Small Business Innovation Research and Small Business Technology Transfer Programs

The Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs are competitive U.S. federal grantmaking programs that support domestic small businesses engaging in R&D with the potential for commercialization.

About SBIR and STTR

The SBIR and STTR programs provide grants to U.S.-based businesses to support the commercialization of scientific research and innovation. The main difference between the two programs is that STTR is designed to facilitate the transfer of technology developed by a research institution to a small business. In STTR, small businesses are required to partner with a nonprofit research institution. In SBIR, nonprofit research partnership is allowed but not required.

The Small Business Administration oversees the SBIR and STTR programs and the programs are administered by different federal agencies in accordance with specific topic areas. Each agency releases topic area solicitations at varied times throughout the year, which small businesses can monitor here. Small businesses applying to the program must respond to active solicitations; the program does not accept unsolicited proposals.

Multiple alternative protein businesses have received SBIR and STTR grants from various federal entities. Agencies who may release topic areas relevant to alternative proteins include the U.S. Department of Agriculture, Department of Commerce, Department of Defense, Department of Energy, Environmental Protection Agency, Department of Health and Human Services, National Aeronautics and Space Administration, and National Science Foundation. Alternative protein companies are encouraged to check active agency solicitations here, as new solicitations are released throughout the year.

Available funding

The SBIR/STTR programs are structured in three phases, each with different funding amounts:

Phase I focuses on "determining, insofar as possible, the scientific and technical merit and feasibility of ideas that appear to have commercial potential" or as "pursuant to STTR program solicitations" and provides $50,000–$305,000 in funding over a six-month (SBIR) or one-year (STTR) period.

Phase II recipients are chosen on the "technical merit and feasibility of the proposals" as evidenced in Phase I and their commercial potential in order to "further develop proposals which meet particular program needs." This phase provides $750,000–$2 million in funding over a two-year period, but awards can vary.

- Generally, only Phase I awardees are eligible for a Phase II award. Companies may generally submit a Phase II proposal between six months and two years after the start date of the relevant Phase I project, but specific details may vary and can be found in the Phase II solicitation.

- Small businesses may receive Phase II awards from the same or a different federal agency than the agency that issued the Phase I award.
- Commercial potential is assessed according to the small business' record of successfully commercializing SBIR or other research, the existence of funding commitments by the private sector or other non-SBIR sources, follow-on research commitments, and the presence of "other indicators of commercial potential."

Granting federal agencies may implement **Phase III**, which "derives from, extends, or completes efforts" funded in the two previous phases, by offering follow-on R&D funding or procurement contracts to businesses who have moved through Phases I and II. Phase III is not funded by the SBIR and STTR programs, and specifics vary by agency.

In addition, SBIR/STTR awardees are eligible to apply for additional Technical and Business Assistance (TABA) funding of $6,500-$50,000 from funding agencies.

A number of states provide matching programs and other incentives to support businesses who have received SBIR/STTR funding.

Eligibility

To participate in the SBIR and STTR programs, businesses must meet the following criteria:

- Organized for profit and with a place of business located in the United States.
- More than 50 percent owned and controlled by one or more individuals who are citizens or permanent resident aliens of the United States, or by other small business concerns that are each more than 50 percent owned and controlled by one or more individuals who are citizens or permanent resident aliens of the United States.
- No more than 500 employees, including affiliates.

For the STTR program, the partnering nonprofit research institution must meet the following criteria:

- Located in the United States.
- Meet one of three definitions: a nonprofit college or university, a domestic nonprofit research organization, or a federally funded R&D center.

Read more about eligibility on the SBIR program website.

