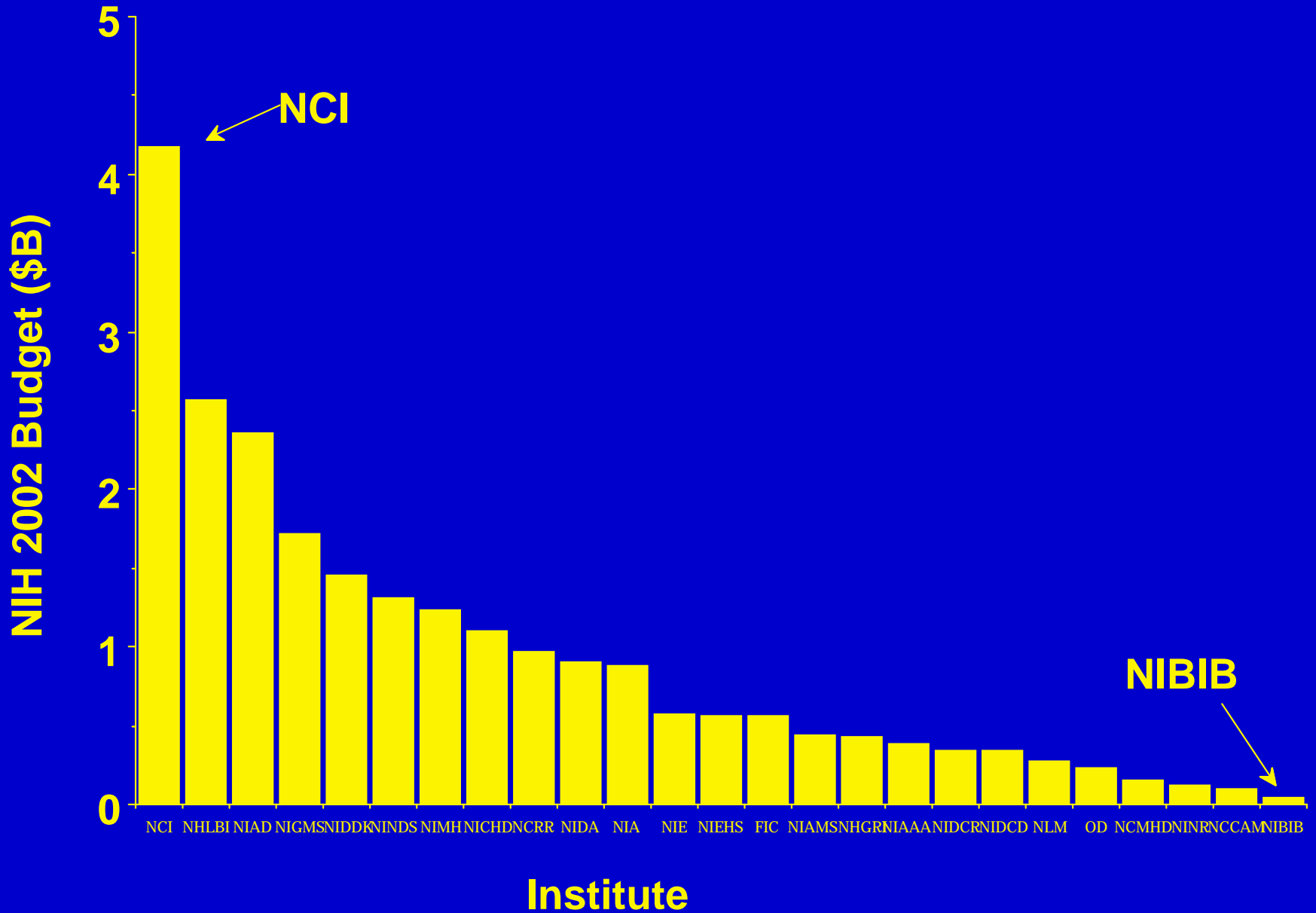
Where NIH's \$23B Goes

NIBIB

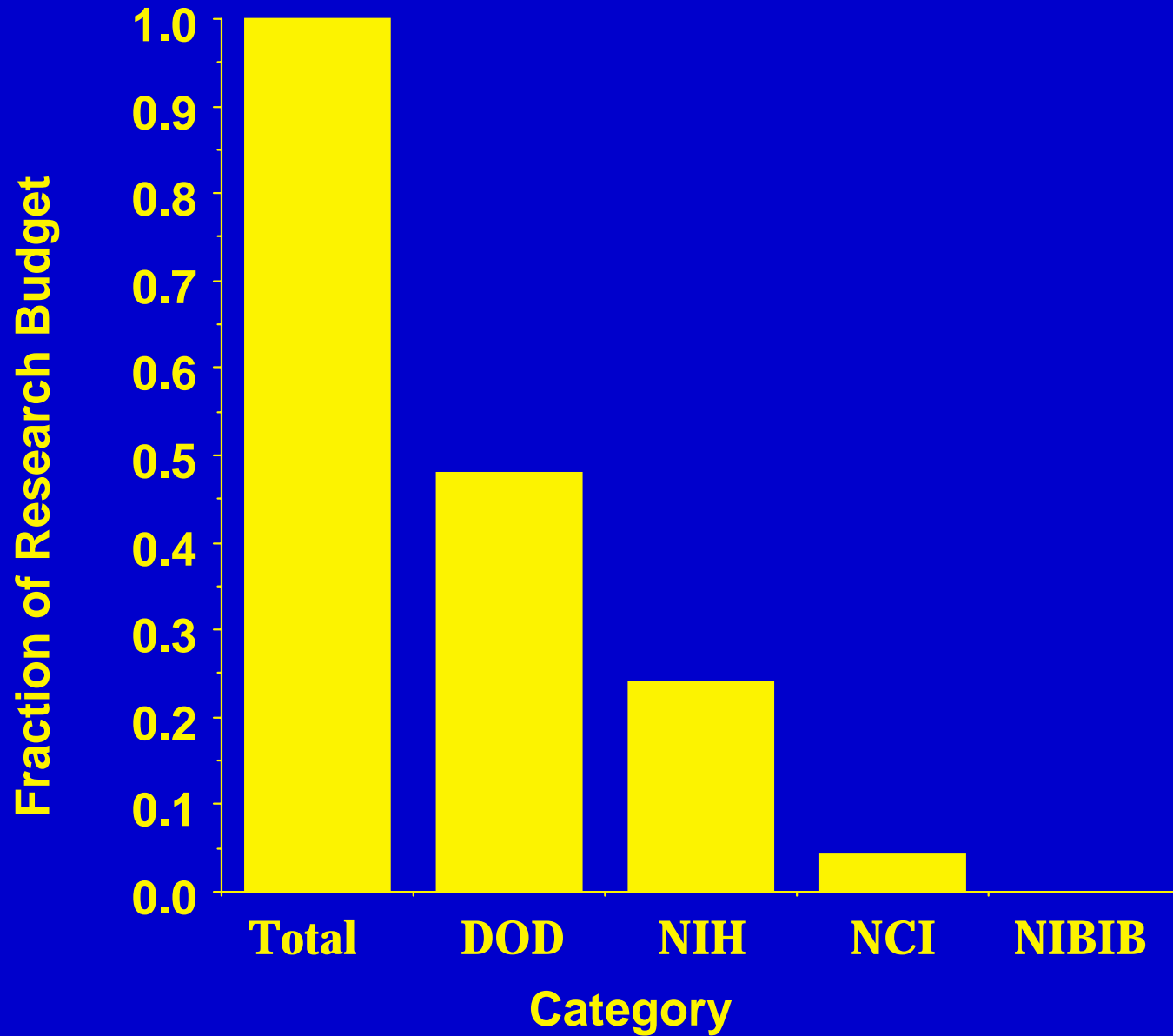
- NCI
- NHLBI
- NIAD
- NIGMS
- NIDDK
- NINDS
- NIMH
- NICHD
- NCRR
- NIDA
- NIA
- NIE
- NIEHS
- FIC
- NIAMS
- NHGRI
- NIAAA
- NIDCR
- NIDCD
- NLM
- OD
- NCMHD
- NINR
- NCCAM
- NIBIB



