



Division of Environmental Biology Virtual Office Hour

Introduction to the Directorate for Technology, Innovation and Partnerships (TIP)

Please submit questions via the Q&A button available to you on Zoom.

Please set to "Send anonymously"

December 11, 2023

Welcome!

Division of Environmental Biology

NSF staff in attendance today:

- Peter Atherton - Technology, Innovation and Partnership (TIP)
- Catherine O'Reilly - Technology, Innovation and Partnership (TIP)
- Floh Thiels - Technology, Innovation and Partnership (TIP)
- Jeremy Wojdak (host) – Population and Community Ecology
- Chris Balakrishnan – Systematics and Biodiversity Science

Facilitators – Christina Washington, Megan Lewis and Bill Lawson



DEB Virtual Office Hour

DEB Office Hours: second Monday of each month, 1-2pm Eastern

Upcoming Topics:

January 8: Environmental Biology Research and the Bioeconomy

February 12: Opportunities for freshwater and marine environmental research

March 11: Translating foundational research and emerging technologies into communities through civic-engaged research

April 8: Opportunities for broadening the STEM community

May 13: CAREER Solicitation

June 10: Merit Review and How to Get Involved with NSF



DEB Blog posts upcoming topics, registration, and recap posts

<https://debblog.nsfbio.com/office-hours/>

DEBrief

Blog of the Division of Environmental Biology, NSF

[Home](#) [DEB Resources and Links](#) [Office Hours](#) [About](#) [Blog Policies](#)



Office Hours

Join us the **second Monday of each month from 1pm-2pm Eastern Time** for the Division of Environmental Biology's (DEB) Virtual Office Hours. Representatives from each of the four clusters will be available to discuss specific programs and funding opportunities. There will then be an open question and answer period – questions can be on any NSF or DEB topic.

Join us remotely and bring your questions! Please use the registration link below to set up your



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AUGUST 21, 2023 BY DEB SCIENCE STAFF

8/14/23 Virtual Office Hours Recap: Things I wish I learned earlier about NSF

The Division of Environmental Biology (DEB) held its latest Virtual Office Hour on August 14, 2023. Program Officers discussed things they've learned during the transition from Principal Investigator to NSF Program Officer, helpful tips and tricks when applying for NSF funding, common misconceptions about the Merit Review Process, and more. We host these office hours 1-2pm EST on the 2nd Monday of every month. There is a designated theme each time, but attendees are welcome to ask about other NSF-related topics. Program Officers (POs) from different research areas are present at each Virtual Office Hour, so a wide range of scientific perspectives are represented.

The presentation slides, recording, and other documents are available here:

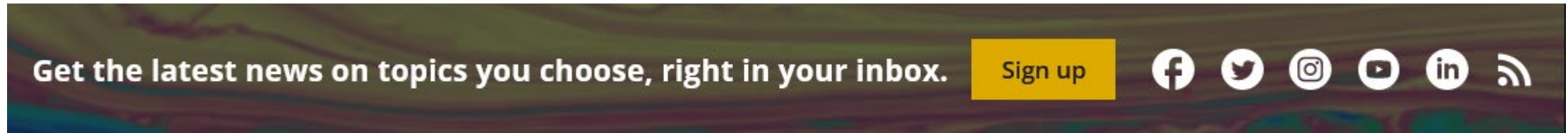


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BIO News and Updates

Visit www.nsf.gov and scroll down until you see the Sign up and social media banner, click on the yellow box, and follow the prompts.



Volunteer to review:

<https://www.surveymonkey.com/r/DEBexpertise>



Recent and Upcoming Funding Opportunities

Find links to all recent solicitations and DCL at the left side of the BIO webpage under Funding

Remember – Many BIO solicitations have no deadlines and no submission limits.

