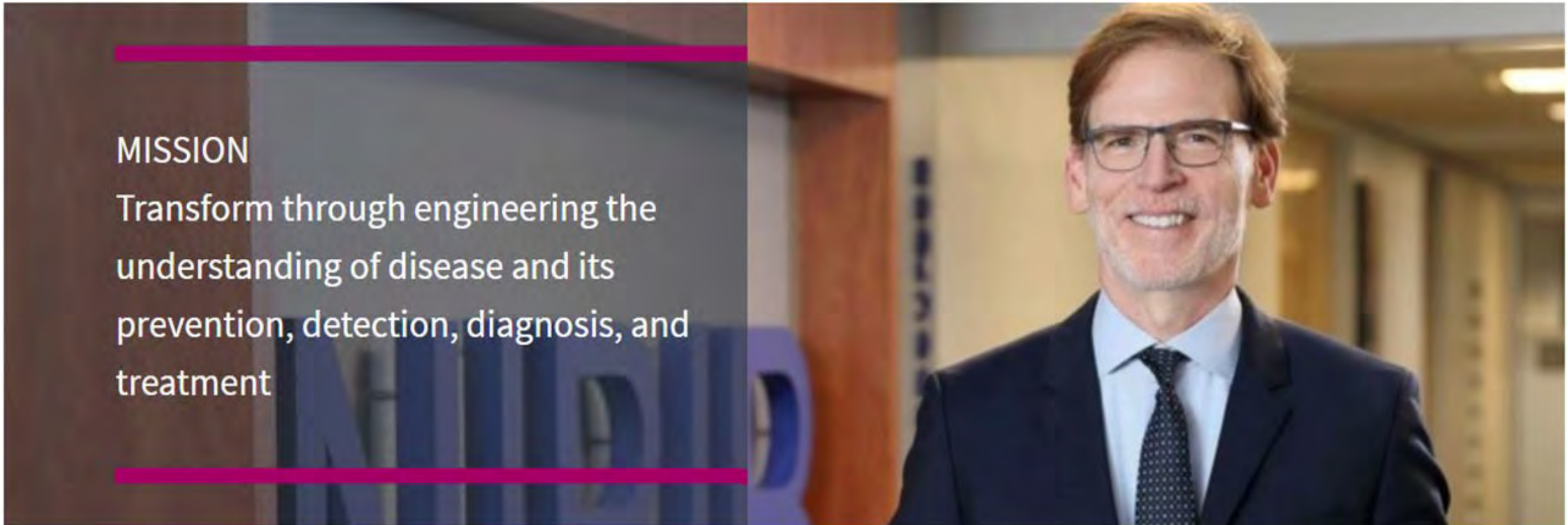
National Institute of Biomedical Imaging and Bioengineering

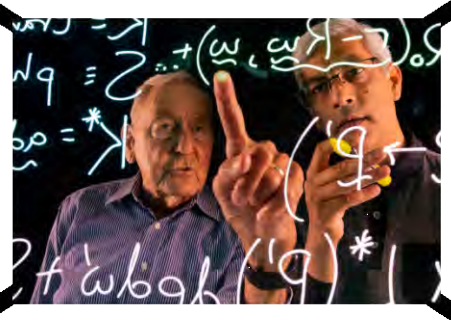


NIBIB: *Technology & Innovation*

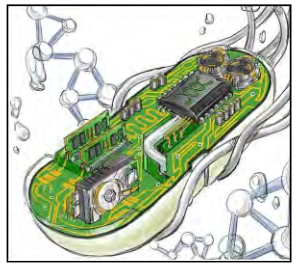
Engineering the Future of Health

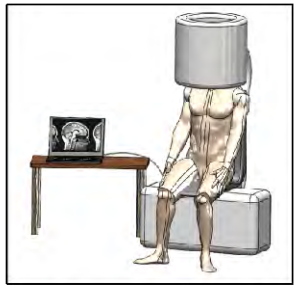
Therapeutic Devices

Modeling, Computation & Machine Intelligence

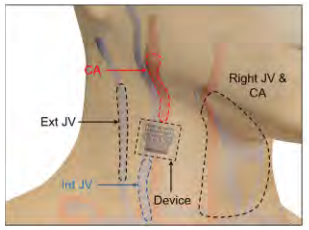


Engineered Biology





Imaging Technologies



Sensors and Point of Care

Understand, Prevent & Detect Disease

Personalize Diagnosis and Treatment

Extend Healthspan

Reduce Costs & Barriers to Access

Drive innovation

NIBIB: *Bioengineering COVID-19 Response*

$60M for COVID-19 technologies; ***$500M*** for SARS-CoV-2 testing

- Rapid POC and home-based testing/diagnostics
- Wearable, implantable, and remote sensors/imagers for physiological monitoring
- Medical imaging technologies, Modeling, algorithms/artificial intelligence (AI) for rapid detection, diagnosis, and monitoring of lung infection; tracking and predicting disease
- Non-contact sensing and imaging for rapid mass screening and vital sign assessment
- Digital health platforms and models that integrate data, assess risk, and provide illness surveillance and management tools

https://www.nibib.nih.gov/about-nibib/directors-corner

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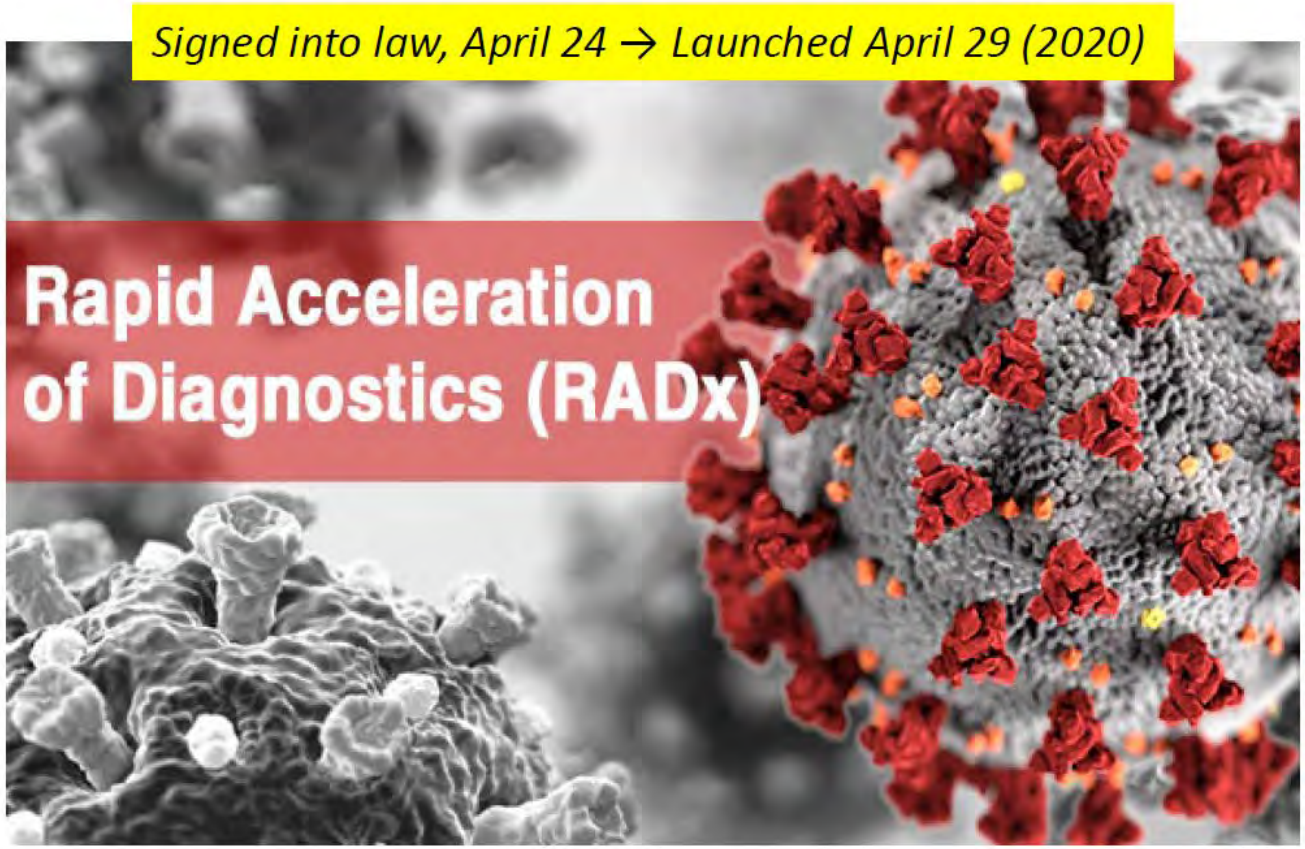
https://www.nibib.nih.gov/about-nibib/directors-corner

Rapid Acceleration of Diagnostics (RADx Tech)