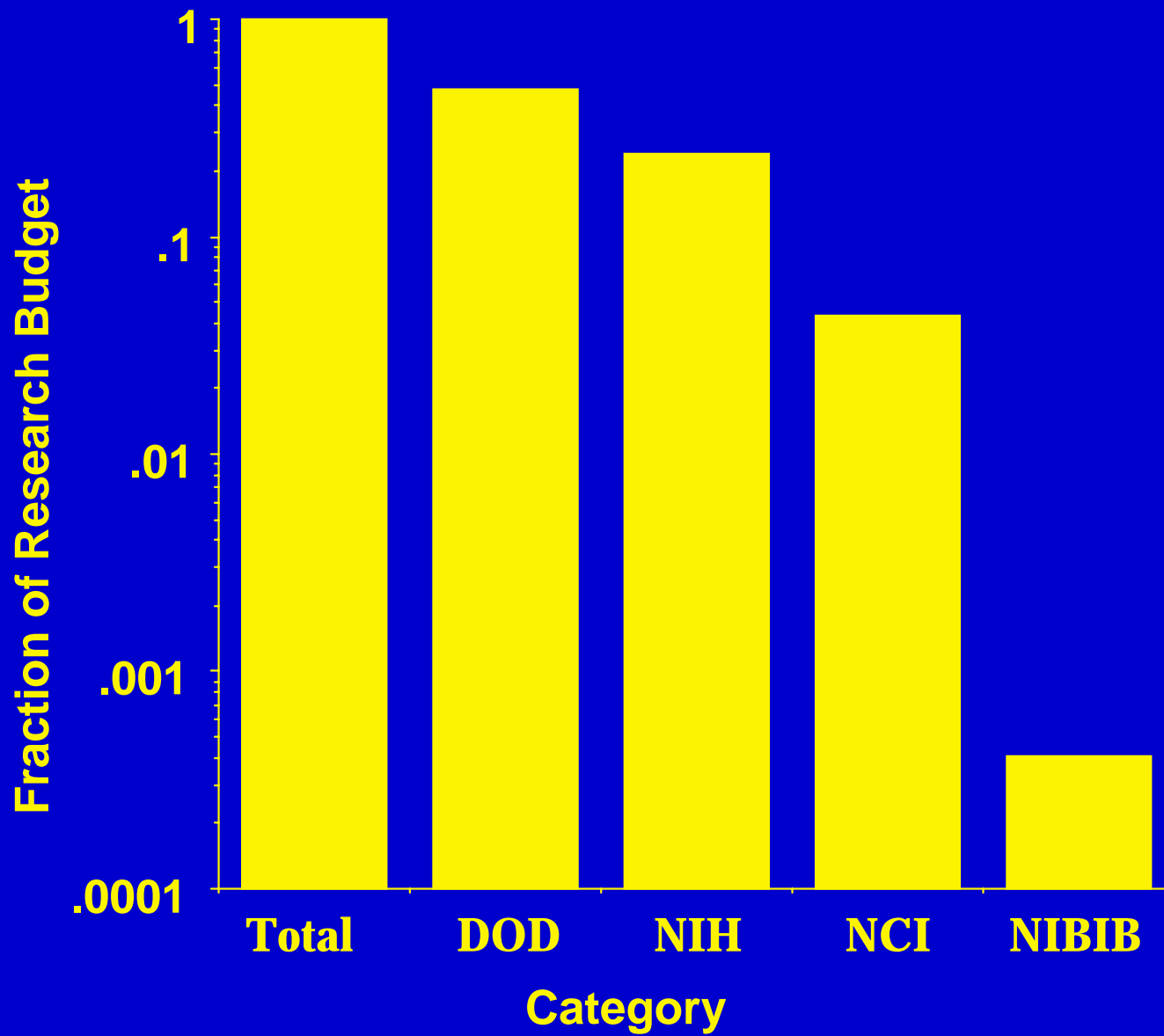
Where NIH's \$23B Goes



Relative Research Budget



Relative Research Budget



NIBIB Organization(2002)

**National
Advisory
Council**

(12 Members ?)

Office of Director

(3 FTE)

