



The mission of the National Institute of Biomedical Imaging and Bioengineering (NIBIB) is to transform through engineering the understanding of disease and its prevention, detection, diagnosis, and treatment. NIBIB supports new tools and technologies to improve human health within its internal laboratories and through grants, collaborations, and training.

NIBIB's Division of Intradisciplinary Training (DIT) aims to develop a competent and diverse workforce that can address bioengineering challenges of the future. The division supports research training starting with undergraduate education through early career-stage investigators. The division also supports research advancement and capacity building awards for investigators at institutions that have not been major recipients of NIH research awards.

## Undergraduate Training

### **Design by Biomedical Undergraduate Teams (DEBUT) Challenge Awards**

\$130,000 in prizes to teams of undergraduate students working on projects offering innovative engineering solutions to unmet clinical and health problems.

### **Biomedical Engineering Summer Internship Program (BESIP)**

Provides undergraduate biomedical engineering students the opportunity to participate in cutting-edge biomedical research projects at NIH intramural laboratories.

### **Enhancing Science, Technology, Engineering, and Math Educational Diversity (ESTEEMED) Research Education Experiences (R25)**

Supports educational activities for freshmen and sophomores from diverse backgrounds to interest them in pursuing advanced studies in bioengineering or STEM fields critical to the mission of NIBIB.

### **Team-Based Design in Biomedical Engineering (R25) Awards**

Provides support for new or existing design courses in which undergraduate students work in teams on open-ended biomedical engineering design projects.

## Pre- and Post-Doctoral Training

### Individual Awards

#### **F30 – MD/PhD or Other Dual-Doctoral Degree Fellowships**

Provides support for the integrated research and clinical training of promising predoctoral students who are matriculated in a dual-doctoral degree training program.

#### **F31 – Predoctoral Fellowships to Promote Diversity**

Offers doctoral training support to doctoral students from diverse backgrounds.

#### **F32 – Postdoctoral Fellowships**

Provides postdoctoral training support for qualified individuals who have received the Ph.D. (or equivalent) degree.

### Institutional Awards

#### **T32 - Institutional Research Training:**

Enables institutions to support pre-doctoral and post-doctoral research training for talented individuals in the fields of biomedical imaging, bioengineering and health informatics.

#### **T35 – Short-Term Institutional Research Training Awards**

Supports short-term clinical or translational research experiences for biomedical engineering graduate students

## Career Development Awards

Career development awards provide salary and laboratory support for postdoctoral fellows transitioning to faculty positions and junior faculty who are changing research fields or need protected research time during critical periods of their careers.

### Transitional Career Development

#### **Pathway to Independence (K99/R00) Awards**

Offers funding for 2 years of mentored postdoc training (K99) and once the PI has secured a faculty position, 3 years of independent research (R00), shortening the time between postdoctoral training and research independence.

#### **Maximizing Opportunities for Scientific and Academic Independent Careers (MOSAIC) K99/R00 Awards**

Essentially same K99/R00 structure as above but for individuals from diverse backgrounds.

### Basic Career Development

#### **K01 – Mentored Research Scientist Development Awards**

Provides up to 4 years of research support to basic researchers who wish to obtain experience in an area different from their doctoral or postdoctoral research focus.

#### **K25 – Mentored Quantitative Research Career Development Awards**

Provides up to 4 years of mentored research support to individuals with quantitative or engineering backgrounds who have little experience in biology or medicine who wish to refocus their research on biomedical research.



## Clinical Career Development

### K08 – Mentored Clinical Scientist Development Awards

Offers clinician-scientists up to four years of mentored research support as they transition to research independence.

### K23 – Mentored Patient-Oriented Research Career Development Awards

Provides clinically trained professionals with up to four years of mentored patient-oriented research support as they transition to research independence.

## Research Awards

### Research Enhancement Awards (R15)

#### AREA Awards

Provides up to 3 years of support for biomedical research conducted by faculty and students at academic institutions that have not been major recipients of NIH research awards. Institutional eligibility can be verified at

<https://grants.nih.gov/grants/funding/r15.htm>.

#### REAP Awards

Provides up to three years of support for faculty and students at Health Professional Schools and Graduate schools to conduct basic and clinical research in educational institutions that provide baccalaureate or advanced degrees and have not been major recipients of NIH research awards.

### Research Supplements

#### Research Supplements to Promote Diversity in Health-Related Research Awards

Supports individuals from diverse backgrounds including those from underrepresented racial and ethnic groups, persons with disabilities, and those from disadvantaged backgrounds.

#### Research Supplements for Career Reentry Awards

Enables talented fellows and early-career faculty with high research potential to reenter an active research career after a qualifying interruption for family or other responsibilities.

#### Supplements to Promote Continuity and Retention

Ensure continuity/retention of investigators to help sustain investigators' research during critical life events.

### Support for Research Excellence (SuRE) Awards (R16)

SuRE is a research capacity building program designed to develop and sustain research excellence at U.S. higher education institutions that receive limited NIH research support and serve students from groups underrepresented in biomedical research. Supports research grants for faculty investigators who have prior experience in leading externally funded, independent research but are not currently funded by NIH (SuRE), or who have not had prior independent external research grants (SuRE-FIRST).

## Others

### Conference/Meetings Awards (R13)

Supports attendance at conferences and meetings that significantly impact the scientific fields relevant to the NIBIB mission. Priority is given to applications that encourage the participation of students, fellows, and junior faculty, especially members of underrepresented groups.

### Loan Repayment Program (LRP)

Supports recruitment and retention of highly qualified health professionals into biomedical or biobehavioral research careers. The LRPs will repay up to \$50,000 annually of a researcher's qualified educational debt in return for a commitment to engage in NIH mission-relevant research.

### Science Education Partnership Awards (SEPA)

SEPA supports educational activities for pre-K through 12<sup>th</sup> grade (P-12) students from underserved communities, teachers, and the general public in order to provide a better understanding of life sciences and to provide opportunities for students to consider a career in biomedical research.

### Summer Research Experience Program (R25)

Offers support to high school science and community college faculty from STEM-related departments to foster a better understanding of biomedical, behavioral and clinical research and its implications.

## Contacts

Please contact the following program staff with questions about the above programs. We welcome the opportunity to speak with potential applicants about our training programs. More information at <https://www.nibib.nih.gov/training>.

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