

USDA Helps Small Businesses Develop New Agricultural Products, Technology

 nifa.usda.gov/announcement/usda-helps-small-businesses-develop-new-agricultural-products-and-technology

WASHINGTON, D.C., Oct. 18, 2017 – The U.S. Department of Agriculture's (USDA) National Institute of Food and Agriculture (NIFA) today announced grants to help bring agricultural business ideas from the drawing board to the marketplace. Funding is made through NIFA's Small Business Innovation Research Program.

“For small agricultural businesses, the federal government is a key, initial investor to help them get great ideas into the marketplace,” said NIFA Director, Sonny Ramaswamy. “The feasibility and scalability of these business concepts are evaluated through our peer review process, and businesses get to keep their intellectual property rights as they commercialize their ventures.”

The Small Business Innovation Research Program (SBIR) is coordinated by the Small Business Administration and administered by 11 federal agencies, including USDA. It encourages domestic small businesses to engage in high-growth research and development with high potential for commercialization and that could lead to significant public benefit. Phase I grants invest in feasibility and proof of concept studies. Phase II grants help successful Phase I projects scale up, implement, and commercialize their ventures. Topic areas include forests and related resources; plant production and protection – biology; animal production and protection; air, water, and soils; food science and nutrition; rural and community development; aquaculture; biofuels and biobased products; small and mid-size farms; and plant production and protection – engineering.

In FY17, the SBIR program supported 114 Phase I and II grants totaling more than \$24 million. Among the Phase I projects, Arcadia Biosciences of Seattle, Washington, will develop new wheat varieties at their Phoenix, Arizona, facilities to help increase consumer acceptance of whole grain wheat by improving the shelf life and flavor of whole grain flour. A Phase II project by Jun Innovations of Honolulu, Hawaii will take the proprietary super-cooling technology it developed in Phase I and develop commercially viable units for demonstration and licensing with potential partners such as major home appliance manufacturers.

Phase I projects:

- GSS Group LLC, Bella Vista, Arkansas, \$100,000
- Quakewrap Inc., Tucson, Arizona, \$100,000
- 2WiTech LLC, San Diego, California, \$100,000
- Architecture Technology Corporation, Campbell, California, \$99,960

- BioSpyder Technologies Inc., Carlsbad, California, \$99,992
- Blue Forest Conservation, San Francisco, California, \$99,967
- Checkerspot, Oakland, California, \$100,000
- Intelligent Optical Systems Inc., Torrance, California, \$99,929
- ISCA Technologies Inc., Riverside, California, \$100,000
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- ISCA Technologies Inc., Riverside, California, \$100,000
- ISCA Technologies Inc., Riverside, California, \$100,000
- Spero Energy Inc., Thousand Oaks, California, \$100,000
- Watershed Materials LLC, Napa, California, \$96,864
- DMC Biotechnologies Inc., Boulder, Colorado, \$100,000
- Growcentia Inc., Fort Collins, Colorado, \$99,943
- HiveTech Solutions LLC, Boulder, Colorado, \$97,850
- Membrane Protective, Technologies Inc., Fort Collins, Colorado, \$100,000
- Sporian Microsystems Inc., Lafayette, Colorado, \$99,992
- TDA Research Inc., Wheat Ridge, Colorado, \$100,000
- Veterinary Diagnostic Technology Inc., Wheat Ridge, Colorado, \$99,973
- Compact Membrane Systems Inc., Newport, Delaware, \$100,000
- Applied Food Technologies Inc., Alachua, Florida, \$99,500
- Lindgren-Pitman Inc. Pompano Beach, Florida, \$98,838
- Live Advantage Bait LLC, Jupiter, Florida, \$97,905
- Pheronym Inc., Gainesville, Florida, \$100,000
- Ronald P. Weidenbach dba Hawaii Fish Company, Waialua, Hawaii, \$100,000
- Gross-Wen Technologies Inc., Ankeny, Iowa, \$100,000
- PSR Genetics LLC, Gilbert, Iowa, \$99,800
- StarrMatica Learning Systems Inc., Clinton, Iowa, \$100,000
- K2 BioMicrosystems LLC, Geneva, Illinois, \$99,725
- Advanced Vascular Therapies Inc., Lafayette, Indiana, \$99,752
- Biomineral Systems LLC, South Bend, Indiana, \$100,000
- Createability Concepts Inc., Carmel, Indiana, \$99,952
- Nutramaize LLC, Lafayette, Indiana, \$99,977
- Mechanized Design LLC, Manhattan, Kansas, \$99,839
- Aquaculture Systems Technologies, New Orleans, Louisiana, \$96,476
- Aerodyne Research Inc., Billerica, Massachusetts, \$100,000
- Cambrian Innovation Inc., Boston, Massachusetts, \$100,000
- Nano Terra Inc., Cambridge, Massachusetts, \$99,993
- Palmos Company, Cambridge, Massachusetts, \$100,000
- Reactive Innovations LLC, Westford, Massachusetts, \$99,999
- Vecna Technologies Inc., Cambridge, Massachusetts, \$100,000

