

WORKSHOP ON IMAGE GUIDED INTERVENTIONS



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National Institutes of Health

US Department Health and Human Services

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

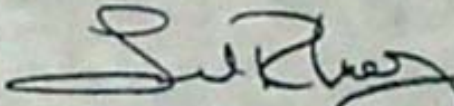
To amend the Public Health Service Act to establish the National Institute of
Biomedical Imaging and Bioengineering.

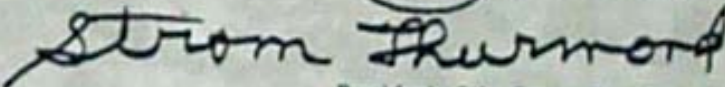
*Be it enacted by the Senate and House of Representatives of
the United States of America in Congress assembled,*

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

2000 (December)

PL106-580

... The Congress makes the following findings:

- (1) **Basic research in imaging, bioengineering, computer science, informatics, and related fields is critical to improving health care** but is fundamentally different from the research in molecular biology on which the current national research institutes at the National Institutes of Health ("NIH") are based. To ensure the development of new techniques and technologies for the 21st century, **these disciplines therefore require an identity and research home at the NIH that is independent of the existing institute structure.** ...

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...(2) Activities under the Program shall include the following with respect to biomedical imaging and bioengineering:

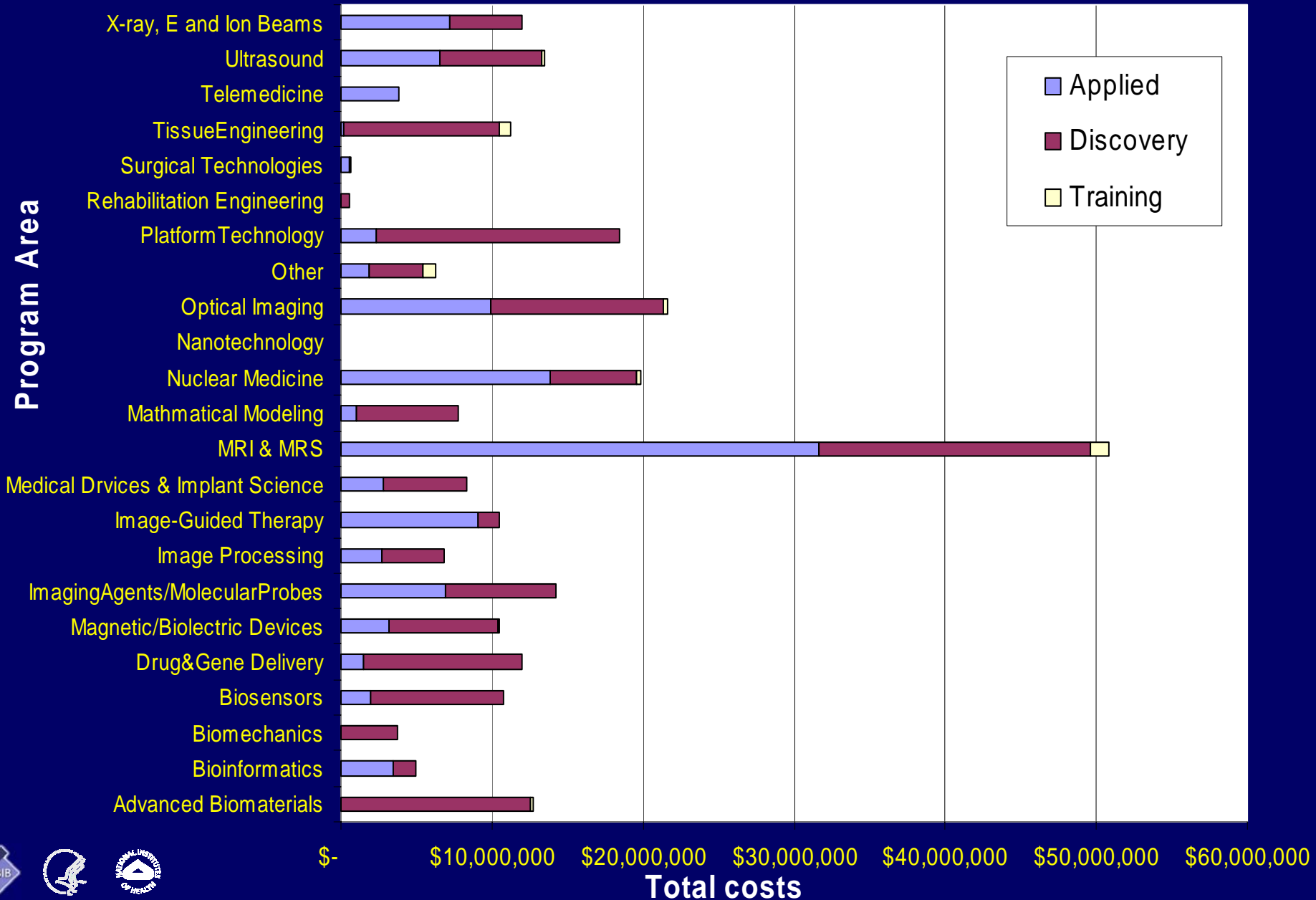
- (A) Research into the development of new techniques and devices.
- (B) Related research in physics, engineering, mathematics, computer science, and other disciplines.
- (C) Technology assessments and outcomes studies to evaluate the effectiveness of biologics, materials, processes, devices, procedures, and informatics.
- (D) Research in screening for diseases and disorders.
- (E) The advancement of existing imaging and bioengineering modalities, including imaging, biomaterials, and informatics.
- (F) The development of target-specific agents to enhance images and to identify and delineate disease.
- (G) The development of advanced engineering and imaging technologies and techniques for research from the molecular and genetic to the whole organ and body levels.
- (H) The development of **new techniques and devices** for more effective **interventional procedures (such as image-guided interventions).**

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.

FY03 Grants



NIH 10 Initiatives To Be Supported With Additional FY05 Funding

- **#7: Image Guided, Robotic Assisted
Microsurgery**



Future Directions

- Strategic Plan
 - ◆ Interagency Collaboration
 - ◆ Public-Private Partnerships
 - ◆ Major Initiatives
 - > Minimally Invasive Surgery / Interventions
 - > Quantum Projects

QUANTUM PROJECTS

- Very High-impact research projects designed to achieve a “quantum” leap forward in health care
- Characteristics:
 - ◆ Technological innovation
 - ◆ Collaborative, multi-disciplinary effort
 - ◆ Achievable in a 6-10 year time period
- Potential Projects
 - ◆ Tissue Engineered Blood; Hemodialysis Replacement; Nerve Regeneration; Prostate CA Detection; Blood Chemistry w/o Needle