- NSF 23-549, 23-548, 23-547 – DEB, IOS, and MCB Core Programs - **No deadline**
- NSF 22-591 – Opportunities for Promoting Understanding through Synthesis (OPUS) – **No deadline**
- NSF 23-514 – Research and Mentoring for Postbaccalaureates in Biological Sciences – **Deadline Jan 18**
- NSF 24-507 – Incorporating Human Behavior in Epidemiological Models – **Deadline Feb 14**
- NSF 22-603 – Mid-Career Advancement – **Deadline March 1**
- DCL 23-108 – Conference Proposals on Clean Energy Topics
- DCL 23-109– Clean Energy Technology RAISE or EAGER Proposals
- [BIO 18-001](#) – Biological Sciences Temporary/Rotator Program Officer



ALL NSF Submissions

- Starting October 23, 2023: PIs and other senior personnel are required to use the SciENCv format only for preparation of the Biographical Sketch and Current and Pending support



Check out the DEB Blog for more information

<https://deblog.nsfbio.com/>



A New “Horizontal”: Strengthen, Scale Use-Inspired and Translational Research



Integrative Activities

International Science & Engineering



National Science Foundation
Directorate for Technology, Innovation and Partnerships

TIP Directorate Mission

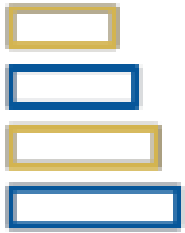
TIP harnesses the nation's vast and diverse talent pool to advance critical and emerging technologies, address pressing societal and economic challenges, and accelerate the translation of research results from lab to market and society. TIP improves U.S. competitiveness, growing the U.S. economy and training a diverse workforce for future, high-wage jobs.

TIP: Accelerating Research To Impact



Fostering Innovation and Technology Ecosystems

Nurtures regional and national innovation and technology ecosystems to support researchers and innovators.



Establishing Translation Pathways

Supports startups through a lab-to-market platform and establishes new pathways for translating research results.



Partnering to Engage the Nation's Diverse Talent

Advances and deepens public and private partnerships across all areas of science, engineering and education.

Find Your Opportunities



Academia

- America's Seed Fund powered by NSF
- Accelerating Research Translation
- Convergence Accelerator
- Enabling Partnerships to Increase Innovation Capacity
- Experiential Learning for Emerging and Novel Technologies
- NSF Entrepreneurial Fellowships
- NSF Innovation Corps (I-Corps™)
- Partnerships for Innovation
- Pathways to Enable Open-Source Ecosystems
- Privacy-Enhancing Technologies Prize Challenge
- Prototype Open Knowledge Network
- NSF Regional Innovation Engines



Business & Industry

- America's Seed Fund powered by NSF
- Convergence Accelerator
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- Pathways to Enable Open-Source Ecosystems
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Government

- Convergence Accelerator
- Experiential Learning for Emerging and Novel Technologies
- NSF Regional Innovation Engines
- Visionary interdisciplinary Teams Advancing Learning Prize Challenge



Nonprofits


- Convergence Accelerator
- Experiential Learning for Emerging and Novel Technologies
- Partnerships for Innovation
- Pathways to Enable Open-Source Ecosystems
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- Visionary interdisciplinary Teams Advancing Learning Prize Challenge



CHIPS and Science Act of 2022

- Appropriates \$54 billion for semiconductors incentives, R&D, workforce development
- Authorizes NSF, DOE, NIST, NASA
- Authorizes \$81B for NSF:
 - +\$36B for the agency
 - Of that, +\$20B for TIP
- Authorizes a new NSF Directorate for Technology, Innovation and Partnerships





CHIPS and Science Act of 2022

- Advanced computing and semiconductors
- Advanced materials
- Advanced communications
- Advanced energy and industrial efficiency technologies
- Artificial intelligence
- Biotechnology
- Cyberinfrastructure and cybersecurity
- Disaster prevention and mitigation
- Robotics and advanced manufacturing
- Quantum information science and technology



Ramping up TIP

March 16:
TIP is established



MAR
2022

Feb. 15, 2022
Pathways to enable Open-Source Ecosystems launches

Jan. 21, 2022
NSF + Intel announce \$100M semi. workforce partnership



Privacy-Enhancing Technologies PRIZE CHALLENGES

July 20:
NSF, NIST, OSTP, UK announce privacy prize challenges

JUL
2022

MAY
2022

May 3:
NSF Engines program launches



Sept. 19:
Entrepreneurial Fellows program launches

Activate

Sept. 7:
NSF, DOD partner to advance 5G security



Oct. 19:
NSF launches ExLENT program

SEP
2022



Sept. 8:
NSF awards five new I-Corps™ Hubs



Oct. 27:
NSF + Micron announce \$10M semi. workforce partnership

OCT
2022



Nov. 10:
NSF announce winners in first phase of NSF, NIST, OSTP, UK privacy prize challenges