$500 Million to NIBIB

Innovate: *Expand Number, Type, Access, Throughput of Testing Technologies*

Optimize: *Technology Performance for Range of Essential "Use Cases"*

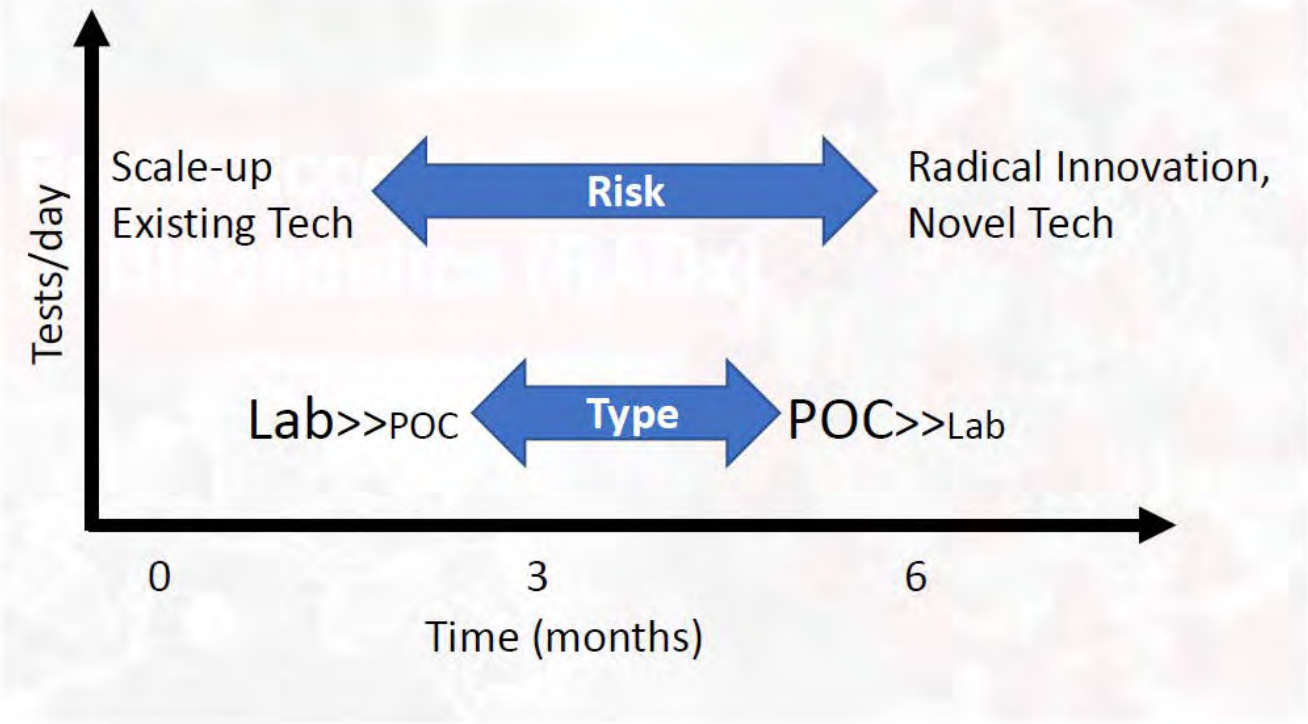
- Home-based
- Point of Care (POC)
- Hospital
- Testing Laboratory

Large Semi-Contained | **Small Semi-Contained** | **Large Public** | **Medium-Small Public** | **Healthcare** | **Home**

→ User Communities

Rapid Acceleration of Diagnostics (RADx Tech)

Signed into law, April 24 → Launched April 29 (2020)



$500 Million to NIBIB

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Optimize: *Technology Performance for Range of Essential "Use Cases"*

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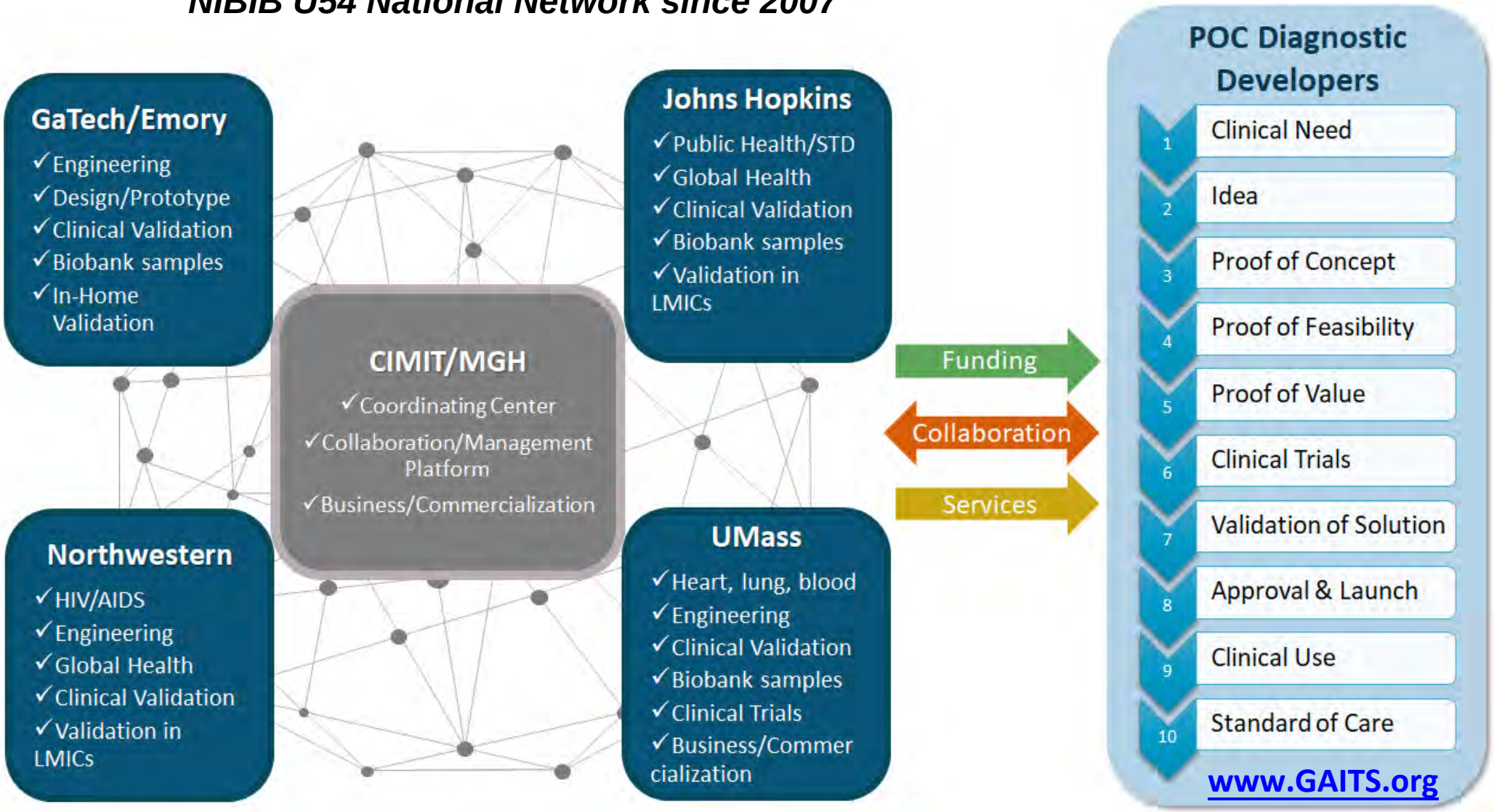
- Point of Care (POC)
- Hospital
- Testing Laboratory

Large Semi-Contained | **Small Semi-Contained** | **Large Public** | **Medium-Small Public** | **Healthcare** | **Home**

→ User Communities

Point-of-Care Technologies Research Network (POCTRN)

NIBIB U54 National Network since 2007



https://www.poctrn.org

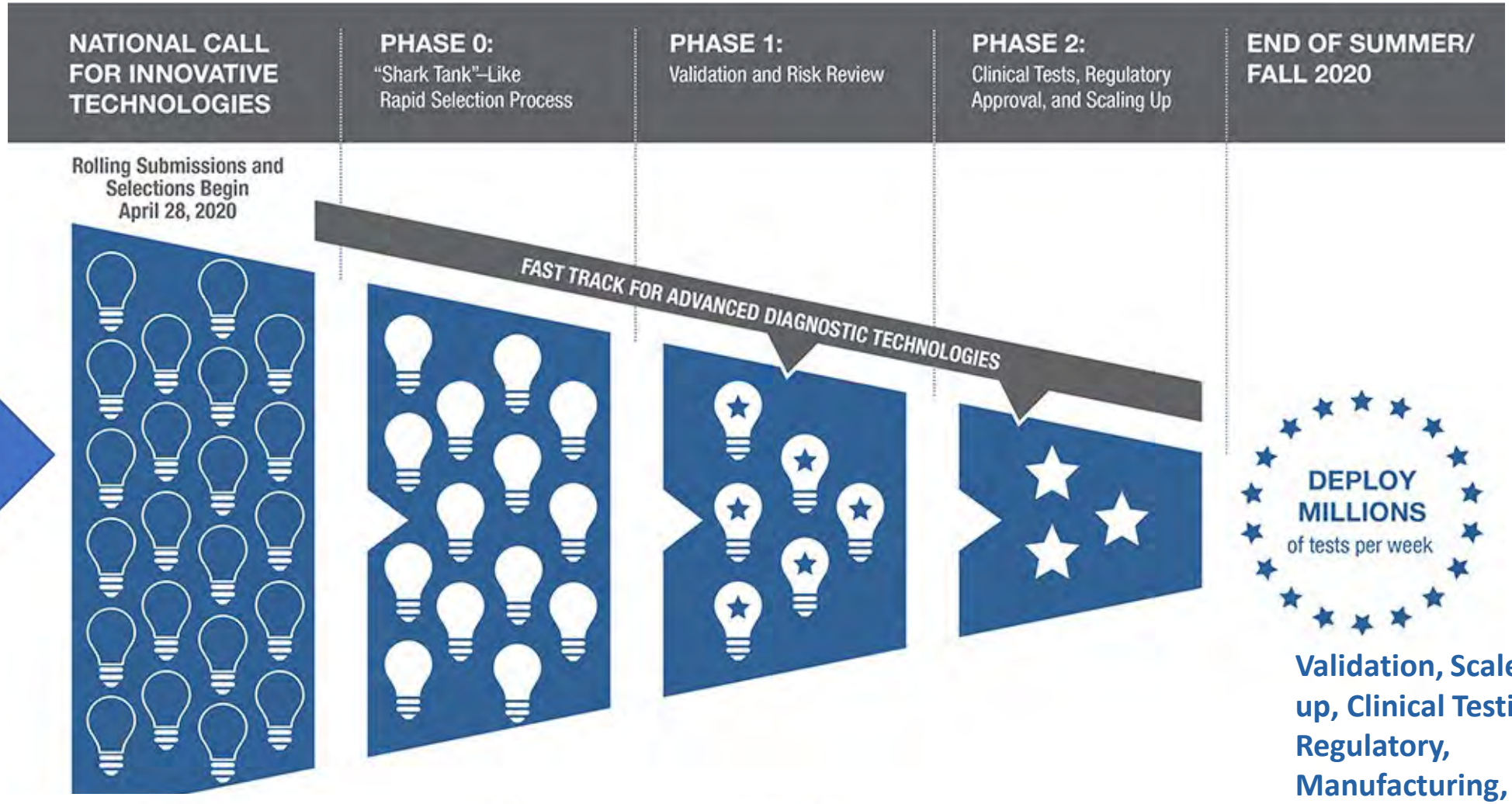
National Institute of Biomedical Imaging and Bioengineering

RADx Tech Innovation Funnel: Project Status

Applications Started

>2,200

~400 in 1st 24 hrs
~1000 in 1st week



Projects in each Phase	494	66	14	-

Validation, Scale-up, Clinical Testing, Regulatory, Manufacturing, Distribution

**As of 12:00 pm 6/18/20*

NIBIB: Division of Interdisciplinary Training

Ask Me Anything!

