

Friends of NIBIB

FriendsofNIBIB.org

Dedicated to supporting the National Institute of Biomedical Imaging and Bioengineering (NIBIB)

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NIBIB RESEARCH AREAS

BIOMEDICAL IMAGING

Medical imaging is a cornerstone of healthcare, informing disease detection, diagnosis, treatment planning, and monitoring. 600+ million imaging procedures are performed each year in the U.S.

Examples: MRI, CT, ultrasound, PET scans, optical imaging, image-guided surgical robots, targeted radiation delivery

BIOENGINEERING

Bioengineering applies engineering solutions to develop technologies that directly improve our health and quality of life. The bioengineering market size is $347.04 billion, growing at a compound annual rate of 17.75%

Examples: artificial organs, prosthetics, cancer immunotherapies, surgical instruments, wearable biosensors, pacemakers

ABOUT FoNIBIB

Friends of NIBIB (FoNIBIB) is a coalition of nonprofit research, scientific, and medical organizations dedicated to supporting the National Institute of Biomedical Imaging and Bioengineering (NIBIB) at the NIH.

FoNIBIB seeks to increase public awareness and support for NIBIB's scientific goals, research advances, and commitment to training the next generation of researchers for the benefit of public health.

ABOUT NIBIB

NIBIB's mission is to transform our understanding of disease and its prevention, detection, diagnosis, and treatment through technology development.

NIBIB LEADS TRANSLATIONAL HEALTH TECHNOLOGIES

NIBIB demonstrates leadership in patent output and translational technology development with less than 1% of the NIH Budget.*

Precision Medicine with AI (PRIMED-AI)
Developing innovative, reliable and cost-effective AI-powered health tools by combining clinical imaging data and other health metrics

New Approach Methodologies (NAMs)
Supporting engineering-driven technologies that provide cost-effective alternatives to animal testing that predict therapeutic safety and efficacy in patients



*NIBIB grantees average 50 patents/$100M, compared to 5 patents/$100M across the NIH**

**Direct grant investments, 2011-2025 data from reporter.nih.gov*

LEARN ABOUT NIBIB INITIATIVES

National Biotechnology Centers

NIBIB supports 23 biotechnology centers around the country focused on Imaging Health and Disease, Engineered Biology, Data Science and Computation, and Advanced Therapies and Cures.

Medical Imaging and Data Resource Center (MIDRC)

A collaborative initiative spanning 24 institutions that are fostering AI and machine learning innovation using medical imaging data, supporting shared image data sets at a national scale.

Point of Care Technologies Research Network (POCTRN)

Develops and tests point-of-care technologies with clinical applications using a network model.

Rapid Acceleration of Diagnostic Technology (RADx Tech)

Designed to rapidly accelerate the development, validation, and commercialization of innovative diagnostic tests using a fast-track, "shark tank"-style process to get diagnostic tests to market.

National Biomaterials Technology Network

The Humanity Unlocking Biomaterials (HUB) Coordinating Center supports the development and acceleration of innovative biomaterials-based technologies for commercial and clinical use.

NIBIB RESEARCH DIVISIONS

Applied Science & Technology

Supports the development of biomedical imaging technologies to transform our understanding of disease, improve diagnostics, image-guided therapies, and human health

MRI
40 million MRI scans are performed in the U.S. annually and have many benefits including noninvasive cancer diagnosis with higher detection rates.

Molecular Probes
Targeted contrast agents allow physicians to visualize, track, and precisely treat diseased tissues in real-time using image-guided interventions, increasing tumor removal and decreasing reoperation rates.

Health Informatics Technologies

Supports the evaluation of biomedical information toward patient-centered applications of clinical decision-making, in-home health monitoring, next-generation imaging, and mobile health

Artificial Intelligence (AI)
Predictive digital technologies automatically capture information used to diagnose, manage, or deliver health care. It is estimated that AI could yield up to $1.5 trillion in health care savings by 2050.

Digital Health
Remote monitoring technologies allow older adults to remain independent. Telehealth studies reveal that clinical contact can increase by up to 43%, breaking down cost and geographic barriers.

Discovery Science & Technology

Supports the development of biomedical technologies that interface with, monitor, and regulate functions of human physiology

Living Materials
Cells combined with synthetic or biological materials can be self-healing and adapt to their environment. Living bandages, for example, deliver localized regenerative signals to the wound, accelerating healing for diabetic ulcers and severe burns, as examples.

Robotics
Robotic surgery systems are minimally invasive, reducing operation and recovery time. "Smart" prosthetics and bionic limbs offer patients greater independent living & reduced pain.

COMMERCIALIZING INNOVATION

- **NIBIB Concept to Clinic: Commercializing Innovation Program (C3i)** has led to 40 commercialized products, and helped investigators secure $120M in SBIR/STTR funding and $600M in private capital
- **RADx Tech** has resulted in 7.8 billion diagnostic tests from 100+ companies for COVID, flu, monkeypox, and hepatitis C, with initiatives launched for HIV, maternal health, fetal monitoring, and endometriosis