NOV
2022

Dec 8:
NSF launches EPIIC program

Dec 12:
NSF announce Builder Platform for NSF Engines

Dec 19:
NSF invests \$12M on advance circular economy



Jan. 10:
NSF + NobleReach Emerge announce biotechnology investment



Jan. 26:
NSF announce cross-sector partnership with Ericsson, Intel, IBM, and Samsung on its FuSe program

JAN
2023

DEC 2022

Dec 9:
NSF invests \$12M on solutions for persons with disabilities

Dec 13:
NSF invests \$11M to address food/nutrition security

Feb 8:
NSF launches ART program



FEB
2023

Mar 15:
NSF launches Proto-OKN program



Apr. 3:
NSF announce 100 teams advancing to Vital Prize Challenge

MAR
2023

May 11:
NSF announces the first-ever NSF Engines, program awards to 44 unique teams



Apr 27:
NSF hosts first-ever industry partnership summit

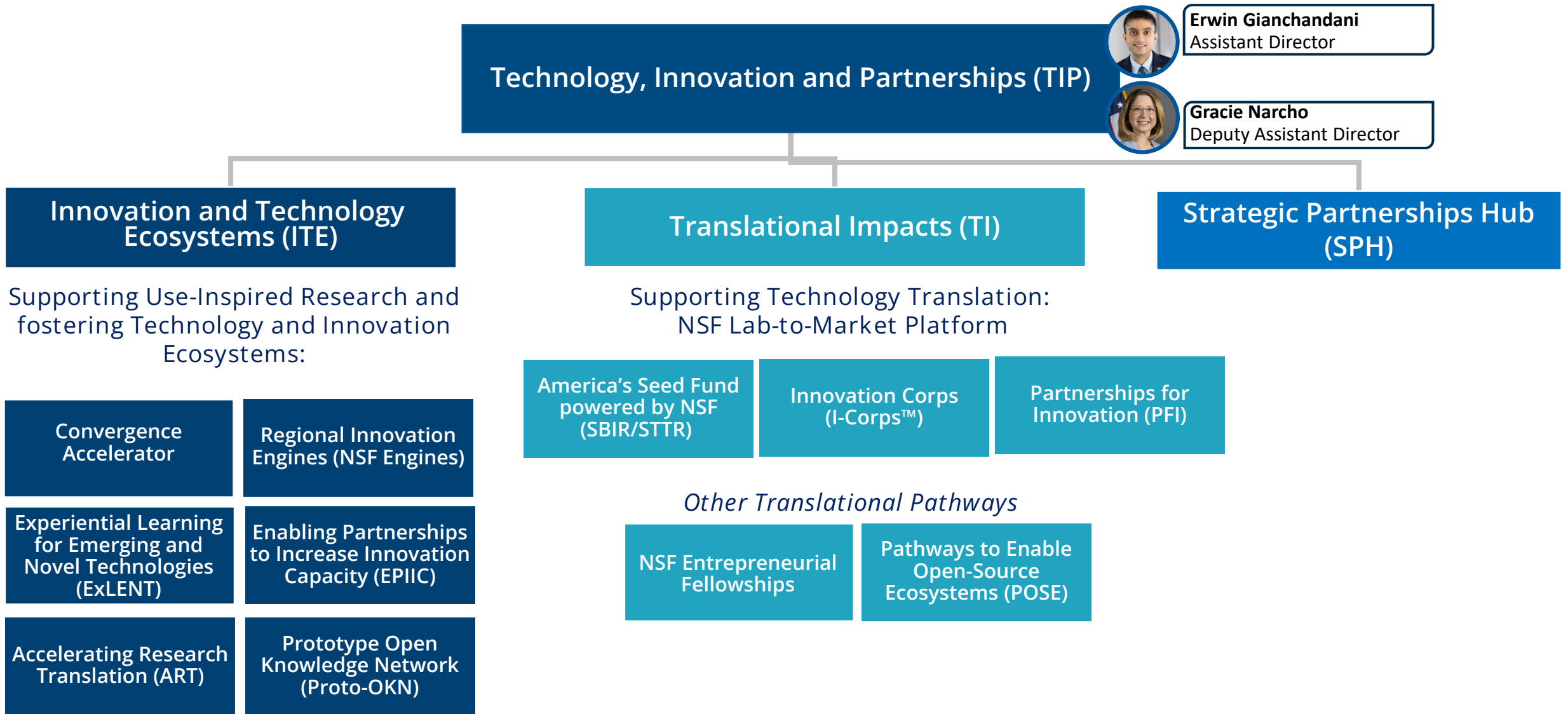
Apr 25:
NSF launches new \$9.5 million opportunity to support NSF Engines

