

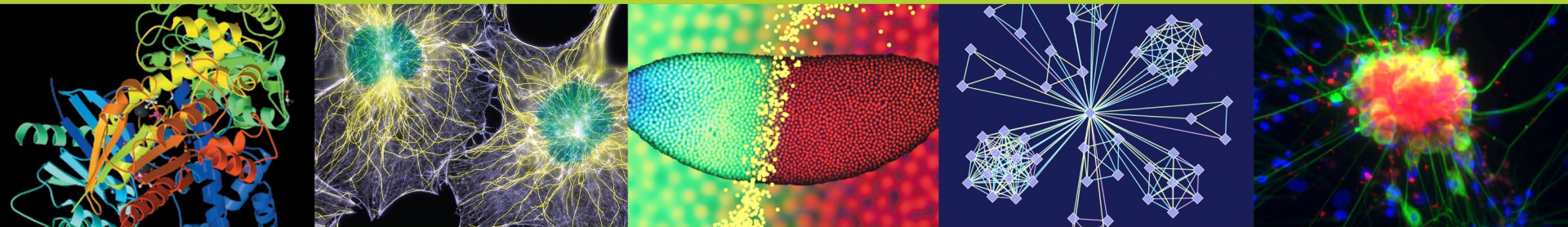
NIGMS Funding Opportunities

Dorothy Beckett

Division of Biophysics, Biomedical Technology, and Computational Biology
(BBCB)

National Institute of General Medical Sciences (NIGMS)

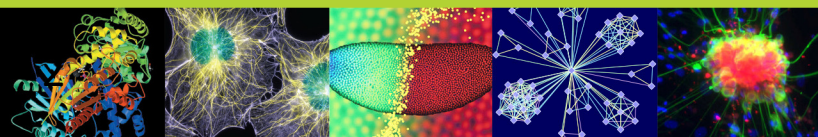
February, 8, 2023



National Institute of General Medical Sciences (NIGMS) Mission

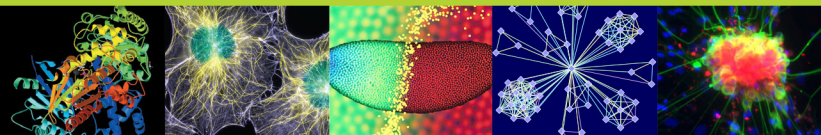
NIGMS supports fundamental research that increases **understanding of basic biological processes** and lays the **foundation** for future advances in disease diagnosis, treatment, and prevention.

- NIGMS-funded scientists investigate how living systems work at a range of levels, from molecules and cells to tissues and organs, in research organisms, humans, and populations.
- NIGMS supports **research and technology development** that is aimed at understanding general principles, mechanisms, and processes.
- NIGMS supports some clinical research
- NIGMS **does not support research that focuses on single classes of cells, tissues, organs, or diseases** unless they are used as models for elucidating basic principles.



Clinical Research Areas Supported by NIGMS

- **Anesthesiology** - Research related to mechanisms of anesthesia & peri-operative pain
- **Clinical Pharmacology** - Research related to drug delivery, biotransformation & disposition, pharmacokinetics, & compartment modeling
- **Sepsis** - Research related to the etiology of sepsis, with emphasis on host response
 - **NOT-GM-19-054**, Notice of Information: NIGMS Priorities for Sepsis Research
- **Innate Immunity and Inflammation** - Research related to cellular & molecular mediators of inflammatory syndromes underlying complex systemic disorders
 - **NOT-ES-20-018**, Fundamental and Applied Research in Inflammation Resolution
- **Injury and Critical Illness** - Research related to injury, including biochemical & physiological changes induced by trauma & burns
 - **NOT-NS-20-005**, Research in the Emergency Care Setting
- **Wound Healing** - Research related to post-injury healing & tissue repair



Overview of NIGMS/NIH Grant Mechanisms

Approx. Career Stage

Awards to support
Independent Research

R15 (3yrs)

R16(Up to 4yrs)

R01 (4-5yrs)

NIGMS MIRA R35 (5yrs)

R21 (2yrs)

Independent
Scientist

**UNDERGRD
and PRE-DOC**

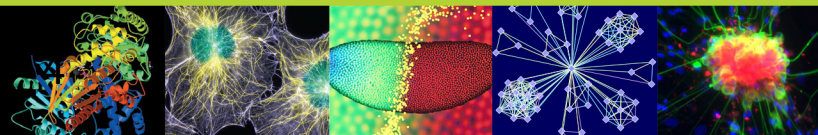
**GRADUATE/MEDICAL
STUDENT**

**POST
DOCTORAL**

EARLY

MIDDLE

SENIOR



NIH R15 Programs: AREA & REAP

Serve institutions with limited NIH Funding

Two NIH [R15](#) "Research Enhancement Award" Programs:

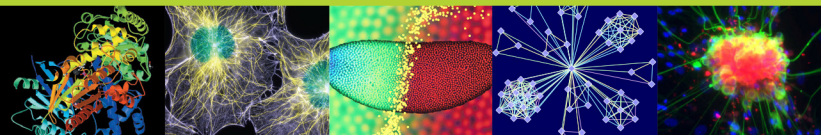
- Academic Research Enhancement Award (AREA) for Undergraduate-Focused Institutions (not health professional)
- Research Enhancement Award Program (REAP) for Health Professional Schools and Graduate Schools

R15 AREA (PAR-21-155 & PAR-21-154 (Clinical Trials Allowed))

R15 REAP (PAR-22-060 & PAR-21-357 (Clinical Trails Allowed))

- 3 years, \$300K DC over the entire project period

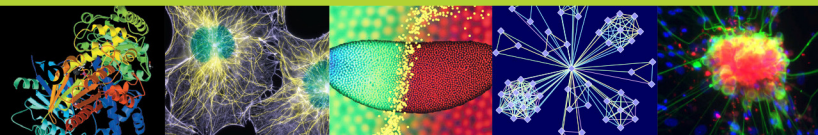
Contacts: Anne Gershenson (anne.gershenson@nih.gov) and
Charles Ansong (charles.ansong@nih.gov)



NIGMS R16 SuRE Programs

Two NIGMS R16 “Research Enhancement Award” Programs

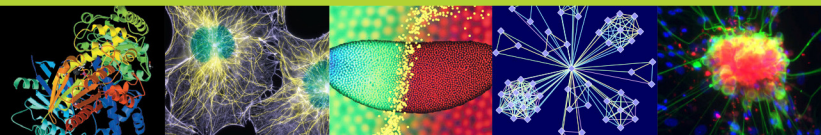
- SuRE (PAR-21-169), renewable
- SuRE-First(PAR-21-173), must not have previously served as a PI or MPI on an externally funded award
- Support for limited-resourced or Medical Health Professional Institutions founded to serve under-represented groups.
- NIGMS manages awards in its mission
- SuRE: 4 years, \$100k DC/yr (renewable)
- SuRE First: up to 4 years, \$125k DC/yr (not renewable) NIGMS contact: Irina.Krasnova@nih.gov



NIH R01 Program (Parent)

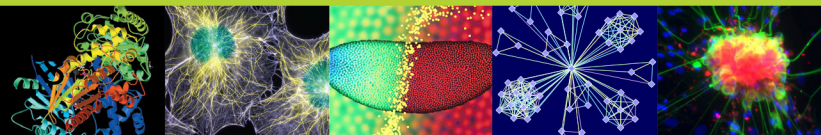
- [PA-20-185](#)
- Provides 4-5 (ESI) years of research support, renewable
- Standard NIH application due dates: January 25, May 25, October 25
- Research Strategy is based on Specific Aims and progress is measured by completion of these aims
- All NIGMS-supported research areas except Technology Development

NIGMS Contact: Program Officer who manages awards relevant to your scientific focus (<https://nigms.nih.gov/about/Pages/Staff-Contacts.aspx>)



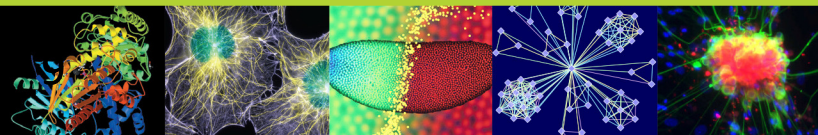
NIGMS Maximizing Investigators' Research Award (MIRA)

- Provides investigators with
 - Stability: 5 years support; PI may spend less time writing applications and have more time for research and mentoring
 - Flexibility: No specific aims required; PI may follow important new research directions
- Two [MIRA FOAs](#)
 - Early-Staged Investigators: [PAR-20-117](#)/[NOT-GM-23-017](#) (re-issuing with two submissions)
 - Established Investigators and New Investigators: [PAR-22-180](#) (January and May submissions)



Joint NSF/NIH Initiative to Support Research at the Interface of the Biological and Mathematical Sciences: BioMath

