



one north carolina
Small Business Program

**FISCAL YEAR 2023 REPORT ON THE COMMITMENT,
DISBURSEMENT, AND USE OF FUNDS**

As Required by §143B-437.83 of the
North Carolina General Statutes

Citation of Law or Resolution: S.L. 2009-451
Section Number: Section 14.5(c)
Due: September 1, 2023

Receiving Entities:

The Joint Legislative Commission on Governmental Operations

The Chairs of the House of Representatives and Senate Finance Committees

The Chairs of the House of Representatives and Senate Appropriations Committees

The Fiscal Research Division of the General Assembly

Submitting Entity:

The Board of Science, Technology & Innovation of the North Carolina Department of
Commerce

BACKGROUND

The federal Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Programs grant competitive awards to small businesses for Phase I proof-of-principle research and development (R&D) and Phase II early-stage product development.

The SBIR program is a highly competitive, merit-based award system designed to stimulate technological innovation, strengthen the role of small businesses in meeting federal R&D needs, and increase private sector commercialization of innovations derived from federal R&D. Enacted in 1982 as part of the Small Business Innovation Development Act (and then reauthorized multiple times since then), the SBIR program requires federal agencies with more than \$100 million in extramural R&D to allocate a percentage of their budgets exclusively for small businesses. This set-aside began in 1983 at 2% and is currently 3.2%, resulting in the availability of approximately \$3.36 billion in fiscal year 2021¹ to small businesses R&D. Participating agencies include: Department of Defense (DoD); Department of Health and Human Services (DHHS); Department of Energy (DOE); Department of Agriculture (USDA); National Science Foundation (NSF); National Aeronautics and Space Administration (NASA); Department of Homeland Security (DHS); Department of Transportation (DOT); Environmental Protection Agency (EPA); Department of Education (DE); and Department of Commerce (DOC) (see chart showing *One North Carolina Small Business Program Awards by Phase I SBIR/STTR Granting Agency, FY 2006-2023*, on page 6).

The STTR program is like the SBIR program, but its unique feature is its *requirement* that the small business work jointly with a non-profit research institution. A minimum of 40% of the work must be performed by the small business and a minimum of 30% by the non-profit research institution. Such institutions include federally funded research and development centers (FFRDCs), universities, university-affiliated hospitals, and other non-profits. Established by Title II of the Small Business Research and Development Enhancement Act of 1992, Public Law 102-564, the STTR program requires federal agencies with more than \$1 billion of extramural R&D to reserve 0.45% of their budgets for R&D small businesses and their partners. This set-aside currently results in the availability of approximately \$523 million for fiscal year 2021.¹

Unofficial, aggregate information acquired from SBIR.gov on August 20, 2023, reports 6,876 awards totaling \$3,888,773,215 for both programs.

The One North Carolina Small Business Program (hereinafter “the Program”)—the subject of this report—entails two State-funded programs: the **SBIR/STTR Phase I Matching Funds Program** and the **SBIR/STTR Phase I Incentive Funds Program**.² North Carolina is among a handful of innovative states that have seen the value of leveraging federal SBIR/STTR funds with State support of this type.

This report provides FY 2023 (7/1/2022-6/30/2023) commitment and disbursement information for both the Matching Funds Program and the Incentive Funds Program. Information for previous fiscal years is available in previously submitted year-end reports.

¹ 2021 is the latest year for which comprehensive data are available.

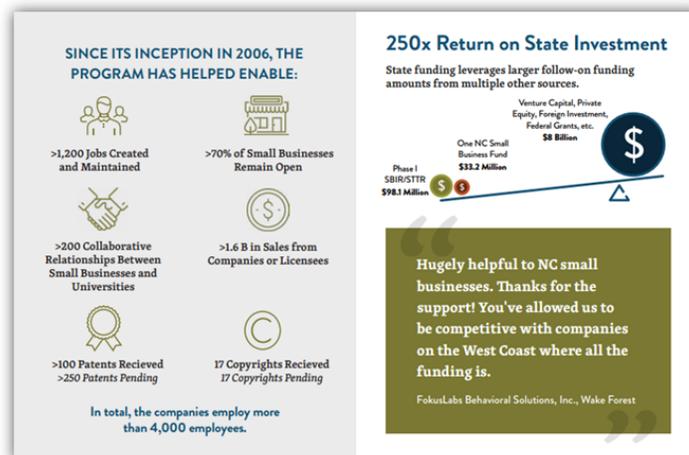
² Descriptions of both programs are provided later in this report on pages 5, and 14, respectively.