Overview of Training Grant Mechanisms Offered by NIBIB

Joan Greve, PhD
Scientific Program Manager

June 18th, 2020; 1-2:30pm ET WebEx

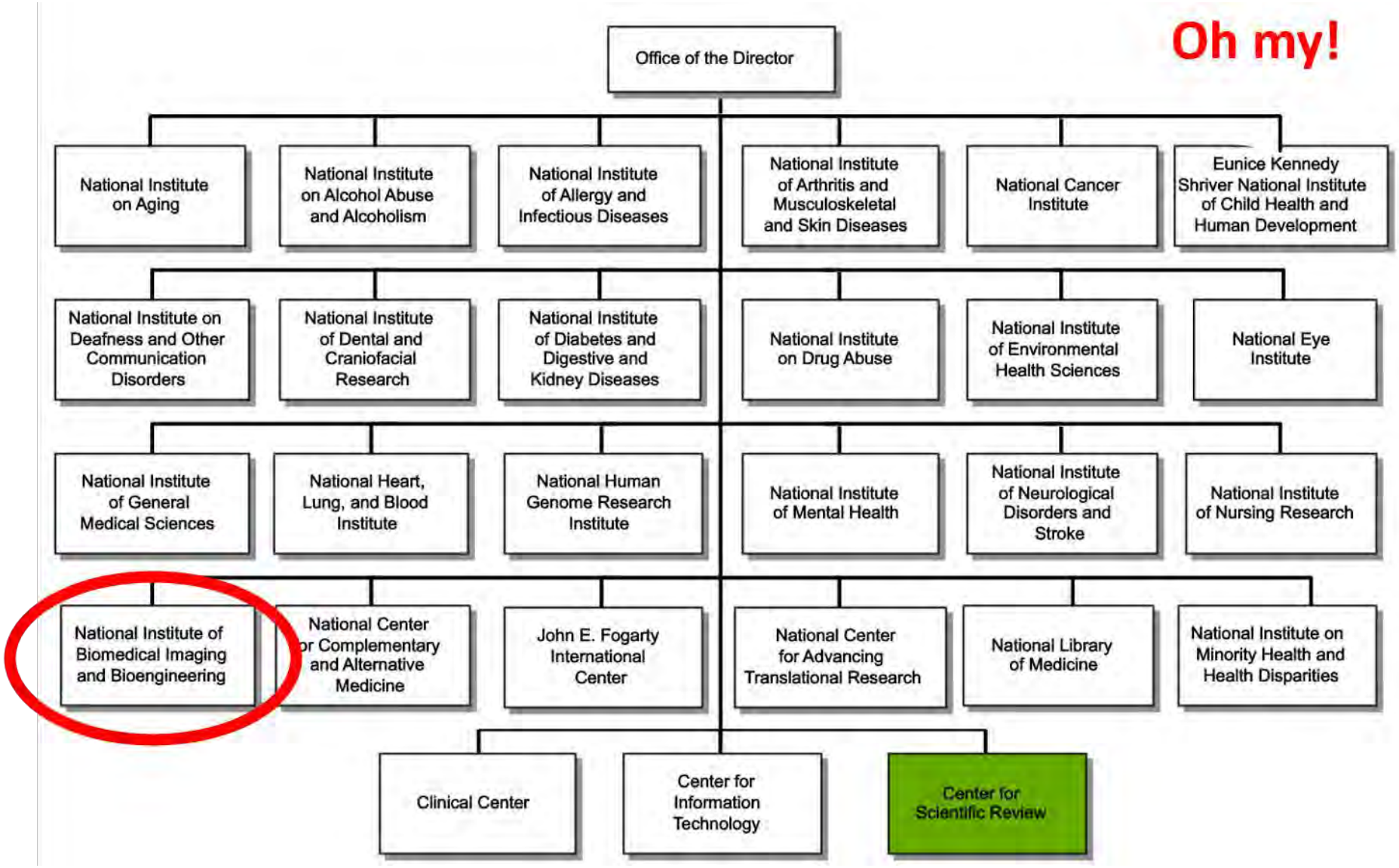
NIBIB: Division of Interdisciplinary Training

Zeynep Erim, PhD
Director

Joan Greve, PhD
Scientific Program Manager

Ahmad El-Hendawy, BS
Scientific Program Analyst

National Institutes of Health



12/29/2000

NIBIB: Division of Applied Science and Technology (Bioimaging)

Supports the development of innovative biomedical imaging technologies to transform our understanding of biological and disease processes for improving diagnostics, image-guided therapies, and human health.

Krishna Kandarpa, M.D., Ph.D.
Director of Research Sciences and Strategic Directions
301-496-8859
kris.kandarpa@nih.gov

Staff | Collaborations | News & Multimedia

DAST Program Areas

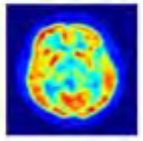
Bio-Electromagnetic Technologies
Shumin Wang, Ph.D.

Bioanalytical Sensors
Tatjana Atanasijevic, Ph.D.

Image-Guided Interventions
Guoying Liu, Ph.D.

Magnetic Resonance Imaging
Guoying Liu, Ph.D.
Shumin Wang, Ph.D.

Molecular Probes and Imaging Agents
Tatjana Atanasijevic, Ph.D.



Nuclear Medicine
George Zubal, Ph.D.

Optical Imaging and Spectroscopy
Randy King, Ph.D.
Behrouz Shabestari, Ph.D.

Ultrasound: Diagnostic and Interventional
Randy King, Ph.D.

X-ray, Electron, and Ion Beam
Behrouz Shabestari, Ph.D.
George Zubal, Ph.D.

https://www.nibib.nih.gov/research-funding/division-applied-science-technology-dast

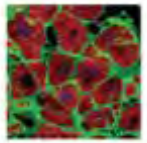
NIBIB: Division of Discovery Science and Technology (Bioengineering)

Supports the development of mathematical and computational methods, biotransducer technologies, and engineered systems to recapitulate, manipulate, and interface with biology to open a new paradigm of biomedical intervention for human health.

David Rampulla, Ph.D.
Director – Division of Discovery Science and Technology
301-451-4774
david.rampulla@nih.gov

Staff | Collaborations | News & Multimedia

DDST Program Areas



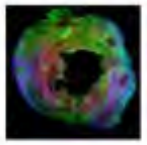
Biochemical Engineering
Luisa Russell, Ph.D.

Bioelectric Engineering
Moria Fisher Bittmann, Ph.D.

Biomechanical Engineering
Moria Fisher Bittmann, Ph.D.

Bionic and Robotic Systems
Michael Wolfson, Ph.D.

Biophotonic Engineering
Ilana Goldberg, Ph.D.



Mathematical Modeling, Simulation and Analysis
Grace C.Y. Peng, Ph.D.

Synthetic Biological and Biomimetic Systems
David Rampulla, Ph.D.

https://www.nibib.nih.gov/research-funding/division-discovery-science-technology-ddst

NIBIB: Division of Health Informatics Technologies (Informatics)

Supports development of science and technology for processing and evaluating complex biomedical information in order to develop solutions to real-world healthcare problems. This research builds toward practical, patient-centered applications.

Behrouz Shabestari, Ph.D.
Director - National Technologies Centers Program
301-451-6771
shabestb@mail.nih.gov

Staff | Collaborations | News & Multimedia

DHIT Program Areas

Artificial Intelligence, Machine Learning, and Deep Learning
Behrouz Shabestari, Ph.D.

Biomedical Informatics
Qi Duan, Ph.D.

Connected Health - Mobile Health and Telehealth
Tiffani Bailey Lash, Ph.D.

Image Processing, Visual Perception and Display
Behrouz Shabestari, Ph.D.
Qi Duan, Ph.D.

Point of Care Technologies - Diagnostics
Tiffani Bailey Lash, Ph.D.

https://www.nibib.nih.gov/research-funding/division-health-informatics-technologies-dhit

NIBIB: Division of Interdisciplinary Training (DIDT)

Training & Careers

Career Level

- Undergraduate and Graduate (8)
- Predoctoral (9)
- Postdoctoral (12)
- Junior Investigator (14)
- Clinician-Scientist (8)

I am an

- Individual (16)
- Institution (14)

Grant Type

- Conference (1)
- Diversity (6)
- Training (22)

Supplements

- No (24)
- Yes (6)

Related Links

DEBUT Challenge

NIH Big Data to Knowledge

+ Career Development Programs - Basic Research

+ Career Development Programs - Clinical Research

− Individual Awards

Maximizing Opportunities for Scientific and Academic Independent Careers (MOSAIC) Postdoctoral Career Transition Award to Promote Diversity (K99/R00 - Independent Clinical Trial Not Allowed)

The purpose of the MOSAIC Postdoctoral Career Transition Award to Promote Diversity (K99/R00) program is to support a cohort of early career, independent investigators from diverse backgrounds conducting research in NIH mission areas. The long-term goal of this program is to enhance diversity in the biomedical research workforce.

Ruth L. Kirschstein National Research Service Awards (NRSA) for Individual Postdoctoral Fellows (Parent F32)

Supports mentored training for postdoctoral fellows obtaining additional research experience

NIH Pathway to Independence Award (Parent K99/R00)

Facilitates a timely transition from postdoctoral research to an independent research position

BRAIN Initiative Fellows: Ruth L. Kirschstein National Research Service Award (NRSA) Individual Postdoctoral Fellowship (F32)

Enhances the research training of promising postdoctorates, early in their postdoctoral training period, who have the potential to become productive investigators in research areas that will advance the goals of the BRAIN Initiative.