**Division of
Biomedical
Imaging**
(3 FTE)

**Division of
Bioengineering**
(3 FTE)

**Office of
Administrative
Management**
(9 FTE)

**Division of
Extramural
Activities**
(2 FTE)

**Office of
Scientific
Review**
(1 FTE)

2002 Budget - 21 FTE - (New \$40.2M)

92 New Research Grants - \$23.7M

74 New Training Positions - \$2.7M

Administration - \$8.2M

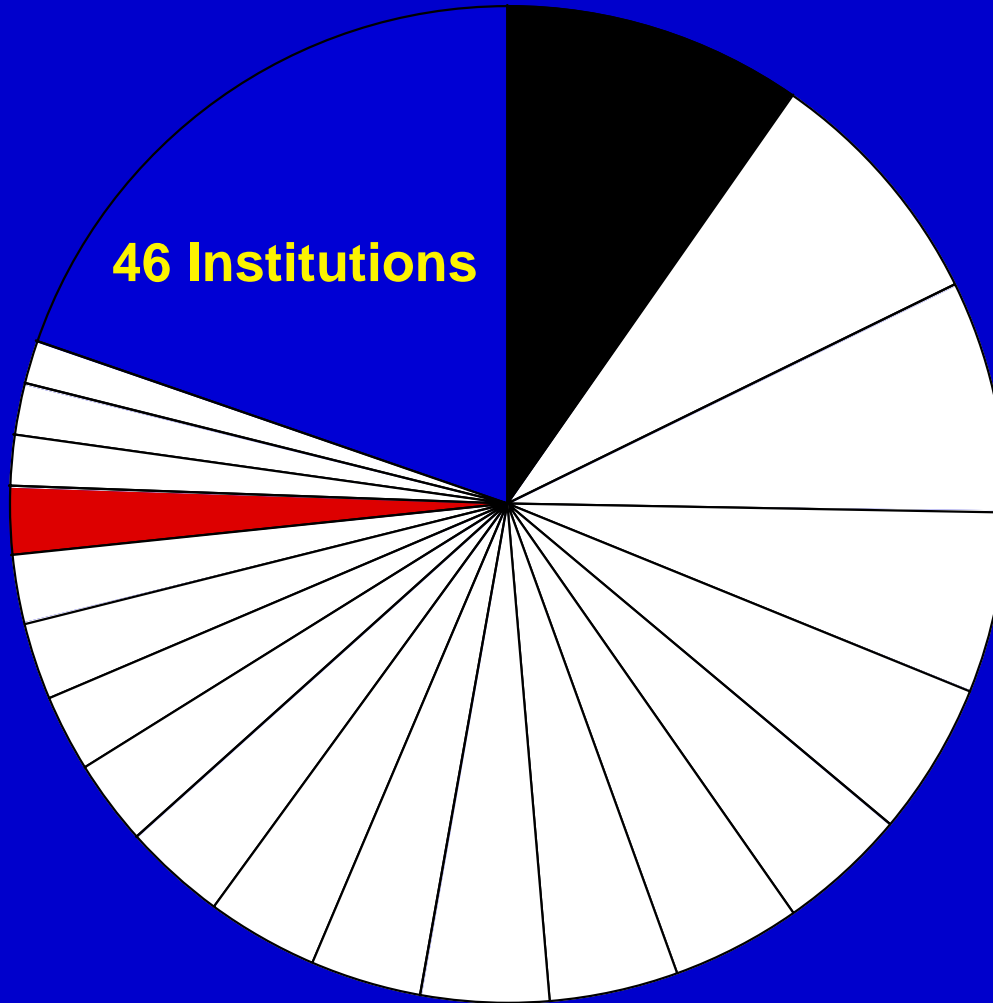
Other Research - \$5.5M

Existing Grants - ??

April 20, 2001 - NIBIB “Official”