PROGRAM IMPACT

Between FY 2006 and FY 2023, 732 grants, totaling more than \$35.2 million, were issued to North Carolina small businesses.³ As measured in a comprehensive evaluation of the Program in 2023,⁴ this support has helped enable:

- The creation and retention of nearly 1,200 private sector jobs statewide – more to come as more companies benefit and grow. Together, the small businesses employ more than 4,000 employees.
- 434 small businesses to develop innovative new technologies, most of which have been commercialized, including biotechnologies, nanotechnologies, medical technologies, computer software, military/defense technologies, agricultural technologies, pharmaceuticals, textiles, and other high-tech applications.
- More than 70 percent of the small businesses to remain in operation.
- The small businesses to attract more than \$8 billion in external investment, including follow-on federal funds.
- 60 percent of North Carolina matching grant winners to win Phase II federal grant awards, each with a considerably larger average value of \$1 million (nationally, 54 percent of Phase I award winners graduate to Phase II awards).
- The development of hundreds of items of intellectual property (e.g., patents, copyrights).
- The small businesses to produce more than \$1.6 billion in sales or licenses.
- Hundreds of significant technology/business-development collaborative relationships between North Carolina universities & businesses.

Most of these companies are small and still growing, albeit rapidly. Thus, these impacts will spur expansion.



³ This includes 188 incentive grants, totaling \$916,987, and 544 Matching grants, totaling \$34,299,020. Information on grants in previous years is available in previously submitted year-end reports.

⁴ The Board of Science, Technology & Innovation conducts a comprehensive, in-depth evaluation of the Program every two years. The latest evaluation of this type was conducted 2023.

TESTIMONIALS

"The NCBST STTR Matching funds have filled a critical gap as our Phase 1 STTR is into a no-cost extension from NIH-NCI and with NC matching funds we are able to continue our scientific operations and make progress on our research and business goals."

~ Deep Creek Pharma, LLC, Yadkinville, NC

"We're grateful for the program, the availability of counseling for grant applicants, and the helpful and well-qualified staff involved in the Matching Fund Program."

~ Haw River Mushroom, LLC, Graham, NC

"These NCBST Matching Funds have literally enabled this Phase I project to move forward to completion. The PI has found this program to be exceptional. The opportunity can be invaluable to NC small business entities, as evidenced by our story. The NCBST has been excellent to work with, and the program structure, requirements and application procedures are equally professionally done. The PI knows from talking to other small business colleagues in North Carolina the impact that this program has on small business medical technology startups. I strongly encourage the NC Legislature to continue to fund this program -- in the context of all the other technology opportunities that now exist in the state, this program should assume a flagship role."

~ Perfusio Corporation, Greenville, NC

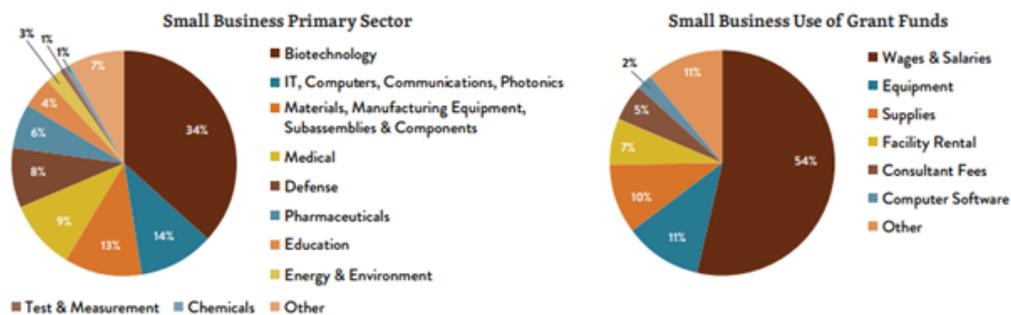
"The program's availability and North Carolina's commitment to support start-up life science companies is also a primary factor in Olfax management's decision to remain in the state."

~ Olfax, LLC, Asheville, NC

"Please keep this [Incentive Funds] program active as it is crucial for innovation. There are only ~13 states that offer no incentives and one (TX) is very competitive with NC in terms of innovation. We must get better at attracting talent and producing technology!"

~ Practical Scientific Solutions, Inc., Fuquay-Varina, NC

One North Carolina Small Business Program Grant Funding Use



MATCHING FUNDS PROGRAM

Overview

The North Carolina SBIR/STTR Phase I Matching Funds Program awards matching funds to North Carolina-based small businesses that have received a federal SBIR or STTR Program Phase I award. The North Carolina Board of Science, Technology & Innovation, a division of the North Carolina Department of Commerce, administers the Program.

Under the Program's authorizing provisions, awards can be made to eligible businesses for up to 100 percent of a company's federal Phase I SBIR/STTR Program award, up to a maximum amount of \$200,000, until funds available for the Program have been exhausted.⁵ Applicants who receive Matching Awards receive 75 percent (Stage 1) of the award amount upon receipt of an SBIR/STTR Phase I award and receive the remaining 25 percent (Stage 2) of the award if their Phase I report is accepted by the funding agency and they submit a related Phase II application to the funding agency. Phase II SBIR/STTR awards often exceed \$1 million.