- Vuronyx Technologies LLC, Beverly, Massachusetts, \$100,000
- Ward Aquafarms LLC, North Falmouth, Massachusetts, \$98,750
- Inventwood LLC, Hyattsville, Maryland, \$100,000
- N5 Sensors Inc., Rockville, Maryland, \$99,807
- VitaminSea LLC, Buxton, Maine, \$100,000
- Novoreach Technologies LLC, Midland, Michigan, \$100,000
- Oxford Biomedical Research Inc., Rochester Hills, Michigan, \$99,872
- Sasya LLC, Plymouth, Minnesota, \$100,000
- APSE Inc, Saint Louis, Missouri, \$100,000
- NanoGuard Technologies LLC, Saint Louis, Missouri, \$100,000
- Vox Vineyards Inc., Kansas City, Missouri, \$86,000
- GS Research LLC, Bay St. Louis, Mississippi, \$100,000
- NWB Sensors Inc., Bozeman, Montana, \$99,853
- Nanodiagnostic Technology LLC, Kannapolis, North Carolina, \$100,000
- Renuvix LLC, Fargo, North Dakota, \$100,000
- Midwest Hop Producers LLC, Plattsmouth, Nebraska, \$69,315
- NG Health Ventures LLC, Lincoln, Nebraska, \$100,000
- Ecovative Design LLC, Troy, New York, \$99,999
- FloraPulse Company, Ithaca, New York, \$99,927
- Vedge Kids LLC, Yorktown Heights, New York, \$100,000
- Zymtronix Catalytic Systems Inc., Ithaca, New York, \$99,923
- LARAD Inc., Wooster, Ohio, \$99,245
- Sensor Development Corporation, Elyria, Ohio, \$99,916
- Skyward, Ltd., Dayton, Ohio, \$99,993
- UES Inc., Dayton, Ohio, \$100,000
- All Things Bugs LLC, Midwest City, Oklahoma, \$100,000
- Alpha Scents Inc., West Linn, Oregon, \$100,000
- eWind Solutions, Inc., Beaverton, Oregon, \$100,000
- Advanced Cooling Technologies Inc., Lancaster, Pennsylvania, \$99,936
- MicrobiType LLC, Plymouth Meeting, Pennsylvania, \$75,000
- Compost Plant L3C, Providence, Rhode Island, \$97,575
- Cirtemo, Columbia, South Carolina, \$100,000
- Gloyer - Taylor Laboratories LLC, Tullahoma, Tennessee, \$95,069
- Fulcrum BioScience LLC, West Jordan, Utah, \$99,733
- Burnshire Hydroelectric LLC, Star Tannery, Virginia, \$99,552
- Novateur Research Solutions LLC, Leesburg, Virginia, \$99,980
- Triangle Engineering, White River Junction, Vermont, \$99,979
- Arcadia Biosciences Inc., Seattle, Washington, \$100,000
- Forest Concepts LLC, Auburn, Washington, \$100,000
- Grow Plastics LLC, Seattle, Washington, \$100,000
- Whole Energy Fuel Company, Bellingham, Washington, \$98,000

- Midwestern BioAg. Inc., McFarland, Wisconsin, \$99,575
- Xylome Corporation, Madison, Wisconsin, \$100,000

More information on these projects is available on the [NIFA website](#).