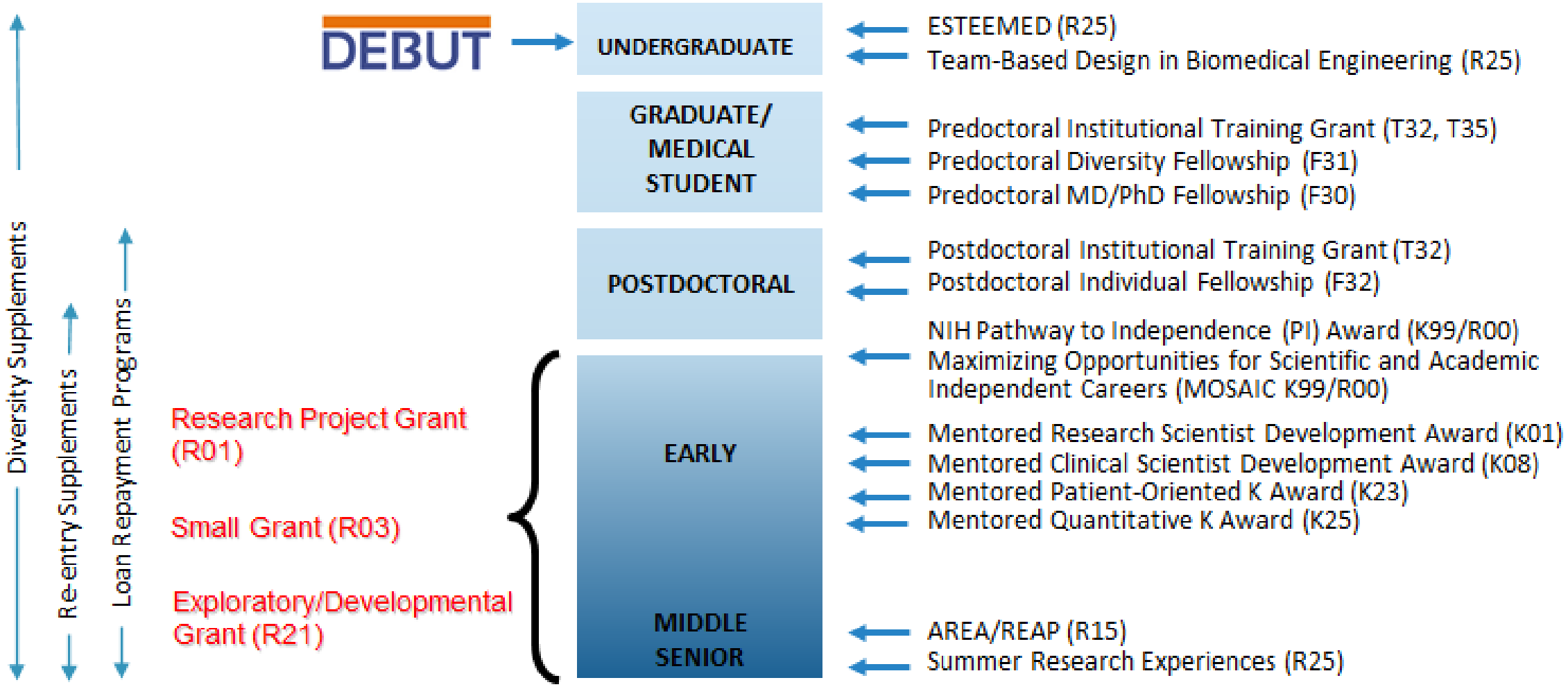
BRAIN Initiative Advanced Postdoctoral Career Transition Award to Promote Diversity (K99/R00

Zeynep Erim, PhD

https://www.nibib.nih.gov/training-careers


Training
Informatics
Bioimaging
Bioengineering

NIBIB Offers Funding Opportunities to Support Scientists at Every Stage of Their Career

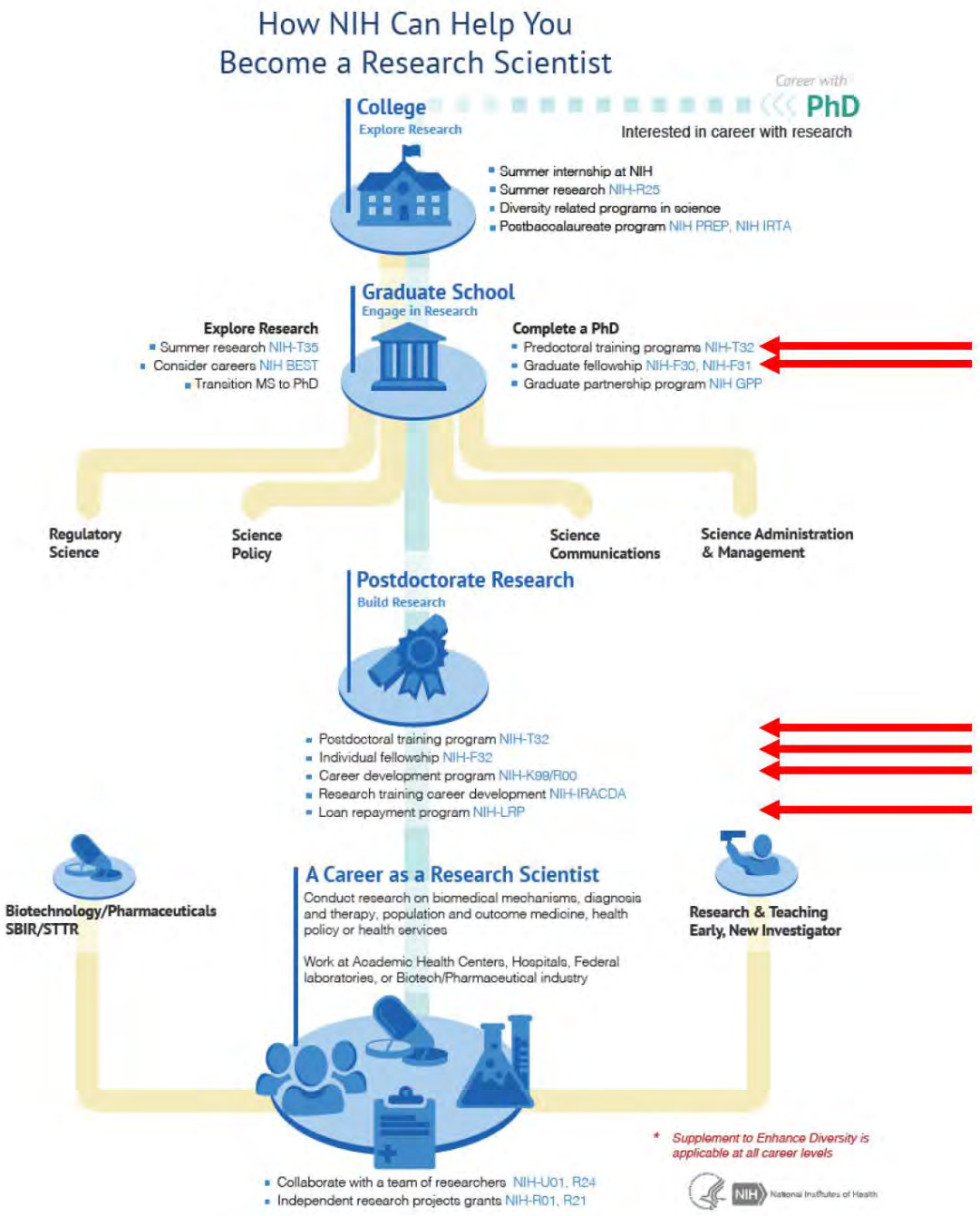


NIBIB Offers Funding Opportunities to Support Scientists at Every Stage of Their Career

PhD

K01, K25

R01, R03, R21, R15, R25



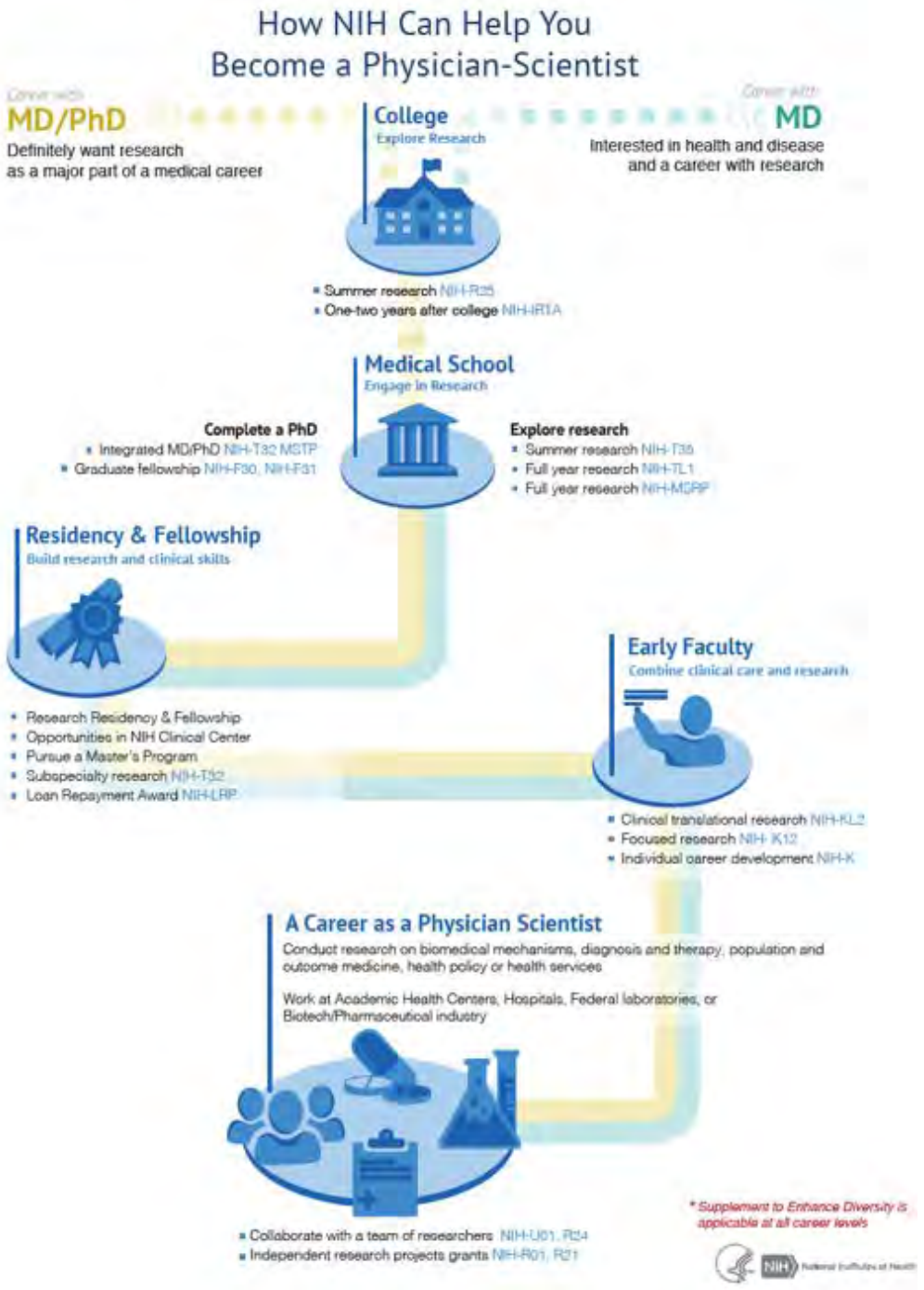
https://researchtraining.nih.gov/infographics/research-scientist

