USDA National Institute of Food and Agriculture
U.S. DEPARTMENT OF AGRICULTURE

SBIR/STTR

SMALL BUSINESS INNOVATION RESEARCH AND SMALL BUSINESS TECHNOLOGY TRANSFER PROGRAMS

Enhancing American Agriculture, Rural Health Care, Rural Communities and the Environment

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SMALL BUSINESS INNOVATION RESEARCH AND TECHNOLOGY TRANSFER PROGRAMS

The National Institute of Food and Agriculture (NIFA) administers the U.S. Department of Agriculture's (USDA) Small Business Innovation Research (SBIR) and Technology Transfer (STTR) programs, both of which focus on projects that enhance American agriculture, rural health care, rural communities and the environment. Central to the STTR program is that small businesses partner with nonprofit research institutions to foster technology transfer through cooperative research and development.

USDA SBIR/STTR PROGRAMS:

- Stimulate technological innovations in the private sector;
- Strengthen the role of small businesses in meeting federal research and development needs;
- Increase the commercialization of innovations derived from SBIR/STTR-supported private sector research and development efforts; and
- Foster and encourage participation of small businesses owned by historically underserved populations.

Qualified, established small businesses with proposals for high quality, advanced research are eligible for competitive awards. Proposed research must relate to important scientific problems and opportunities in agriculture that may lead to significant public benefit.

USDA encourages small businesses to partner with university and federal lab researchers to develop and market technology, processes and products.

RECOGNIZING OPPORTUNITY

Providing solutions to the issues that face American agriculture and society requires passion and dedication, traits that are synonymous with the drive of small business owners. SBIR/STTR funds focused, valuable projects and creates partnerships between university researchers and small businesses to bring together science, research, production and marketing in a way that allows forward-thinking ideas to become a reality.

FACILITATING PROGRESS

USDA uses two SBIR/STTR phases to provide grantees the resources they need to create a process that thoroughly addresses the science, business and organizational planning to develop an investment-worthy commercialization strategy.

ADVANCING STRATEGIC PRIORITIES

The SBIR/STTR programs are uniquely positioned to help USDA meet its key priorities of addressing climate change through climate-smart agriculture and forestry; advancing racial justice, equity and opportunity; creating more and better market opportunities; and tackling food and nutrition insecurity.

THE SBIR/STTR PROCESS

Phase I is open to any eligible small business.

FUNDING LIMIT: $125,000–$175,000

DURATION: 8 months (SBIR) / 12 months (STTR)

OBJECTIVE: Determine the scientific feasibility of ideas with commercial potential.

RESOURCE: View the current Phase I Request for Applications (go.usa.gov/xzEX4).

Phase II is open only to previous Phase I awardees.

FUNDING LIMIT: $600,000

DURATION: 24 months

OBJECTIVE: Facilitate a research and development phase with scale-up of the innovation that provides a positive return on investment. Phase II also allows for commercialization planning and implementation of the technology, product, or service.

RESOURCE: View the current Phase II Request for Applications (go.usa.gov/xzEXB).

Phase III is not funded through SBIR funds, but successful Phase II grantees are encouraged to secure funding from personal, public, private and state resources and investments to enable commercialization.

SBIR/STTR RESEARCH AREAS

ANIMAL PRODUCTION AND PROTECTION

Develops and markets innovative technologies to help agricultural animal producers improve production efficiency, prevent diseases and outbreaks, conserve resources, and reduce costs of production.

AQUACULTURE

Improves private sector production and competitiveness by increasing reproductive efficiency and genetic improvement in fish and shellfish; enhancing animal health, food safety, production efficiency, and cost-effective production of alternative proteins; and reducing water usage.

BIOFUELS AND BIOBASED PRODUCTS

Promotes product usage through innovative technologies that increase biofuels and biobased products from agricultural materials and provide new opportunities to diversify agriculture's role in the raw materials industry.