APR
2023

MAY
2023



NSF Technology, Innovation and Partnerships Focus Areas



NSF Technology, Innovation and Partnerships Focus Areas



Erwin Gianchandani
Assistant Director



Gracie Narcho
Deputy Assistant Director

Technology, Innovation and Partnerships (TIP)

Innovation and Technology Ecosystems (ITE)

Supporting Use-Inspired Research and fostering Technology and Innovation Ecosystems:

Convergence Accelerator

Regional Innovation Engines (NSF Engines)

Experiential Learning for Emerging and Novel Technologies (ExLENT)

Enabling Partnerships to Increase Innovation Capacity (EPIIC)

Accelerating Research Translation (ART)

Prototype Open Knowledge Network (Proto-OKN)

Translational Impacts (TI)

Supporting Technology Translation:
NSF Lab-to-Market Platform

America's Seed Fund powered by NSF (SBIR/STTR)

Innovation Corps (I-Corps™)

Partnerships for Innovation (PFI)

Other Translational Pathways

NSF Entrepreneurial Fellowships

Pathways to Enable Open-Source Ecosystems (POSE)





Convergence Accelerator program funds multi-disciplinary teams through convergence research and innovation processes to stimulate innovative idea sharing and development of sustainable solutions to solve societal challenges.

Two Phases:	PHASE I (PLANNING)	PHASE II (IMPLEMENTATION)
	9 months	24 months
	Up to \$750,000	Up to \$5 Million

Opportunity available to:

- Academia
- Business & Industry
- Governments
- Nonprofits



Regional Innovation Engines (NSF Engines) program supports the development of diverse, regional coalitions to engage in use-inspired research, drive research results to the market and society, promote workforce development, and ultimately stimulate the economy and create new jobs.

Engines are funded up to **\$160 million** for up to **10** years

NSF Engine Development Awards - up to **\$1 million** for up to **2** years to plan for an Engine.

Opportunity available to:

- Academia
- Business & Industry
- Government
- Nonprofits



Enhancing Partnerships to Increase Innovation Capacity (EPIIC) program provides training and networking support to help build more inclusive innovation ecosystems and pathway into NSF Engines.

Funding up to **\$400,000** over **3** years

Opportunity available to:

- **Academia**



Accelerating Research Translation (ART) program supports institutions of higher education to build capacity and infrastructure to strengthen and scale the translation of basic research outcomes into impactful solutions.

Funding up to **\$6 million** over **4** years

Opportunity available to:

- Academia

NSF Technology, Innovation and Partnerships Focus Areas



Erwin Gianchandani
Assistant Director



Gracie Narcho
Deputy Assistant Director

Technology, Innovation and Partnerships (TIP)

Innovation and Technology Ecosystems (ITE)

Supporting Use-Inspired Research and fostering Technology and Innovation Ecosystems:

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Other Translational Pathways

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Pathways to Enable Open-Source Ecosystems (POSE)

Strategic Partnerships Hub (SPH)





Innovation Corps (I-Corps™) provides experiential entrepreneurial education to further the nation's innovation ecosystem. Hubs implement the I-Corps program by creating a network of universities that help researchers learn how to test the market through customer discovery.