NIBIB Offers Funding Opportunities to Support Physician-Scientists at Every Stage of Their Career

MD, MD/PhD

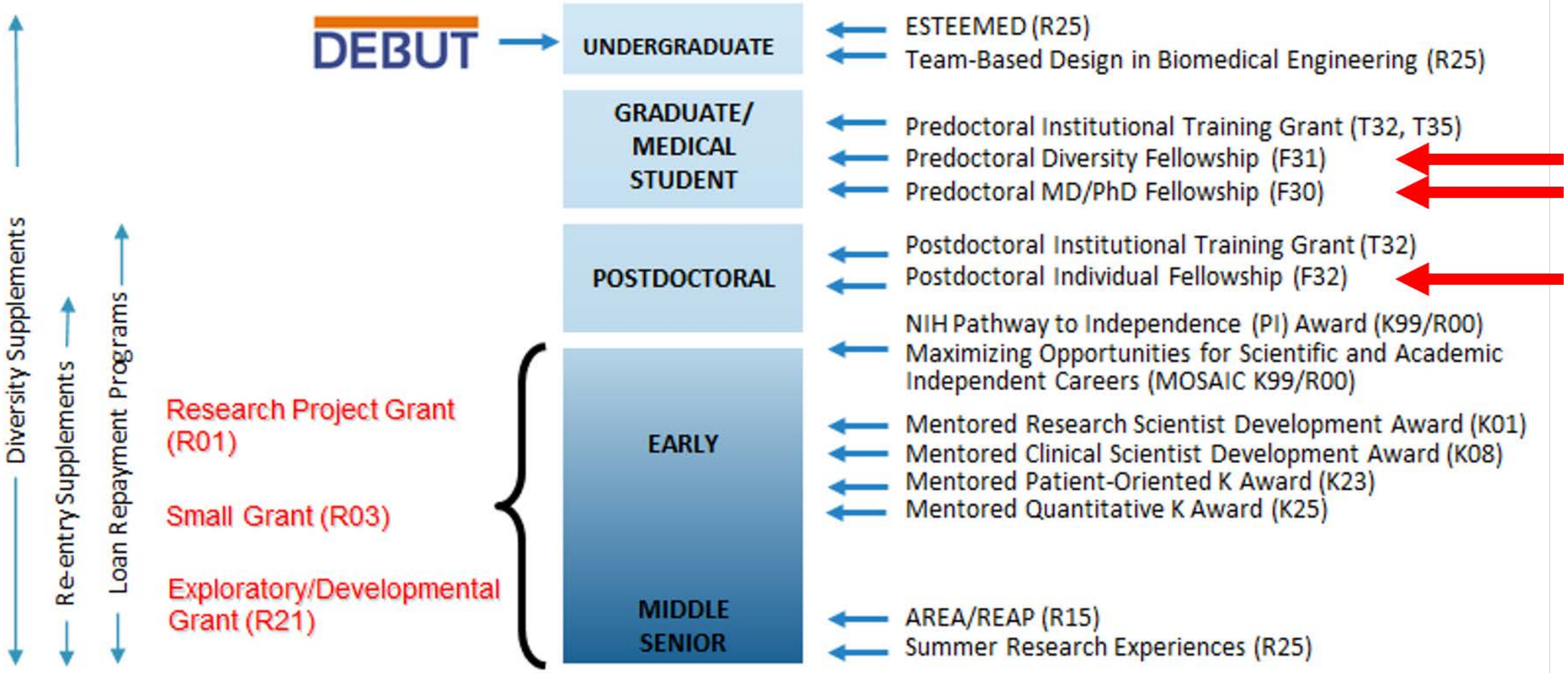
K08, K23

R01, R03, R21



https://researchtraining.nih.gov/infographics/physician-scientist

NIBIB Offers Funding Opportunities to Support Scientists at Every Stage of Their Career (2)



Individual Fellowships (F)

Ruth L. Kirschstein, MD – National Research Service Award (NRSA)

- **F30** – Individual Predoctoral **MD/PhD** Fellowship (without MSTP), F30 NIBIB
- **F31** – Individual **Predoctoral** Fellowship to Promote Diversity, F31 NIBIB (Note: NIBIB does not participate in the Parent F31, PA-19-195)
- **F32** – Individual **Postdoctoral** Fellowship, F32 NIBIB
- **BRAIN F32** –BRAIN Initiative **Postdoctoral** Fellowships, BRAIN F32
  - Must be citizen, non-citizen national, or permanent resident
  - Must have identified Sponsor and defined Research Training Plan
  - Individual fellow applies through their university/institution

Contact: joan.greve@nih.gov

Individual Fellowships (F) Common Elements

Common Elements

- **Applicant (PI):** High quality past experience (academic record and research), potential to be a productive researcher, committed to a research career in the future.
- **Sponsor(s):** Appropriate scientific background, experience with mentoring during given career stage of Applicant, funding support for Applicant's research, if a team – well justified and roles clearly defined.
- **Research Training Plan:**
  - Research Project: High quality, goals and timeline appropriate for given career stage of Applicant.
  - Training: Enhances Applicant's development into a productive researcher, well integrated with Research Project, individualized for the Applicant.
- **Institutional Environment:** Supportive of training, including facilities and resources.

Individual Fellowships (F): Inquiry

Inquiry to assess: 1) fit to NIBIB mission, 2) Eligibility

- Specific Aims
  - NIBIB Mission: Transform through engineering the understanding of disease and its prevention, detection, diagnosis, and treatment.
    - Support for *novel technology development* that is generalizable to more than one disease/condition/tissue/organ, rather than the investigation of a single disease or biological system.
- CV/Biosketch
- At least 1 month in advance

Individual Fellowships (F): F30

- **F30** – Individual **Predoctoral MD/PhD** Fellowship (without MSTP), F30 NIBIB

  - Within 48 months of matriculation into the MD/PhD program
  - 5 years of support
  - <6 years aggregate Kirschtein NRSA support, including time on a T32
  - Mentor must have grant(s) from NIBIB (*IC specific*)
  - https://www.nigms.nih.gov/Training/InstPredoc/Pages/PredocOverview-MSTP.aspx

Contact: joan.greve@nih.gov

Individual Fellowships (F): F31

- **F31** – Individual **Predoctoral** Fellowship to Promote Diversity, F31 NIBIB

  - 2 years of support
  - <5 years aggregate Kirschtein NRSA support, including time on a T32
  - NIBIB does not participate in the Parent F31, PA-19-195
  - Applicant is in a PhD program
  - Support is provided after qualifying exam is passed and doing full-time research.
    - Takes about 9 months for review and acceptance, so could submit prior to qualifying exam.

Contact: joan.greve@nih.gov

Individual Fellowships (F): F32 NIBIB

- **F32** – Individual **Postdoctoral** Fellowship, F32 NIBIB

  - 2 years of support
  - <3 years aggregate Kirschtein NRSA support, including time on a T32
  - Must have completed PhD by time of award
    - Strong applications demonstrate established relationship with post-doc mentor; application must come from post-doc institution.
  - Priority will be given to applicants who propose to work with a different mentor than that of their doctoral research, preferably at a different institution.