Purpose

The purpose of the Matching Program is to foster job creation and economic development in North Carolina by increasing the competitive position of North Carolina small businesses in attracting SBIR and STTR grant funding, and to provide an incentive for Phase I award-winning firms to participate in the more substantial Phase II program. The goals of the Matching Program are to:

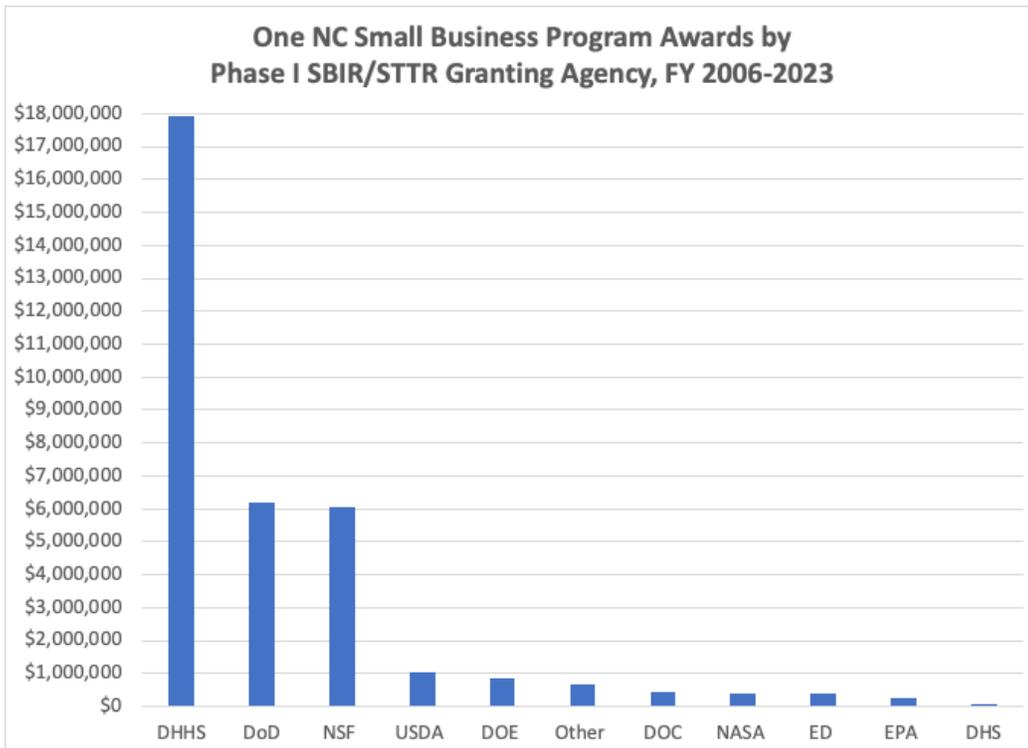
1. Increase the amount of federal research dollars received by North Carolina small businesses.
2. Increase the intensity of the research conducted under Phase I, making North Carolina small businesses more competitive for Phase II funds.
3. Help North Carolina businesses bridge the funding gap period between the final Phase I payment and the first Phase II payment in the federal SBIR/STTR Program.
4. Encourage the establishment and growth of high-quality, advanced technology companies in the State of North Carolina.

⁵ Due to funding limitations, the FY 2023 solicitation awards were capped at 50 percent of a company's federal Phase I SBIR/STTR Program award, up to a maximum amount of \$75,000.

MATCHING FUNDS PROGRAM (CONTINUED)

FY 2023 Summary

- The award ceiling was \$75,000. In addition, businesses located in Tier 3 areas were eligible only if they had not previously received funding from the One N.C. Small Business Program and had less than four full-time employees.
- Restrictions imposed for applicants from Tier 3 counties reinforce the Board's commitment to a broad reach that includes rural counties throughout the State.
- The One N.C. Small Business Program received \$2,000,000 in direct appropriations, of which 1,702,858.50 was allocated for the Matching Funds Program.
- The Program awarded 25 Matching Grants in FY 2023, obligating 100% of its allocation.
- By the time of this report, \$1,199,914.38 (70.5%) of the FY 2023 Matching Funds awarded had been disbursed.
- Total disbursements made in FY 2023 included:
 - (19) FY 2023 Stage 1 (16) FY 2022 Stage 1 (0) FY 2019 Stage 1
 - (2) FY 2023 Stage 2 (16) FY 2022 Stage 2 (1) FY 2019 Stage 2



Note: The award amount by agency is highly correlated with the size of each agency's research and development (R&D) budget and the R&D strengths of a state's small businesses.