Phase II projects:

- Dunn`s Fish Farms Inc., Brinkley, Arkansas, \$600,000
- ISCA Technologies Inc., Riverside, California, \$600,000
- ISCA Technologies Inc., Riverside, California, \$600,000
- One Resonance Sensors LLC, San Diego, California, \$599,331
- TDA Research Inc., Wheat Ridge, Colorado, \$600,000
- Compact Membrane Systems Inc., Newport, Delaware, \$600,000
- Foresight Science & Technology Inc., Gainesville, Florida, \$530,104
- Candidus Inc., Athens, Georgia, \$600,000
- Jun Innovations Inc., Honolulu, Hawaii, \$596,592
- Accelerated Ag Technologies LLC, Urbandale, Iowa, \$600,000
- Gross-Wen Technologies Inc., Ankeny, Iowa, \$600,000
- Aptimmune Biologics Inc., Champaign, Illinois, \$600,000
- Hazel Technologies LLC, Skokie, Illinois, \$600,000
- ORB Technologies LLC, Lexington, Kentucky, \$600,000
- Diversified Technologies Inc., Bedford, Massachusetts, \$599,120
- Advanced Medical Electronics Corporation, Maple Grove, Minnesota, \$599,981
- Montana BioAgriculture Inc., Missoula, Montana, \$599,999
- Epicrop Technologies Inc., Lincoln, Nebraska, NE, \$599,999
- Windcall Manufacturing Inc., Venango, Nebraska, \$600,000
- Codagenix Inc., Farmingdale, New York, \$592,912
- 3Bar Biologics Inc., Columbus, Ohio, \$600,000
- Innovative Scientific Solutions Inc., Dayton, Ohio, 599,640
- VRM Labs Inc., Easley, South Carolina, \$600,000
- Stony Creek Colors Inc., Goodlettsville, Tennessee, \$599,828
- Nutrient Recovery and Upcycling LLC, Madison, Wisconsin, \$585,819
- Whole Trees LLC, Madison, Wisconsin, \$579,540

More information on these projects is available on the [NIFA website](#).

Since 1990, the SBIR program has awarded more than 3,000 research and development grants to American-owned, independently operated, for-profit businesses with 500 employees or less. Among past projects, [Stony Creek Colors](#), near Nashville, Tennessee, developed natural indigo and other textile dyes to reduce the need for imported synthetic

dyes based on toxic chemicals. Under its Phase II project, Stony Creek Colors received more than \$1 million in private investment to scale up crop production and has been successful in increasing sales of their bio-based product into industrial markets.

BioProdex Inc. of Gainesville, Florida, is helping area ranchers stop the spread of tropical soda apple, an invasive weed that chokes out native species and forage for cattle. The company created an herbicide based on a naturally occurring plant virus called pseudomonas. With this green solution, the company is helping to protect the food chain while saving ranchers money and protecting their lands. SolviNix@LC, is the world's first EPA-approved biological herbicide containing a plant virus as the active ingredient.

NIFA's mission is to invest in and advance agricultural research, education, and extension to solve societal challenges. NIFA's investments in transformative science directly support the long-term prosperity and global preeminence of U.S. agriculture. To learn more about NIFA's impact on agricultural sciences, visit [, sign up for updates](#), and follow us on Twitter [@USDA NIFA](#), [#NIFAImpacts](#).

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