Contact: joan.greve@nih.gov

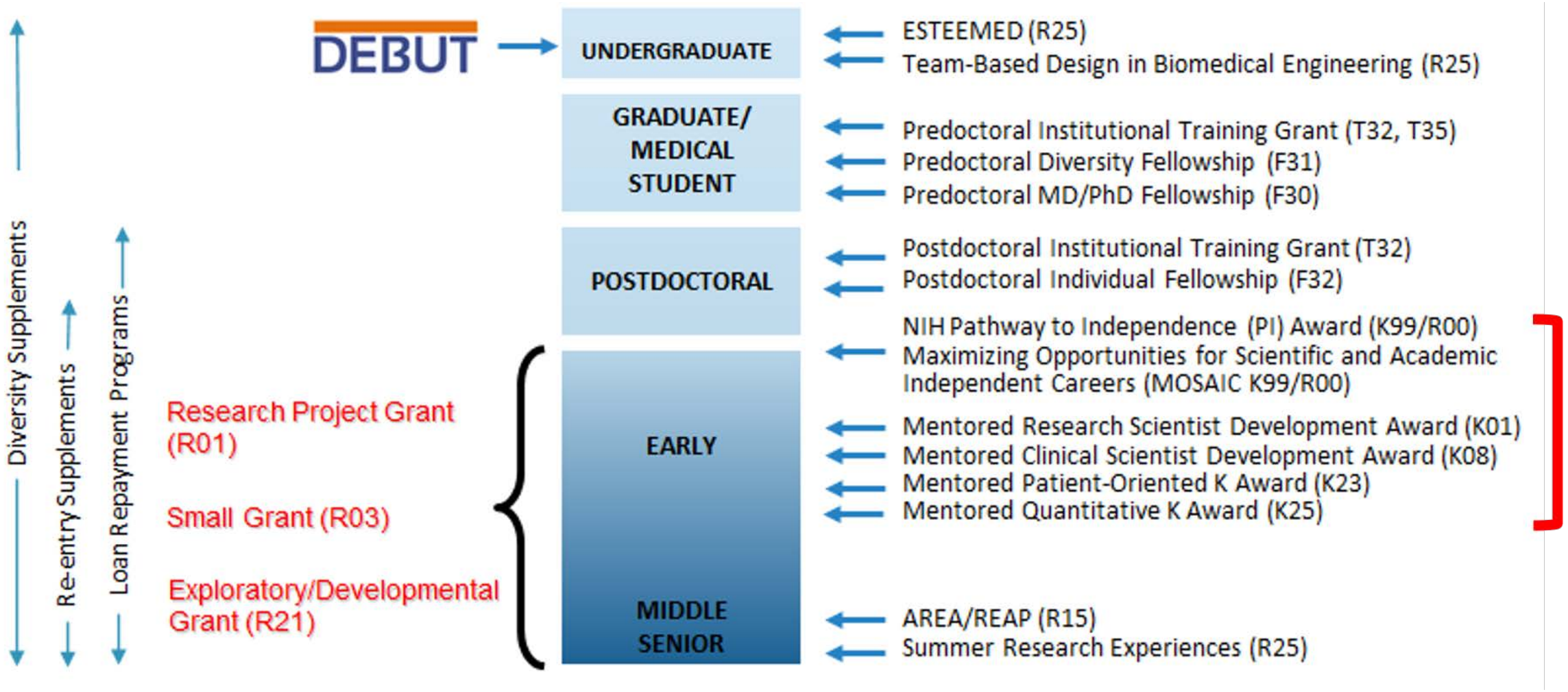
Individual Fellowships (F): Brain F32

- **F32** – BRAIN Initiative **Postdoctoral** Fellowships, BRAIN F32

  - 3 years of support
  - <3 years aggregate Kirschtein NRSA support, including time on a T32
  - Encourages applications from individuals who have *not* yet completed their terminal doctoral degree and who expect to do so within 12 months of the application due date.
  - On the application due date, candidates may *not* have completed more than 6 months of postdoctoral training.
  - **Extended DUE date to July 8, 2020**

Contact: joan.greve@nih.gov

NIBIB Offers Funding Opportunities to Support Scientists at Every Stage of Their Career (3)



Individual Career Development (K) Awards

Mentored support for basic and clinical investigators who are transitioning to independence, changing their research focus, or need protected research time.

For PhD or MDs:

- **K99/R00** – Pathway to Independence Award, K99 NIBIB
- **MOSAIC K99/R00 to Promote Diversity,** K99 MOSAIC NIBIB
- **BRAIN K99/R00 to Promote Diversity,** K99 BRAIN

For PhDs

- **K01** – Research Scientist Development Award, K01 NIBIB
- **K25** – *Quantitative* Scientist Development Award, K25 NIBIB

For MDs:

- **K08** – Clinical Scientist Development Award, K08 NIBIB
- **K23** – Patient-Oriented Development Award, K23 NIBIB

Contact: joan.greve@nih.gov

Individual Career Development (K) Awards: Common Elements

Common Elements

- **Applicant (PI):** Must demonstrate the potential for highly productive independent research.
- **Research Plan:** Specific Aims should reflect a strong research plan and justify the need for a dedicated period of mentored research and career development activities.
- **Mentor(s):** Expertise to cover all areas involved in the new aspects of the research (if a team – well justified and roles clearly defined) and provide environment for highly productive independent research.
- **Career Development:** Can include course work, seminars, meetings, workshops in addition to research training.
- **Clear Integration:** Between the training goals, career development plan, and the Specific Aims.
- **Results:** At the end of the K award, the Awardee should be able to provide a timeline of how/when they will be able to achieve independent funding, e.g. a Research Project Grant (RPG) like the R01.

Individual Career Development (K) Awards: Inquiry

Inquiry to assess: 1) fit to NIBIB mission, 2) Eligibility, [3) career redirection for K01, K25]

- *Eligibility Form*
- Specific Aims
  - **NIBIB Mission:** Transform through engineering the understanding of disease and its prevention, detection, diagnosis, and treatment.
    - Support for novel *technology development* that is generalizable to more than one disease/condition/tissue/organ, rather than the investigation of a single disease or biological system.
- CV/Biosketch
- At least 1 month in advance

Individual Career Development (K) Awards: For PhD or MDs

For PhD or MDs:

- Up to 2 years of **K99**, up to 3 years of **R00**
- Ineligible if: PD/PI on any major NIH grant or career award
- Must be in non-independent research position

- **K99/R00** – Pathway to Independence Award, K99 NIBIB
  - <4 years of post-doc
  - There is no citizenship requirement
- **MOSAIC K99/R00 to Promote Diversity,** K99 MOSAIC NIBIB
  - <4 years of post-doc
  - Must be citizen, non-citizen national, or permanent resident
- **BRAIN K99/R00 to Promote Diversity,** K99 BRAIN
  - <5 years of post-doc
  - Must be citizen, non-citizen national, or permanent resident

Contact: joan.greve@nih.gov

Individual Career Development (K) Awards: For PhDs

For PhDs

- **K01** – Research Scientist Development Award, K01 NIBIB
  - Support to obtain experience and skills in an area different from doctoral and/or post-doctoral research focus. *(Career Redirection)*
- **K25** – *Quantitative* Scientist Development Award, K25 NIBIB
  - Support for research-oriented quantitative scientists/engineers with little or no experience in medicine and life sciences to develop skills to conduct basic or clinical biomedical imaging or bioengineering research. *(Career Redirection)*
  - <10 years from terminal degree
  - 75% effort
  - 3-4 years of support, duration must be justified *(IC specific)*
  - Ineligible if: PD/PI on K award, R01, P01, P50
    - Ok if PD/PI on R03, R21
    - Can be senior post-doc, Assistant Professor, Research Track, Instructor
  - Must be citizen, non-citizen national, or permanent resident
  - Must have identified Mentor and defined Research Plan

Salary Support: Up to $90,000 plus fringe benefits per year.
Research Support: Up to $40,000 per year.

Contact: joan.greve@nih.gov

Individual Career Development (K) Awards: For MD, DDS, DVM, DO, PharmaD, etc.

For MD, DDS, DVM, DO, PharmD, etc.:

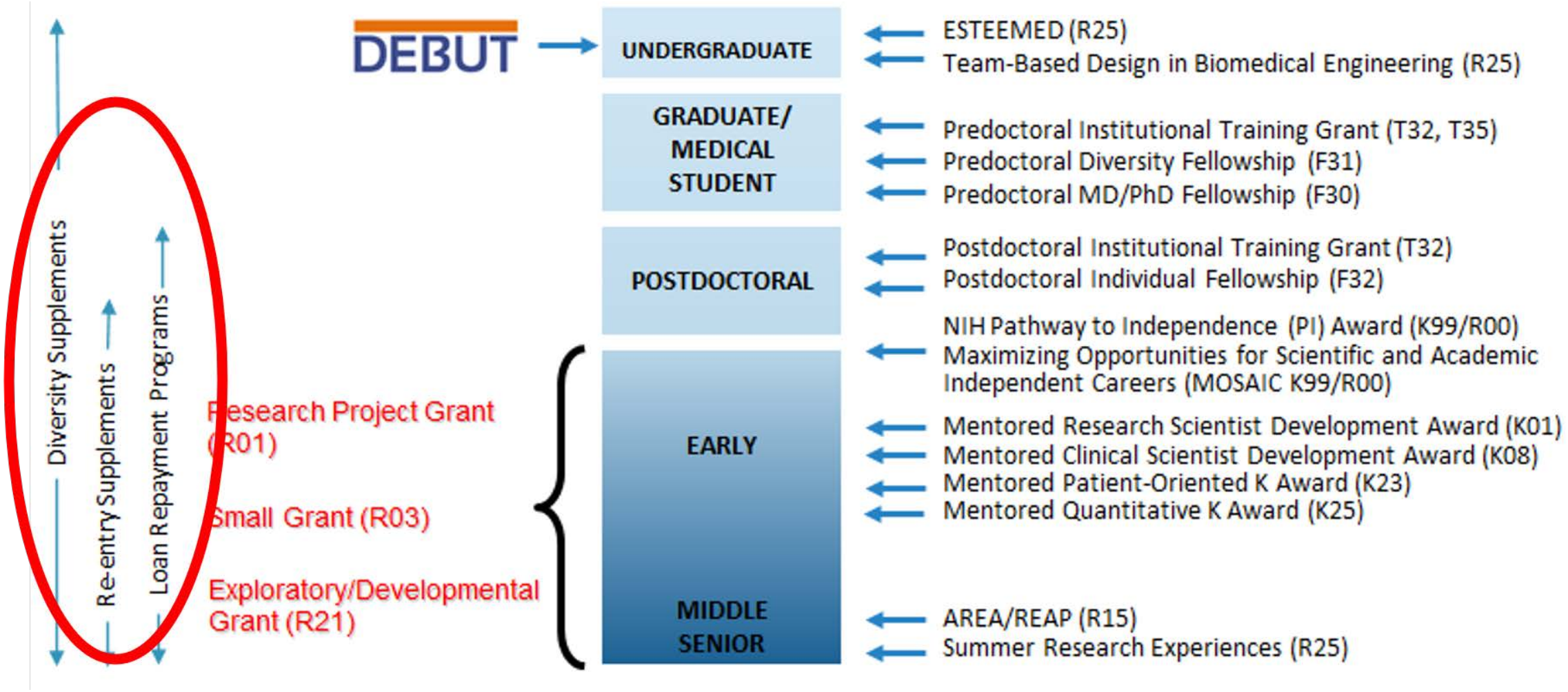
- **K08** – Clinical Scientist Development Award, K08 NIBIB
- **K23** – *Patient-Oriented* Development Award, K23 NIBIB

  - Requires clinical doctoral degree
  - <10 years from terminal degree (end of residency/fellowship)
  - Applicants must be clinicians with active licensure *(IC specific)*
  - Ineligible if: PD/PI on K award, R01, P01, P50
    - Ok if PD/PI on R03, R21
    - Can be senior post-doc, Assistant Professor
  - Must be citizen, non-citizen national, or permanent resident
  - Must have identified Mentor and defined Research Plan

Contact: joan.greve@nih.gov

Salary Support: Up to $105,000 plus fringe benefits per year.
Research Support: Up to $40,000 per year.