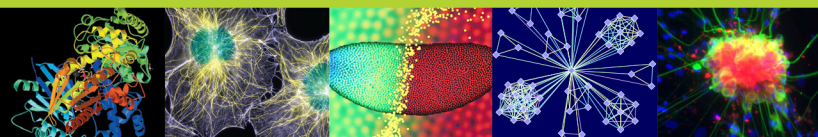
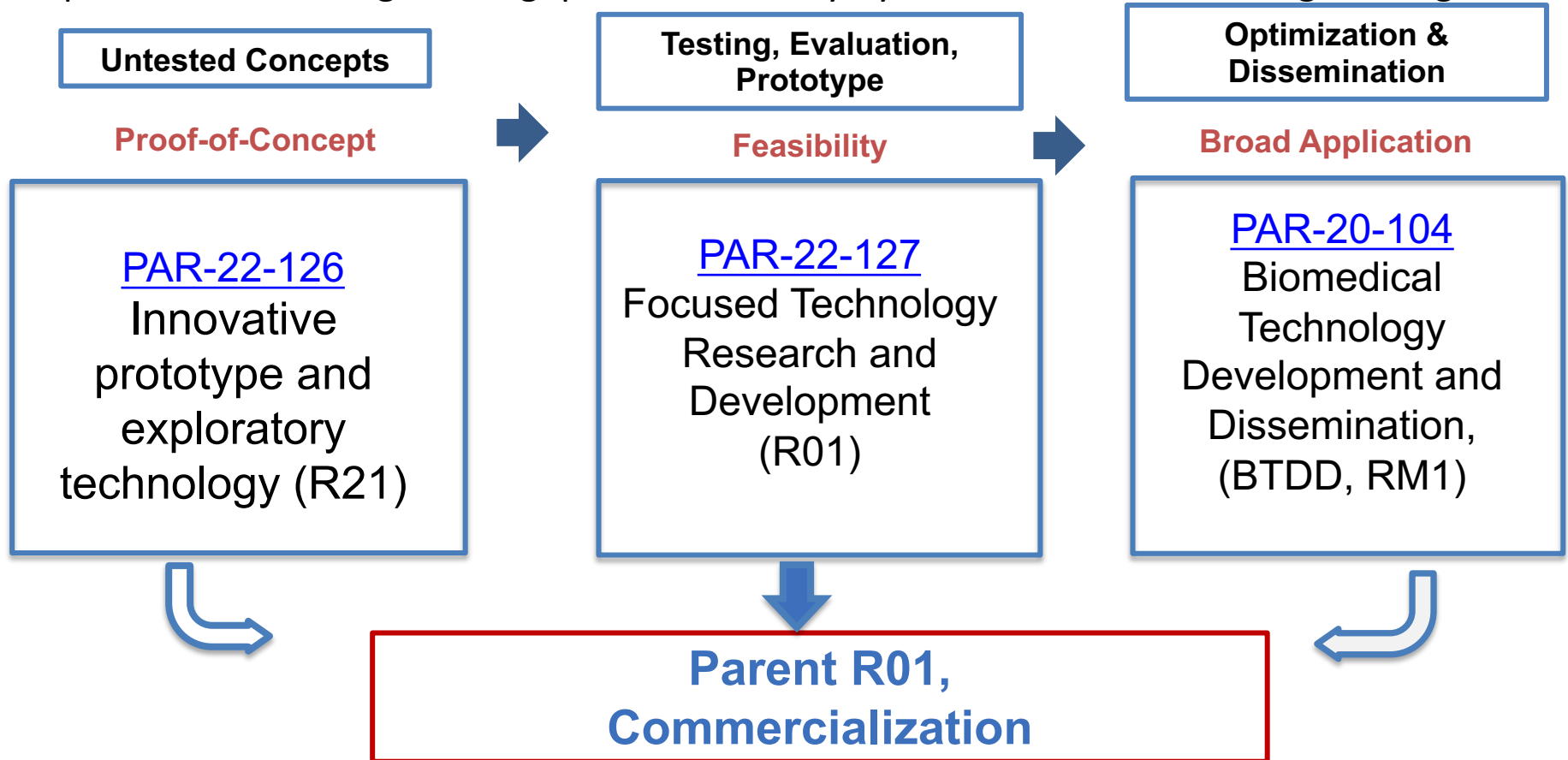
- Supports fundamental research in mathematics and statistics necessary to answer questions in the biological and biomedical sciences.
- Two Tracks:
 - Track 1 (up to \$600K/3yrs): Exploratory projects (high risk/high reward) and/or new teams
 - Track 2 (up to \$1.2M/3-4yrs): Large scope projects from well-established teams
- Requirements:
 - Important biomedical/biological problem within NIGMS mission.
 - Innovative mathematical/statistical/computational methods
 - Integration of the mathematical approaches and the biomedical/biological problems.
- Submission Window: September 1 - September 18 ([Solicitation NSF 22-600](#)) Submission to NSF → transferred to NIGMS as R01 if funded