TABLE 1: FY 2023 One North Carolina Small Business Matching Funds Program Grantees and Disbursements

Company Name	Project Title	City	County	Total Grant Amount	Fiscal Year Committed	Amount Paid in FY2023
Advanced Materials Manufacturing	Composite Metal Foam for Microreactors	Raleigh	Wake	\$75,000.00	2022	\$18,750.00
Aegis Power Systems Inc.	Bi-Directional Converter 600VDC to 28VDC	Murphy	Cherokee	\$75,000.00	2023	\$56,250.00
AimMax Therapeutics Inc.	Optimization and Characterization of Novel Antifungal Peptides	Durham	Durham	\$75,000.00	2022	\$56,250.00
Assist Equipment Development Inc.	A Low-Cost, Practical Fitness Monitor of Socket-Suspension Systems for Lower Limb Amputees	Cary	Wake	\$75,000.00	2022	\$56,250.00
Boundless Science LLC	Aerosol Ventilation for Rapid Cooling of Transplant Donor Lungs	Chapel Hill	Orange	\$75,000.00	2022	\$56,250.00
Callahan-Young LLC	Jigsawdio: an AudioVisual Jigsaw Puzzle for People with Alzheimer's Disease and Alzheimer's-Disease-Related Dementias	Raleigh	Wake	\$75,000.00	2023	\$56,250.00
Catalytic and Redox Solutions LLC	Tailored Oxide-Molten Salt (OMS) Composites for High-Operating-Temperature Thermal Energy Storage	Cary	Wake	\$44,982.00	2023	\$33,736.50
CLAIRIgene LLC	APOE-targeted therapy for precision medicine in late onset Alzheimer's disease: A novel epigenome editing approach for downregulation of APOEε4 expression	Durham	Durham	\$75,000.00	2023	\$56,250.00

Claradele Pharmaceuticals Inc.	Development of a small molecule immunomodulator for the treatment of melanoma	Winterville	Pitt	\$75,000.00	2022	\$56,250.00
Construkts Inc.	Mixed-Reality Learning Platform for Middle School Mathematics	Winnabow	Brunswick	\$75,000.00	2022	\$18,750.00
Converter Source LLC	Multi-Lift-Temperature Stirling Cryocooler and Controller for CubeSat Platform	Asheville	Buncombe	\$74,831.00	2023	\$74,831.00
Digital Health Navigation Solutions	A cloud-based digital health navigation program for colorectal cancer screening	Winston-Salem	Forsyth	\$75,000.00	2023	\$56,250.00
Drakeford, Scott, & Associates LLC	SBIR Phase I: An integrated digital approach to mental health and skill development for workforce re-entry (COVID-19)	Durham	Durham	\$75,000.00	2022	\$18,750.00
Eldec Pharmaceuticals Inc.	Novel Peptide Fusion Inhibitors for the Treatment of COVID-19	Chapel Hill	Orange	\$62,657.50	2023	\$56,250.00
ExLattice Inc.	SBIR Phase I: Machine learning-powered simulation of additive manufacturing for real-time design and process optimization	Durham	Durham	\$75,000.00	2023	\$56,250.00
ForesightCares Inc.	STTR Phase I: Camera-Based Multimodal AI for Health Monitoring	Matthews	Union	\$75,000.00	2022	\$56,250.00
Geometric Data Analytics	DTFAAST: Distributed Topological Fingerprints Automating Anomaly, Search & Testing	Chapel Hill	Orange	\$75,000.00	2022	\$18,750.00
GreenLifeTech Corporation	Innovative Method for Preservation of Fresh Foods	Banner Elk	Avery	\$37,452.00	2023	\$28,089.00

GreenLifeTech Corporation	Automatic Food Preservation in the Retail Environment	Banner Elk	Avery	\$49,275.00	2022	\$12,318.75
Impulse Wellness LLC	IW - Bluetooth Electromyography-based Stroke Therapeutic (BEST): Shifting the Paradigm with Biofeedback-Driven Home Therapy	Raleigh	Wake	\$49,999.00	2022	\$37,499.25
Insightfinder Inc.	Artificial Intelligence (AI) System for Enterprise Software Incident Management	Raleigh	Wake	\$75,000.00	2022	\$56,250.00
Isolere Bio Inc.	LentiTag: A novel approach to the efficient manufacturing of active lentiviral vectors	Durham	Durham	\$75,000.00	2022	\$18,750.00
LED Radiofluidics Corp.	Development of LED Photoredox Radiolabeling Device	Chapel Hill	Orange	\$75,000.00	2023	\$56,250.00
LiRA Inc.	Video-to-speech software application to provide real-time, noninvasive, natural voice restoration for voiceless individuals	Durham	Durham	\$75,000.00	2023	\$56,250.00
METIS Health Analytics LLC	Quality and Safety Monitoring of Clinical Computed Tomography Practice	Chapel Hill	Orange	\$75,000.00	2022	\$56,250.00
Mycologics LLC	SBIR Phase I: A novel biocontrol agent against fungal infection and fungal toxin contamination on food and feed crops	Durham	Durham	\$75,000.00	2023	\$56,250.00
NeuroGT Inc.	Develop AAV9 gene replacement therapy for treating MPS I	Chapel Hill	Orange	\$75,000.00	2023	\$56,250.00
Olfax LLC	Development of an intranasal, direct to nerve treatment for headache disorders	Asheville	Buncombe	\$75,000.00	2023	\$56,250.00