NIBIB Offers Funding Opportunities to Support Scientists at Every Stage of Their Career (4)



Administrative Supplements

A noncompeting award that provides additional funding to a currently funded grant to meet increased costs that are within the scope of the approved project, but that were unforeseen when the new or competing renewal application was awarded. ADMIN SUPP

- **Diversity in Health-Related Research:** To enhance the diversity of the research workforce by recruiting and supporting **students, postdoctorates, and eligible investigators** from diverse backgrounds, including those from groups that have been shown to be underrepresented in health-related research. Also available to **PD(s)/PI(s) of research grants who are or become disabled** and need additional support to accommodate their disability in order to continue to work on the research project. PA-20-222
- **Re-Entry into Biomedical and Behavioral Research Careers:** To support individuals with high potential to re-enter an active research career after an **interruption for family responsibilities or other qualifying circumstances.** At the completion of the supplement, the re-entry scientist will be in a position to apply for a career development (K) award, a research award (R), or some other form of research support. PA-18-592

Contact: joan.greve@nih.gov

Administrative Supplements (cont)

- **Promote Research Continuity and Retention of NIH Mentored Career Development (K) Award Recipients and Scholars:** To ensure continuity of research among recipients of mentored career development (K) awards by providing supplemental research support to help sustain the investigator's research **during critical life events**. NOT-OD-20-054

- **Continuity of Biomedical and Behavioral Research Among First-Time Recipients of NIH Research Project Grant Awards:** To enhance the retention of **investigators facing critical life events** who are transitioning to the first renewal of their first independent research project grant award or to a second new NIH research project grant award. NOT-OD-20-055

Contact: joan.greve@nih.gov

Loan Repayment Programs

Clinical Research

Pediatric Research

Health Disparities Research

Contraception & Infertility Research

Clinical—Disadvantaged Backgrounds

Eligibility:

- **M.D., Ph.D.,** or equivalent. Exception: Contraception & Infertility Research LRP
- **U.S. Citizen** or **permanent resident**
- Educational debt at least **20%** of applicant's annual base income
- At least 20 hours/week on research
- Domestic nonprofit, university, or government organization; NIH grant support **not** required

$70 Million
Invested annually by 24 NIH ICs

Application Cycle
September 1 to November 15

Application Success Rate
2,600 applications
1,300 awards

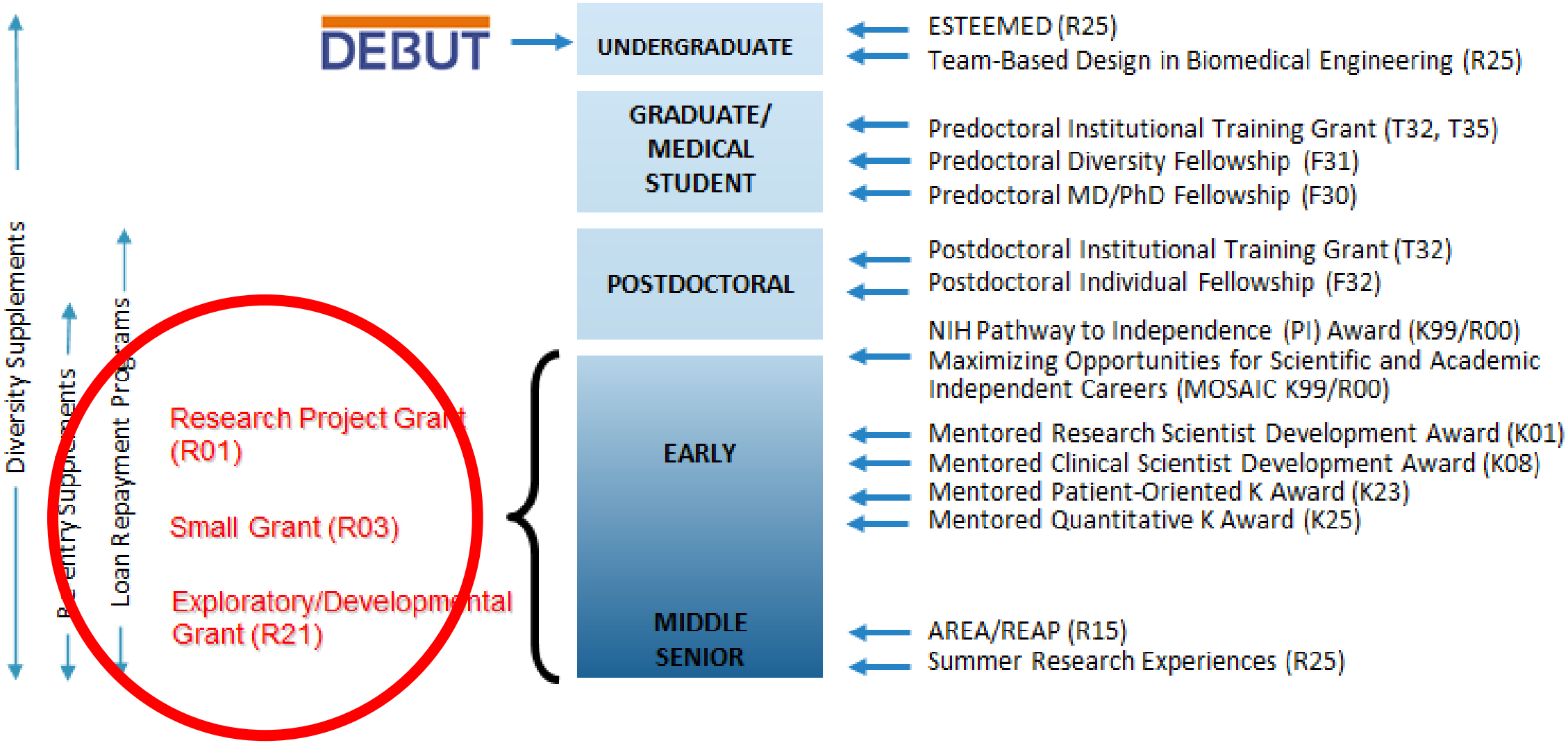
Contract Length
2 years for new awards
1 or 2 years for renewal awards

Average Education Debt
$145,233 for LRP applicants in 2018

Benefits
Up to $50,000/year in loan payment

LRP NIBIB, **Contact:** joan.greve@nih.gov

NIBIB Offers Funding Opportunities to Support Scientists at Every Stage of Their Career (5)



Key NIH Grant Programs: Each Serves a Purpose (when faculty)

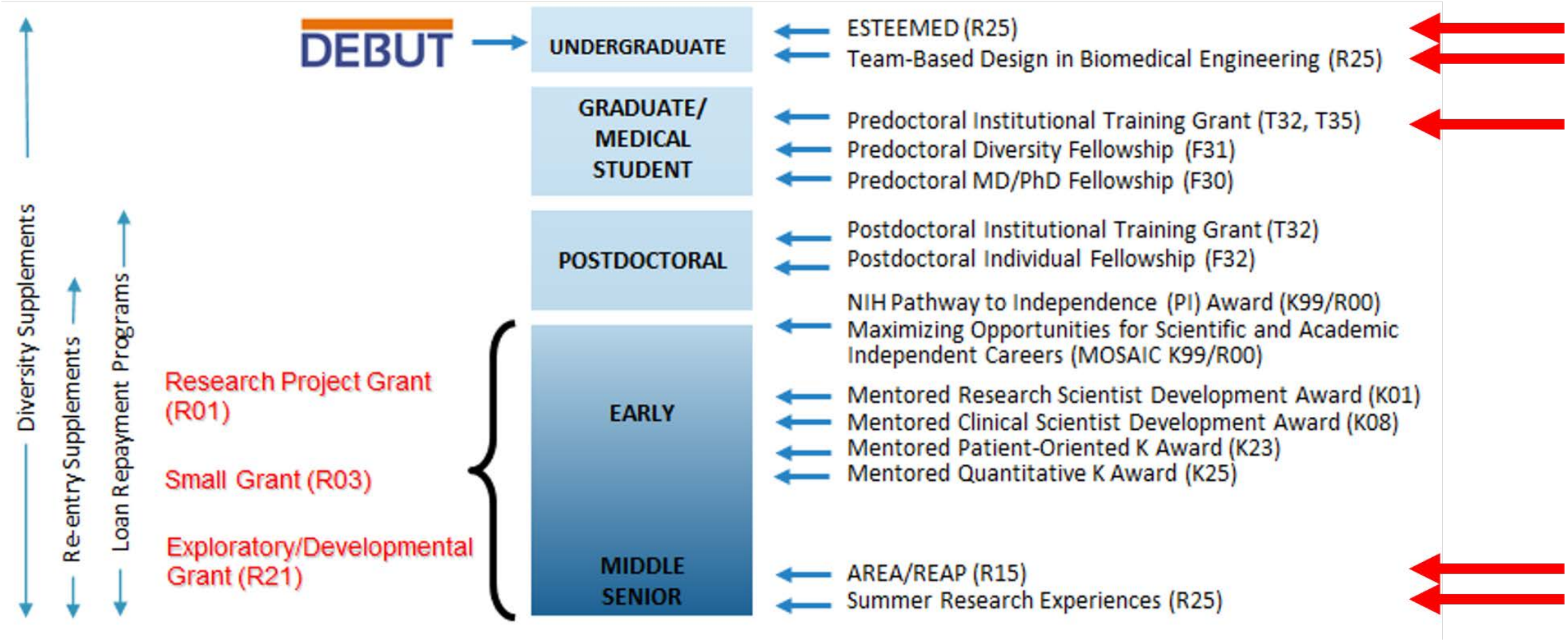
- **R01** – Research Project Grant, R01 NIBIB
  - NIH's most commonly used grant, highly valued by peers
  - Supports a discrete, specified, circumscribed research project
  - Based on solid preliminary data
  - Typically $250-$499k per year, 3-5 years, renewable,
  - **NOTE:** NIBIB funds R01s for only 4 years, renewable. *(IC specific)*
- **R03** – Small Grant Program, R03 NIBIB
  - Self-contained: data analysis, pilots, methods development
  - $50k per year for two years
- **R21** – Exploratory/Developmental Research Grant, R21 NIBIB, PAR-18-433
  - Breakthroughs in development of innovative techniques, agents, methodologies, models, or their applications
  - May involve considerable risk that should be balanced by the potential high impact
  - Applicants are expected to propose novel biomedical research approaches for which there is *no preliminary data* to demonstrate the feasibility of the proposed project.
    - These R21 applications must **not** include preliminary data that demonstrate the feasibility of the specific aims. *Applications including preliminary data will be considered noncompliant with the FOA instructions.*
  - $275k per year, typically 2 years, **not** renewable
  - R21 is **not** a "new investigator starter grant"!