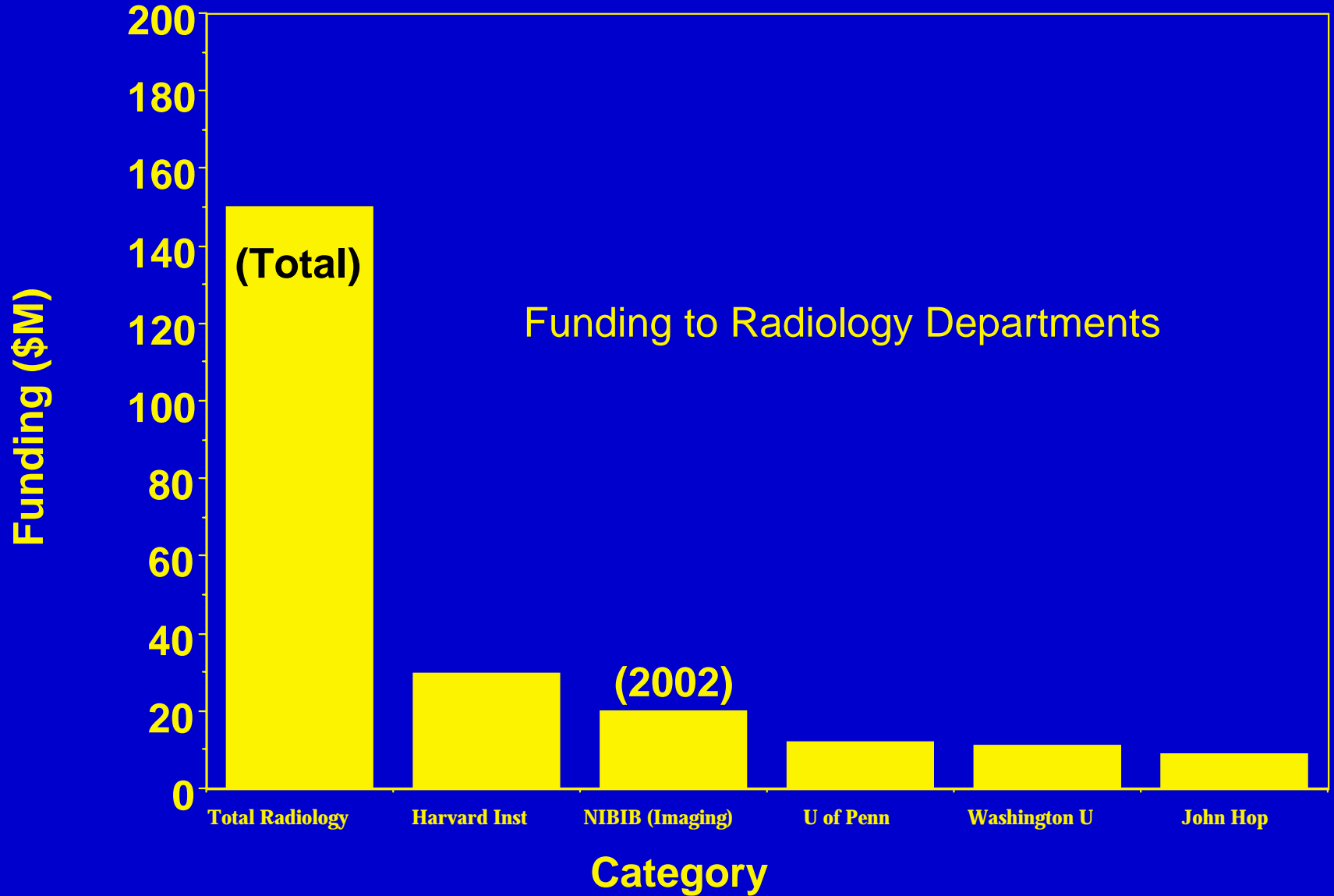
- Secretary of HSS “officially” created NIBIB
 - Requested transfer of money to run NIBIB
 - Begin recruiting a NIBIB Director
 - Set up an Advisory Committee
- Acting Director of NIH appointed Donna Dean Acting Director of NIBIB

Funding of Radiology Departments (FY 2000) Total \$150M



- MGH
- U of Penn
- Washington U
- John Hop
- BWH
- U of Mich
- Stanford
- U of Washington
- BI Deac
- U of Minn
- UC SF
- Yale
- UCLA
- Pitt
- U of Chi
- Duke
- Iowa
- Wake Forest
- U Tex Hou
- AZ
- Others (46 Inst)

Impact of NIBIB on Radiology Funding



Uncertainties

- Lobby effort to increase appropriations
 - ARR suggesting \$40M -> \$300M

Makes a big pot of money

- Number of proposals assigned to NIBIB
- Number of proposals requesting assignment of NIBIB

If large number of proposal assigned or requesting NIBIB assignment, competition for small pot of money.

Recommendations

- Determine whether appropriations for NIBIB increased - timeframe Aug-Sept
- Determine magnitude of grants transferred to NIBIB

These two processes will determine the magnitude of 2003 budget. (NIBIB was created late in 2002 Budget process and NIH leadership did not plan for its creation.)

Recommendations

Remember that NIBIB creation does not change to Study Sections directly

- 2002 Budget for proposals submitted for Oct/Nov Deadlines and before.
- For investigator initiated investigations - Request assignment to your favorite Institute, but if your research generalizes indicate that NIBIB have have an interest.

Conclusions

- NIBIB is an *Agent of Change*.
- Major impact will be in future.
- Medical imaging scientists have an opportunity to create their future.