Om Bharti LLC	Computer-aided modeling and analysis tools for bioprocess industrialization	Wilmington	New Hanover	\$69,898.00	2023	\$52,423.50
Oncotrap Inc.	mRNA Delivery of a Panel of Single-Domain Antibodies for Combinatorial Deciphering of Therapeutic Targets for Covid-19 Related Cytokine Release Syndrome	Chapel Hill	Orange	\$75,000.00	2022	\$56,250.00
Oxford Defense North Carolina LLC	Multifunctional Metamaterial Laser Energy Control	Durham	Durham	\$56,164.00	2022	\$14,041.00
People Designs Inc.	An eHealth platform to facilitate financial understanding and legal preparation for patients with dementia and their caregivers	Durham	Durham	\$75,000.00	2022	\$18,750.00
Perfusio Corp.	Multi-spectral Physiologic Visualization Imaging for Non-contact Real-time Capture of Cardiovascular Vital Signs Using a Novel Optical Engineering Design	Greenville	Pitt	\$75,000.00	2022	\$56,250.00
Perotech Inc.	Large Area Hard X-ray Imager Based on Metal Halide Perovskite Nanocrystals	Chapel Hill	Orange	\$75,000.00	2022	\$18,750.00
Phase Inc.	Additive Manufacturing of PDMS Microfluidics	Cornelius	Mecklenburg	\$75,000.00	2022	\$18,750.00
Phaxtec Inc.	Production Pathways of Biopolymers for Barrier Paper Coatings	Wake Forest	Wake	\$75,000.00	2022	\$56,250.00
Proximal LLC	An Easy-to-use Virtual Reality Development Toolkit for Education	Raleigh	Wake	\$75,000.00	2022	\$56,250.00

Quantworks Inc.	SBIR Phase I:Drone-Delivered AEDs for Treatment of Out-of-Hospital Cardiac Arrest	Carrboro	Orange	\$75,000.00	2022	\$56,250.00
Regennova Inc.	Therapeutic Reduction of Cerebral Amyloid Angiopathy Pathologies in ADRD	Durham	Durham	\$75,000.00	2023	\$56,250.00
Selsym Biotech Inc.	Increasing efficiency of sdFv production in a tobacco-based system for synthetic platelet design	Cary	Wake	\$56,575.50	2022	\$42,431.63
Smart Girls HQ LLC	Dear Smart Girl: Game-Based STEM Career Exploration For Elementary Aged Girls	Charlotte	Mecklenburg	\$75,000.00	2022	\$75,000.00
Smart Material Solutions Inc.	Nanopatterned coatings for thin-film solar panels	Raleigh	Wake	\$75,000.00	2023	\$75,000.00
Third Floor Materials Inc.	Epsilon-near-zero tunneling diodes for room-temperature IR detectors and light sources	Durham	Durham	\$37,414.57	2022	\$28,060.93
Triangle Environmental Health Initiative	A compact, modular wastewater treatment system for non-potable reuse of household greywater	Durham	Durham	\$50,000.00	2022	\$12,500.00
United Protective Technologies LLC	Low Emissivity Transparent Hypersonic Atomic Layer (LETHAL) Composite Windows	Locust	Stanly	\$69,913.00	2022	\$17,478.25
Upstream Biotechnology Inc.	Engineering broad-spectrum disease resistance in soybean without fitness cost	Sanford	Lee	\$50,000.00	2019	\$12,500.00

Vidterra LLC	Low Latency ISR Video Distribution Over Starlink	Wilmington	New Hanover	\$24,813.50	2022	\$6,203.37
Vigilant Cyber Systems Inc.	IA DEVSECOPS	Mount Airy	Surry	\$73,470.50	2023	\$56,123.25
Voxel Innovations	Internal Finishing of Metal Additive Parts with Electrochemical Machining	Raleigh	Wake	\$52,461.00	2022	\$13,115.25
Wisely Inc.	Smart food storage system to enable consumer food waste reduction	Raleigh	Wake	\$49,955.00	2023	\$37,466.25
Zymeron Corporation	Novel Antibiotic Targeting Multidrug-Resistant Pseudomonas Aeruginosa Infections	Durham	Durham	\$75,000.00	2022	\$18,750.00
Total Amount Awarded for FY2023						\$1,702,858.50
Total Funds Disbursed in FY2023						\$2,147,567.93

NOTE: Committed and disbursed amounts in the table above differ because One North Carolina Small Business Matching Funds Program awards are disbursed in two payments, as explained on page 5 of this report. The second disbursement (final 25% of award) most often occurs in a different fiscal year from the year originally obligated.

INCENTIVE FUNDS PROGRAM

Overview

The North Carolina SBIR/STTR Phase I Incentive Funds Program reimburses qualified North Carolina businesses for a portion of the costs incurred in preparing and submitting Phase I proposals for the U.S. Government's SBIR and STTR Programs. Under the Incentive Funds Program, the State issues qualified applicants a grant for approved Phase I Proposal preparation costs, up to \$12,000. These grants are awarded to qualified applicants on a first-come, first-served basis, up to the limits of available funding. The North Carolina Board of Science, Technology & Innovation, a division of the North Carolina Department of Commerce, administers the Program.