I-Corps Hubs Funding for up to **\$3 million** per year for **5 years**

10 I-Corps Hubs involving nearly 100 universities

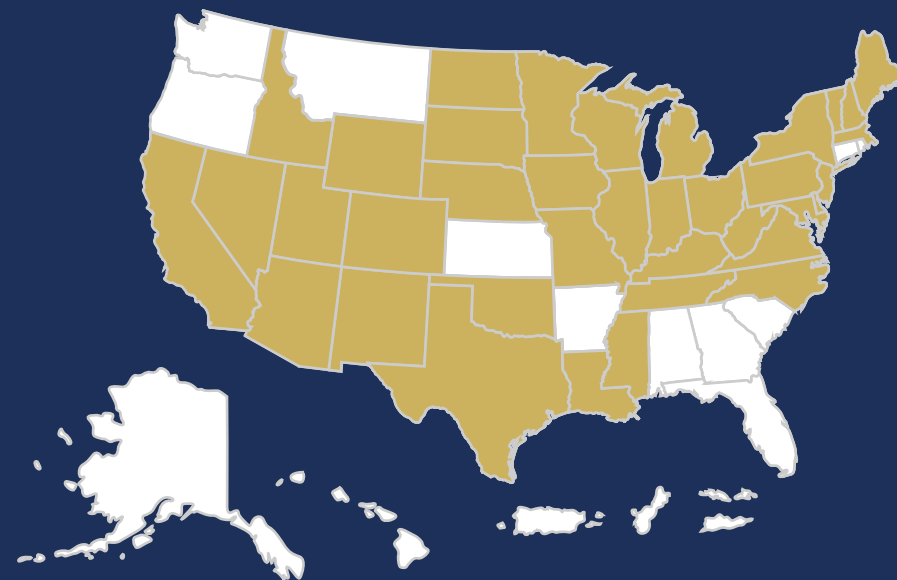
I-Corps Teams Funding for **\$50,000** for **7 weeks**



CORPS
NSF Innovation Corps



All Hubs



Opportunity available to:



Academia





Partnerships for Innovation (PFI) program offers researchers a technology testbed to gain market insights, launch a commercial application or facilitate industry adoption. PFI helps researchers translate basic research into technologies and spurs university spinoff companies.

Two Phases:

TECHNOLOGY
TRANSLATION

2 years
Up to \$550,000

RESEARCH
PARTNERSHIPS

3 years
Up to \$1 million

Opportunity available to:



Academia



Nonprofits





America's Seed Fund powered by NSF (the Small Business Innovation Research and Small Business Technology Transfer program) provides up to **\$2 million** in research and development funding for deep-tech startups, transforming scientific and engineering discoveries into products and services with commercial and societal impact.

Submit a Project Pitch to get started!

PHASE I	PHASE II	PHASE IIB
6-12 months	2 years	
Up to \$275,000	Up to \$1 million	Up to \$500,000

CHIPS and
Science Act
2022



America's
SEED FUND
SBIR.STTR

Opportunity available to:



Academia



Business & Industry





Pathways to Enable Open-Source Ecosystems (POSE) supports sustainable high-impact open-source ecosystems to ensure more secure open-source products, increase coordination of developer contributions and a more focused route to impactful technologies.

Two Phases:

PHASE I
1 year
Up to
\$300,000

PHASE II
2 years
Up to
\$1.5 million



Pathways to Enable Open-Source Ecosystems

Opportunity available to:



Academia



Business & Industry



Nonprofits



Through a \$20 million cooperative agreement, the **Entrepreneurial Fellowships** run by the non-profit, **Activate.org**, support researchers from a variety of backgrounds and geographies to move technologies from lab to market.

2 years of training

At least **\$350,000** in direct support, plus specialized research facilities and equipment



Activate



CHIPS and
Science Act
2022



Opportunity available to:



Individual Researchers

TIP Pilot Efforts

Why we pilot

A "science-of-science" approach

TIP views pilots as experiments that offer an opportunity to learn something new or improve the agency's overall approach to funding research and innovation. Specifically, each pilot involves defining a hypothesis, testing it, and then assessing the outcomes to inform if the approach is worthy of further investment and scaling.

Recent Translational Impacts pilots:
Compass, and Entrepreneurial Training

View all TIP pilots here: <https://new.nsf.gov/tip/pilots>



Please note: NSF does not solicit proposals for pilots.

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new.nsf.gov/tip/latest



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Technology, Innovation and Partnerships

A new directorate at the U.S. National Science Foundation

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One year ago, under the leadership of Director Sethuraman Panchanathan, the U.S. National Science Foundation announced the establishment of the Directorate for Technology, Innovation and Partnerships, or TIP, the agency's first new directorate in more than 30 years.

Just a few months later, Congress passed the "CHIPS and Science Act," authorizing the establishment of the directorate and charging it with the critical mission of advancing U.S. competitiveness through investments that accelerate the development of key technologies and address pressing societal and economic challenges.

Updates

[NSF invests more than \\$43 million in NSF Regional Innovation Engines Development Awards](#)

May 11, 2023

[NSF seeks input on novel approaches to emerging technology career pathways](#)

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[Accelerating Research Translation](#)