NIGMS Biomedical Technology Program

From Untested Concepts to Broad Dissemination

Some Technologies of Interest: instruments, chemical biology & bioanalytical tools, computational tools, high throughput biochemistry, synthetic methods, cell engineering etc..



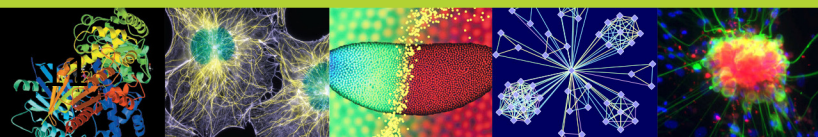
NIGMS Small Business Program

Research and development activities that have strong potential for commercialization

- STTR-R41, R42-Small Business Technology Transfer
- SBIR-R43,R44-Small Business Innovation Research
- NIGMS supports innovative SBIR projects that could benefit the research communities related to its mission.

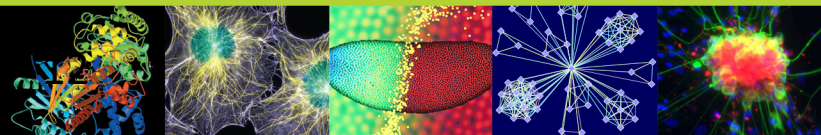
Topics supported include but are not limited to sepsis, wound healing, glycomics, bioanalytical processes, biophysical instrumentation, imaging, separations....

NIGMS Contact: Eddie Billingslea (eddie.billingslea@nih.gov)



Checklist for Application Preparation

- If you are uncertain about the NIGMS-mission relevance of your research contact the appropriate NIGMS Program Officer (PO)
- Read and follow instructions in the Funding Opportunity Announcement (FOA)
- Good grantsmanship
 - Refer to literature accurately and thoroughly
 - Include well-designed tables and figures
- Include potential pitfalls & alternative approaches
- Get feedback from other investigators familiar with NIH applications
- Allow time for submission, avoid last minute before deadline
- Send in supplemental materials if allowed by the FOA (check with SRO)
- Ask for advice from trusted colleagues, mentors, and your NIGMS POs



Useful Websites

NIH Funding Opportunity Announcements (FOAs) can be found at the **NIH Guide**

<http://grants.nih.gov/grants/guide/index.html>

NIGMS MIRA Programs and FOAs

<https://www.nigms.nih.gov/research/mechanisms/MIRA/pages/default.aspx>

NIGMS Tech Dev Programs and FOAs

<https://www.nigms.nih.gov/grants/Pages/Technology-Development-Programs.aspx>

NIH Common Fund Programs and FOAs

<https://commonfund.nih.gov/grants/fundedresearch>

Some Resources:

Samples applications: <https://www.niaid.nih.gov/grants-contracts/apply-grant>

ESI FAQ: <https://grants.nih.gov/policy/early-investigators/faqs.htm>

NIH Grants FAQ: https://grants.nih.gov/grants/frequent_questions.htm

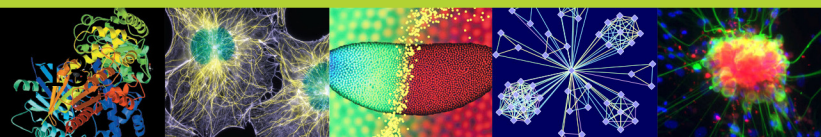
Finding your potential NIH IC and PO: <https://reporter.nih.gov/matchmaker>

Finding your potential study section: <https://public.csr.nih.gov/ForApplicants/ArtHome>

Open Mike: <https://nexus.od.nih.gov/all/category/blog/open-mike/>

Sign-up and follow Weekly updates of NIH Funding Opportunities and Notices at
<http://grants.nih.gov/grants/guide/listserv.htm>

Sign-up and follow NIGMS at <https://loop.nigms.nih.gov/>



Questions?

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