Purpose

The purpose of the Incentive Program is to foster job creation and economic development in North Carolina by encouraging North Carolina small businesses to compete for federal SBIR and STTR awards. The goal of the Incentive Program is to increase the number of North Carolina applications for federal SBIR and STTR Phase I awards.

FY 2023 Summary

- The One N.C. Small Business Program received \$2,000,000 in direct appropriations, of which \$297,141.50 was allocated for the Incentive Funds Program.
- The Program awarded 48 grants, obligating \$345,562.22 - 116% of allocated funds. Additional funding came from funds that were unobligated from previous years' grantees who were unable to meet the requirements to receive their Stage II disbursement.
- By the time of this report, \$326,426.39 (89.6%) of FY 2023 Incentive Fund Awards had been disbursed. The five remaining FY 2023 payments were in process.

The Incentive Funds Program has led to greater geographical fund distribution across the State.

TABLE 2: FY 2023 One North Carolina Small Business Incentive Funds Program Grantees and Disbursements

Company Name	Project Title	City	County	Total Grant Amount	Fiscal Year Funds Committed	Amount Paid in FY2023
3-C Institute for Social Development Inc.	The SE-Learn Online Professional Development Platform for Enhanced Social Emotional Learning with Students	Durham	Durham	\$6,010.94	2022	\$6,010.94
3F, LLC	Self-Reinforced Polymer Filament for Additive Manufacturing	Hickory	Catawba	\$12,000.00	2022	\$12,000.00
8EIGHT8SIX2NINE	Novel Process to Develop Nonwoven Materials with Enhanced Stretch and Recovery	Raleigh	Wake	\$500.00	2022	\$500.00
Adamas Nanotechnologies Inc.	C54-27a Atmospheric Pressure Plasma Functionalization of Nanodiamond Particles	Raleigh	Wake	\$3,058.57	2022	-\$2,941.43
Advanced Materials Manufacturing	Composite Metal Foam for Microreactors	Raleigh	Wake	\$11,260.33	2022	\$5,260.33
Aegis Power Systems Inc.	Modular Clean Energy Storage Auxiliary Power Unit for Austere and Contested Environments	Murphy	Cherokee	\$12,000.00	2023	\$12,000.00
AKALAKA co.	PENS for Life: Personalized Education & Networking System for Life	Durham	Durham	\$12,000.00	2023	\$12,000.00
Applied Research Transformation PLLC	C56 17a TOWERtx Performance-based Decisions through Sensor Data	Durham	Durham	\$3,000.00	2023	\$3,000.00

Company Name	Project Title	City	County	Total Grant Amount	Fiscal Year Funds Committed	Amount Paid in FY2023
Archimedes Analytical LLC	Biobased Material/Textiles for Military Applications	Hickory	Catawba	\$6,187.50	2022	\$6,187.50
Artiam Bio Inc.	Treatment for cannabis use disorder	Morrisville	Wake	\$5,750.50	2022	-\$249.50
Atom Bioworks Inc.	Designer DNA Nanostructure-based Metastatic Cell Isolation Platform	Cary	Wake	\$12,000.00	2022	\$12,000.00
AxNano, LLC	Mobile PFAS Effluent Treatment System (PETS) for management of Air Force wastes	Greensboro	Guildford	\$8,220.59	2023	\$8,220.59
BioKier Inc.	Clinical development of a promising nutrient supplement to evaluate effects on cholesterol levels in patients with diabetes	Chapel Hill	Orange	\$12,000.00	2022	\$6,000.00
BioMojo LLC	BioMojo Digital Human Model	Cary	Wake	\$8,953.63	2022	\$2,953.63
Branelie Health Inc.	Heads Together Health: A novel, machine learning based digital health platform for personalized management of concussion patients	Chapel Hill	Orange	\$9,687.50	2022	\$9,687.50
Brighton Development LLC	Unique Antimicrobial Hemodialysis Catheter to Prevent Catheter-Related Blood Stream Infections (CRBSI)	Cary	Wake	\$10,001.25	2023	\$10,001.25

Company Name	Project Title	City	County	Total Grant Amount	Fiscal Year Funds Committed	Amount Paid in FY2023
Callahan-Young LLC	Jigsawdio Audio Visual Jigsaw Puzzle	Raleigh	Wake	\$2,500.00	2022	\$2,500.00
Cervu	Intravaginal device for the treatment of pelvic pain and dyspareunia in female cancer survivors	Cary	Wake	\$4,500.00	2023	\$4,500.00
Coprata Inc.	Smart Toilet with Artificial Intelligence for Remote Management of Inflammatory Bowel Disease	Durham	Durham	\$4,884.23	2022	-\$1,115.77
Coprata Inc.	Smart Toilet for Improved Management of Intestinal Diseases through Stool-based Digital Biomarkers	Durham	Durham	\$12,000.00	2023	\$12,000.00
COSMIC EATS INC.	Cosmic Eats' mobile food production solution for food deserts	Cary	Wake	\$7,485.25	2022	\$1,485.25
Daheco Engines & Energy	AES&R, Airlectric Energy Storage	Valdese	Burke	\$12,000.00	2023	\$12,000.00
Daimler Devices	Validation of Novel Suture Clip Technology for Tendon Repair	Raleigh	Wake	\$6,633.55	2022	\$6,000.00
Dignify Therapeutics LLC	Mechanoreceptor-induced defecation in Type 2 diabetes	Research Triangle Park	Durham	\$12,000.00	2022	\$12,000.00