CONSERVATION OF NATURAL RESOURCES

Creates technology for conserving and protecting essential resources while sustaining optimal agricultural productivity by enhancing air, soil, and water quality; developing irrigation techniques; reducing erosion and pollution caused by agriculture enterprises; and promoting these new technologies.

FOOD SCIENCE AND NUTRITION

Develops products and processes from new knowledge; improves methods of processing and packaging for better quality and nutritional value; and promotes programs and products that increase consumption and understanding of healthy foods while reducing childhood obesity.

FORESTS AND RELATED RESOURCES

Focuses on the health, diversity and productivity of forests and grasslands by sustaining forest resources, addressing climate change impacts, developing value-added materials and protecting existing ecosystems.

PLANT PRODUCTION AND PROTECTION – BIOLOGY

Enhances crop production and protection through biological approaches that reduce the impact of harmful agents, advance plant improvement methods, and develop new food and specialty crop plants.

PLANT PRODUCTION AND PROTECTION – ENGINEERING

Enhances crop development and safety by reducing the impact of harmful agents and developing economically and environmentally sound production, post-harvest, and storage systems.

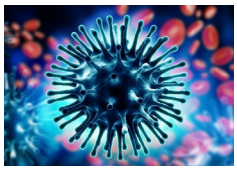
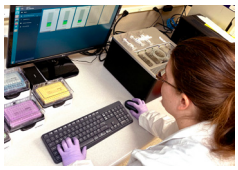
RURAL AND COMMUNITY DEVELOPMENT

Conceptualizes and commercializes new and existing technology, products, processes, and services that enhance efficiency and equity of public and private investments; builds a diversified workforce; increases resilience to natural and human disasters; and improves economic vitality of rural communities and the reduction of poverty.

SMALL AND MID-SIZED FARMS

Increases sustainability and profitability of farms and ranches through newly developed plant, animal, organic and natural products; enhanced farm safety; increased operation efficiency; and conservation of natural resources.

REALIZING POTENTIAL

CAMBRIDGE TECHNOLOGIES LLC used their precision vaccinology technique to develop a novel vaccine against the Swine Influenza A virus, an acute and sometimes fatal respiratory disease in pigs. Cambridge Technologies is working with the USDA Center for Veterinary Biologics on a commercial license for this vaccine.

Woman-owned **HIVETECH SOLUTIONS** is improving honeybee health with its Mobile Indoor Climate Controlled Apiary (MICA). This technology reduces the effects of large temperature swings and bee parasites and provides healthy honeybee hibernation with 72% higher survivability compared to conventional outdoor storage. HiveTech secured additional outside investment to bring MICA to the commercial beekeeping market in 2022.

PRAIRIE AQUATECH developed Microbially-Enhanced Protein™, or ME-PRO®, a plant-based protein ingredient using a patented fermentation technology to improve feed and food quality. ME-PRO® increases nutrient bioavailability in feedstocks to improve animal health and nutrition while reducing environmental impact. Currently producing 30,000 tons of ME-PRO®, Prairie AquaTech is one of the global leaders in alternative protein ingredient production.

STONY CREEK COLORS (SCC) has developed an agricultural supply chain to replace synthetic dyes with plant-based drop-in solutions. SCC's method biochemically stabizes biomass for storage and transport, allowing it to expand its farmer network into new, more productive climates. This work has substantially improved the dye production process, resulting in commercial sales of high-purity BioPreferred™ natural indigo dye to world-leading brand customers.

Minority-owned **SONSIGHT WIND INC.** developed an advanced extended blade turbine with a novel low-mass, low-RPM generator that increases energy production at lower wind speeds with low generation costs. Sonsight's Phase I research resulted in a patent for the generator that established the framework for the Phase II turbine development and their present quiet, dependable prototype turbine.

A mix of federal funds and private investment supported the research and innovation of **HALOMINE™ INC.** to advance protection against viruses, bacteria and fungi/mold in various applications, including food safety. Halomine's success in antimicrobial coatings has led to a corporate partnership with a global industrial cleaning and infection control company, which will significantly impact food safety for consumers worldwide.

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