SBIR and alternative proteins

SBIR has been one of the largest single sources of U.S. federal funding for alternative protein startups to date. As of August 2024, GFI is aware of at least $5.9 million in SBIR/STTR grants awarded to the alternative protein industry including to:

Arvegenix LLC
SBIR Phase I | $106,489 | USDA (2021)

Cambridge Corps
SBIR Phase II | $250,000 | DOE (2020)

Fybraworks
SBIR Phase I | $256,000 | NSF (2021)

Meati
SBIR Phase I | $111,846 | DOE (2018)
SBIR Phase I | $221,176 | NSF (2019)
SBIR Phase II | $1.25 million | NSF (2023)

Modern Meadow
SBIR Phase I | $92,488 | USDA (2012)

Nature's Fynd
SBIR Phase I | $149,848 | NSF (2013)
SBIR Phase II | $620,779 | NSF (2014)
Nature's Fynd and Montana State University | STTR Phases I and II | NASA (2018/2022)

North Star Research
SBIR Phase I | $61,639 | NASA (1999)

Novel Farms
SBIR Phase I | $256,000 | NSF (2021)
SBIR Phase II | $999,967 | NSF (2023)

Opera Bioscience
SBIR Phase I | $275,000 | NSF (2022)

Reel Seafood
SBIR Phase I | USDA (2024)

Tender Foods and Tufts
SBIR Phase I | $256,000 | NSF (2020)
SBIR Phase II | $997,986 | NSF (2022)

How to apply

Eligible small businesses should apply to open solicitations from federal agencies, listed here. Each solicitation has specific application components and instructions listed on the funding agency's website.

Check out these online tutorials and other resources maintained by the Small Business Administration for tips on preparing a successful SBIR/STTR application.

Join GFI's public funding email list to receive notifications when new SBIR/STTR topics are released that are relevant to alternative proteins.

Learn more

SBIR website
Open solicitations
Online tutorials
FAQs

Other R&D funding sources

State/local government opportunities. State and local R&D opportunities are variable from state to state. Your local Small Business Development Center (SBDC) may be the best place to learn about opportunities and small business support available in your area.

Nonprofit and non-governmental opportunities. GFI captures R&D funding opportunities relevant to alternative proteins in our research funding database. This database includes government and non-governmental opportunities. Typically the best way to stay informed about funding opportunities from nonprofit organizations is to sign up for their newsletters or follow their social media accounts to be alerted when new grant application cycles open.

Application tips

Start early: The application process—particularly for federal government funding—involves several steps and requires significant time. Start as soon as possible to ensure you have time to complete the registration steps, understand what is required for submission, and collect the necessary information. Depending on the agency, receiving funding may take up to a year from the time you submit your application.

Register with SAM.gov: The first step in applying for any research grant from the U.S. government is to make sure your business or organization is registered with SAM.gov and grants.gov. This webpage provides more information on how to register.

Submit early: Deadlines won't get extended. Submit your application several hours before the deadline, if not days before the deadline, in case there are last-minute technical issues with the submission platform. Federal submission platforms can become quite slow immediately before a grant deadline.

Follow the rules: Read the solicitation and make sure you understand and follow the instructions. Your application needs to contain what is asked for, in the order it is asked for, using clear language and document structure. Make it easy for reviewers to find information and understand what you're proposing to do. Read the solicitation again. And again.

Focus on fit: Understand the funder's big-picture goals and the objectives of the specific funding program. Learn their expectations for how project results will be shared and how IP is handled. If these goals and expectations align with your company's plans, make sure your application articulates how your project will help the funder achieve their goals. If any of the goals and expectations are misaligned with your project, do not apply.

Learn from program managers: Most solicitations will include contact information for a program manager, and sometimes funding programs offer an informational webinar. Attend the webinar and talk to the program manager to gain insight into whether the funder thinks your proposed R&D topic is a good fit for what they're looking for. Do your homework (read the solicitation, understand the goals of the program, and have a high-level idea of your project) before contacting a program officer so that your conversation with them will be short, focused, and productive.

Partner with a university or federal research center: Universities, federally funded R&D centers (FFRDCs), and government research agencies like the USDA Agricultural Research Service (ARS) have expertise and equipment (including pilot scale facilities) that may be valuable to your R&D project. There are existing mechanisms for establishing research partnerships (e.g., CRADAs), and some universities may offer grant proposal preparation and submission support if one of their researchers is involved in the project. These partnerships may help companies save time and money.

About GFI

The Good Food Institute is a 501(c)(3) nonprofit working internationally to make alternative proteins like plant-based and cultivated meat delicious, affordable, and accessible. GFI advances open-access research, mobilizes resources and talent, and empowers partners across the food system to create a sustainable, secure, and just protein supply. GFI is funded entirely by private philanthropic support.