Company Name	Project Title	City	County	Total Grant Amount	Fiscal Year Funds Committed	Amount Paid in FY2023
Dignify Therapeutics LLC	Evaluation of chronic intrathecal drug delivery using an implantable pump as therapy for neurogenic bladder and bowel	Research Triangle Park	Durham	\$4,561.06	2023	\$4,561.06
Drakeford, Scott, & Associates LLC	Changing Lives Through Digital Media and Virtual Reality	Durham	Durham	\$6,433.33	2023	\$6,433.33
EydisBio Inc.	Development of a Novel, Third-Generation Inhibitor of FLT3 for the Treatment of Relapsed or Refractory Acute Myeloid Leukemia	Durham	Durham	\$3,433.60	2022	-\$2,533.40
F&I Enterprises LLC	CBD222-003 Collapsible and Protective Portable Canine Shelter	Clemmons	Forsyth	\$9,000.00	2023	\$9,000.00
ForesightCares Inc.	AI-based Visual Fall Risk Assessment and Tailored Exercises in Smartphones: A Reliable, Accessible Low-cost App for Older Adults	Matthews	Union	\$8,808.33	2023	\$8,808.33
Glycan Therapeutics Corporation	Construction of chondroitin sulfate microarray	Raleigh	Wake	\$11,774.50	2022	\$5,774.50
Glycan Therapeutics Corporation	Analysis of heparan sulfate from airspace fluid of ARDS patients	Raleigh	Wake	\$12,000.00	2023	\$12,000.00
Goldfinch Sensor Technologies and Analytics LLC	Community-driven agricultural decarbonization in meat and poultry processing	Cary	Wake	\$7,297.31	2023	\$7,297.31

Company Name	Project Title	City	County	Total Grant Amount	Fiscal Year Funds Committed	Amount Paid in FY2023
GreenLifeTech Corporation	Hormetic Dose-Response Relationship of Gaseous Ozone in Low Oxygen-Environment for Consumer Market Integration and Household Use	Banner Elk	Avery	\$3,465.00	2023	\$3,465.00
Health Outcomes Inc.	Development of a cloud-based, self-report SUD intake system enabling primary care clinicians to routinely complete, implement, document, and bill for biopsychosocial assessments for the underserved	Chapel Hill	Orange	\$8,671.73	2022	\$2,671.73
iEdapts LLC	Saving Our Students "SOS" AI-GAP Assessment e-Learning platform.	Charlotte	Mecklenburg	\$2,487.20	2022	\$2,487.20
iEdapts LLC	: MeToDo™ AI-Math 1 Digital Inclusion (Engagement Prep)	Charlotte	Mecklenburg	\$3,045.00	2023	\$3,045.00
Impulse Wellness LLC	IW - Bluetooth Electromyography-based Stroke Therapeutic (BEST): Shifting the Paradigm with Biofeedback-Driven Home Therapy	Raleigh	Wake	\$2,899.49	2022	-\$2,899.49
Innatrix	Novel RNAi biopesticides for soybean protection against soybean cyst nematodes	Durham	Durham	\$3,877.44	2023	\$3,877.44
Innovation Therapies	HappyHEART: A collaborative approach to managing behavioral health symptoms and cardiovascular disease	Hope Mills	Cumberland	\$2,161.29	2022	\$2,161.29

Company Name	Project Title	City	County	Total Grant Amount	Fiscal Year Funds Committed	Amount Paid in FY2023
Intermodal Logistics Consulting Inc.	Multi-agent Tracking of Dilemma Zone Conflicts with AI Video Analytics and Traffic Conservation Law	Winston-Salem	Forsyth	\$2,250.00	2022	\$2,250.00
Kyma Technologies Inc.	Low-Cost Manufacturing of High Quality GaN Substrates	Raleigh	Wake	\$8,268.97	2022	\$2,268.97
Lloyd Technologies Inc.	Combating CAUTI's and MDROs with Novel Urinary Catheters	Fayetteville	Cumberland	\$2,692.52	2023	\$2,692.52
Lumedica Inc	Dental Optical Imaging Probe Using Low-Cost 1580 nm OCT	Durham	Durham	\$5,356.00	2022	\$5,356.00
Markeyia Tech LLC	Global Energy Intelligence Security Command Infrastructure (GEISCI)	Clayton	Johnston	\$1,659.32	2022	-\$75.32
MSI Software Solutions LLC	MSiReader Pro: An Intuitive and Innovative Vendor Neutral Software for Mass Spectrometry Imaging	Raleigh	Wake	\$7,124.43	2022	\$7,124.43
Mucommune LLC	Fast dissolving antibody tablets for preventing vaginal HSV transmission	Durham	Durham	\$11,025.82	2022	\$5,025.82
Mucommune LLC	Highly Acidifying Intravaginal Rings with Lactobacillus Probiotics to Treat Bacterial Vaginosis	Durham	Durham	\$11,022.16	2023	\$11,022.16