Limited number of ICs participate in R03 and R21

R21 NIBIB: Trailblazer

- New and Early Stage Investigator
- Enhanced R21 Exploratory/Developmental Grant
  - $400,000 in direct costs over 3 years
  - Pursue a new or emerging research program (exploratory, developmental, proof of concept, or high risk-high impact)
  - Technology design-, discovery- or hypothesis-driven
- Idea differs substantially from current thinking or practice
- Applicants are expected to propose research approaches for which there are *minimal or no preliminary data.*
  - However, if available, minimal preliminary data are allowed. *Preliminary data are defined as* material which the applicant has independently produced and *not yet published* in a peer-reviewed journal. All preliminary data should be clearly marked and *limited to one-half page*, which may include one figure.
- R21 TRAILBLAZER NIBIB, PAR-18-207

NIBIB Offers Funding Opportunities to Support Scientists at Every Stage of Their Career (6)



R15: Research Enhancement Award (when faculty)

Supports small-scale research projects at domestic academic institutions that are not major recipients of NIH support (no more than $6 million per year in total costs in 4 of the last 7 years).

- **AREA**: Academic Research Enhancement Award, **undergraduate-focused** institutions, AREA NIBIB
- **REAP:** Research Enhancement Award for Health Professional and Graduate Schools (REAP) **graduate** schools of arts and sciences and **health professional** schools that grant baccalaureate or advanced degrees, REAP NIBIB
  - Common Goals: 1) Support meritorious research; 2) Expose students to research; 3) Strengthen the research environment of the institution.
  - Applicants may not be the PI on any other active NIH grant.
  - Up to $300,000 direct costs + full F&A for up to 3 years.

Contact: joan.greve@nih.gov

R25: Research Education Program (when faculty)

Supports research education activities that complement and/or enhance the training of a workforce to meet the nation's biomedical, behavioral, and clinical research needs.

- **ESTEEMED** (Enhancing Science, Technology, EnginEering, and Math Educational Diversity): To support educational activities that enhance the diversity of the biomedical research workforce through **early preparation** for **undergraduate** students in bioengineering or related STEM fields. ESTEEMED NIBIB, **Contact:** zeynep.erim@nih.gov

- **Team-Based Design:** To establish new or to enhance existing **undergraduate** team-based **design courses** in biomedical engineering departments or programs, Team-Based Design NIBIB, **Contact:** joan.greve@nih.gov

Design Challenge (when faculty)

- **DEBUT** (DEsign by Biomedical Undergraduate Teams)**:** Challenge **undergraduate** student teams to develop technology solutions to unmet needs in any area of healthcare. DEBUT NIBIB, **Contact:** zeynep.erim@nih.gov

2020: $100,000 in Prizes

- Application Deadline: June 1
- Winners Announced: August 25
- Awards: October 15, 2020 BMES SD

NIBIB-Sponsored Prizes:

The Steven H. Krosnick Prize: **$20,000**

Second Prize: **$15,000**

Third Prize: **$10,000**

HIV/AIDS Prize: **$15,000**

NIMHD Prize for Low-Resource Settings: **$15,000**

5 Honorable Mentions: **$1,000** each

VentureWell-Sponsored Prizes:

Venture Prize: **$15,000**

Design Excellence Prize: **$5,000**

Institutional Research Training Grant (when senior faculty)

Ruth L. Kirschstein, MD – National Research Service Award (NRSA)

- **T32** – To enable institutions to support **pre-doctoral and post-doctoral** research training for talented individuals in the fields of biomedical imaging, bioengineering and health informatics.
- Something you are doing uniquely, typically supports <10 students.

- **What you can do now** → Look in REPORTER to find T32's (E.g. if you are headed off to a PhD or postdoc, could identify T32's you could potentially be supported on at new institution.)

T32 NIBIB, **Contact:** zeynep.erim@nih.gov

Diversity

NIBIB

- **ESTEEMED,** Undergraduate
- **F31 Diversity,** Ph.D. students
- **MOSAIC and BRAIN K99/R00,** Postdoc
- **Diversity Supplements,** Any career stage

Around NIH

- **Blueprint ENDURE,** Undergraduate neuroscience, ENDURE
- **Blueprint D-SPAN F99/K00,** Graduate neuroscience Pre- to Post-doc transition, D-SPAN
- **BRAIN K99/R00,** Neuroscience workforce, BRAIN K99/R00

NIBIB Small Business Programs

Overview

The National Institutes of Health (NIH) Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs are congressionally-mandated set-aside programs to encourage research and development that has a strong potential for technology commercialization. These programs were developed to meet the following objectives:

- Stimulate technological innovation;
- Meet federal research and development needs;
- Increase private-sector commercialization of innovations developed through federal R&D funding; and
- Foster and encourage participation in innovation and entrepreneurship by socially and economically disadvantaged persons and women-owned small businesses.

The Small Business Program at the NIBIB is used to achieve the mission of the Institute by supporting innovative technologies through various stages of commercial research and development. The NIBIB welcomes SBIR and STTR applications from small businesses proposing ideas relevant to its scientific program areas, which can be found at http://www.nibib.nih.gov/research-funding. Please contact program staff if you have questions about which Institute(s) would be the best fit for your project.

Todd Merchak,
Program Specialist
301-496-8592
merchakt@mail.nih.gov

Ilana Goldberg, Ph.D.
Program Director, AAAS Science & Technology Policy Fellow
301-402-3465
ilana.goldberg@nih.gov

https://www.nibib.nih.gov/research-funding/small-business-programs

Additional NIH Funding Opportunities

Diversity Supplements

Re-entry Supplements

Loan Repayment Programs

DEBUT

UNDERGRADUATE

- ESTEEMED (R25)
- Team-Based Design in Biomedical Engineering (R25)

GRADUATE/ MEDICAL STUDENT

- Predoctoral Institutional Training Grant (T32, T35)
- Predoctor
- Predoctor

POSTDOCTORAL

- Postdocto
- Postdocto

EARLY

- NIH Pathw
- Maximizin
- Independe
- Mentored
- Mentored
- Mentored
- Mentored Quantitative K Award (K25)

MIDDLE SENIOR

- AREA/REAP (R15)
- Summer Research Experiences (R25)

Research Project Grant (R01)

Small Grant (R03)

Exploratory/Developmental Grant (R21)

DP5: Early Independence Award

Supports outstanding junior scientists with the intellect, scientific creativity, drive, and maturity to bypass the traditional postdoctoral training period to launch independent research careers.

For PhD or MDs:

- Complete doctoral degree or clinical training between June 1, 2019 and September 30, 2021
- In non-independent research position at time of application
- Single PI only
- Preliminary data not required
- $250,000 direct costs per year for up to 5 years
- Minimum of 80% research effort in first 2 years
- 3-5 Letters of Reference required
- Only 2 applications allowed per institution
- RFA-RM-19-008 and RFA-RM-20-021 (COVID-19)
- **DUE: September 4, 2020**
- NIH Common Fund

DP2: New Innovator Award

Supports exceptionally creative early career investigators who propose innovative, high-impact projects.

Hybrid for PhD or MDs:

- Early Stage Investigator (no NIH R01 or equivalent grant and within 10 years of doctoral degree or clinical training)
- Single PI only
- No preliminary data required
- Awards of $1.5 million disbursed in first year of 5 year project period
- Commit 25% research effort
- RFA-RM-19-006
- **DUE: August 21, 2020**
- NIH Common Fund

Pop Quiz!

1. Are all grant mechanisms offered by each IC?
2. Does each IC have the same requirements for a given grant mechanism?
3. How far in advance should you submit an inquiry to have a reasonable chance of receiving a response?
4. Who should be your closest ally when developing your proposal?

1. **No**
2. **No**
3. **1 month, need to think ahead/be prepared**
4. **Your advisor … or a designated mentor for early faculty! Mentorship in grant writing is critical.**

To-Do's

This slide deck is not a substitute for … reading, highlighting, annotating FOA's … for yourself! … for your future mentees!!!

NIH

Home base!, https://grants.nih.gov/grants/oer.htm
NIBIB research funding, scroll down for Scientific Program Areas which will list Scientific Program Officers, https://www.nibib.nih.gov/research-funding
Regional Seminars, https://grants.nih.gov/news/contact-in-person/seminars.htm#upcoming
NIH RePORTER, https://projectreporter.nih.gov/reporter.cfm
NIH match maker, https://projectreporter.nih.gov/reporter_matchmaker.cfm?source=RPCO&new=1
Study sections, https://public.csr.nih.gov/StudySections
Do you know about Early Stage Investigator … and New Investigator?
https://grants.nih.gov/policy/early-investigators/index.htm
https://public.csr.nih.gov/ForApplicants/PlanningAndWriting/NewInvestigatorAdvantages

Outside of NIH

Apply for internal grants at your institution (travel, research, other)
Apply for awards at your various conferences (why not?! If not you, then who?!)

Thank you!

Q&A