Company Name	Project Title	City	County	Total Grant Amount	Fiscal Year Funds Committed	Amount Paid in FY2023
Mycologics LLC	SBIR Phase I: A novel biocontrol agent against fungal infection and fungal toxin contamination on food and feed crops	Durham	Durham	\$4,159.81	2022	-\$1,836.93
NextPower360 Co.	Intrinsically Adapting Variable Wind Generators	Asheville	Buncombe	\$12,000.00	2023	\$12,000.00
Olfax LLC	Development of an intranasal, direct to nerve treatment for headache disorders	Asheville	Buncombe	\$6,000.00	2022	\$6,000.00
Praetego Inc.	Multifunctional Amadorins for Treatment of Alzheimer's Disease and Related Dementias	Research Triangle Park	Durham	\$9,936.00	2022	\$9,936.00
Prohuman Technologies	SBIR Phase I: Development of a self-adjustable wearable combining thermo, cryo and compression therapy for recovery and pain management	Concord	Cabarrus	\$12,000.00	2022	\$6,000.00
Protochips Inc.	Computationally Mediated Tomography system for in situ TEM	Morrisville	Wake	\$4,617.19	2023	\$4,617.19
Rachel Miller	Biomimetic Drone Detection and Stealth Enhancement Data Application	Concord	Cabarrus	\$6,000.00	2023	\$6,000.00

Company Name	Project Title	City	County	Total Grant Amount	Fiscal Year Funds Committed	Amount Paid in FY2023
Redbud Labs Inc.	Improving extraction success of FFPE samples with automated and reliable microfluidic sample preparation	Research Triangle Park	Durham	\$8,640.79	2022	\$2,640.79
Regenova Inc.	IND-enabling studies for a novel neuroprotectant for stroke	Durham	Durham	\$12,000.00	2023	\$12,000.00
Resolved Analytics PLLC	Social App Technologies to Enable Small Businesses with Narrative Based Marketing	Pittsboro	Chatham	\$6,428.63	2022	\$6,428.63
Resolved Analytics PLLC	3D Printed Chitosan Scaffolds for Cultured Meat Tissue Engineering	Pittsboro	Chatham	\$7,000.84	2023	\$7,000.84
Setter Research Inc.	Navigation on Commercial Broadcast Communications (NCBC)	Greensboro	Guilford	\$3,658.43	2023	\$3,658.43
SMART GIRLS HQ LLC	Dear Smart Girl: Game-Based STEM Career Exploration for Elementary Aged Girls	Charlotte	Mecklenburg	\$10,194.17	2022	\$10,194.17
Smart Material Solutions Inc.	Nanopatterned coatings for thin-film solar panels	Raleigh	Wake	\$3,356.17	2023	\$3,356.17
SonoVascular Inc.	Quadruple-action thrombectomy system for single pass treatment of thrombi in acute ischemic stroke	Chapel Hill	Orange	\$4,112.54	2022	-\$1,387.46

Company Name	Project Title	City	County	Total Grant Amount	Fiscal Year Funds Committed	Amount Paid in FY2023
Stratus Technology Group LLC	Interactive Simulation Emergency Response Training (InSERT)	Spencer	Rowan	\$9,000.00	2022	\$9,000.00
Telli Technologies	In-situ Instrumentation to Predict Performance of Emerging Power Electronics Converters in Grid Applications	Charlotte	Mecklenburg	\$12,000.00	2022	\$6,000.00
Third Floor Materials Inc.	Epsilon-near-zero based FAST filter	Durham	Durham	\$4,641.79	2022	\$4,641.79
Triangle Environmental Health Initiative	A compact, modular wastewater treatment system for non-potable reuse of household greywater	Durham	Durham	\$7,022.92	2022	\$1,022.92
Triangle Environmental Health Initiative	A high-rate, low-footprint septic tank effluent treatment system for non-potable reuse	Durham	Durham	\$12,000.00	2023	\$12,000.00
Triangle Precision Diagnostics Inc.	A Breast Cancer Immunity Score Kit as Companion Biomarker Test Using RT-qPCR and RNA-seq	Research Triangle Park	Durham	\$2,675.00	2022	\$5,350.00
United Protective Technologies LLC	Atomic Deposition Enhanced Precision Tooling (ADEPT) for Electrochemical Machining	Locust	Stanly	\$7,832.34	2022	\$1,017.95
VetOncoDx LLC	Early Cancer Detection in Companion Animals Using Urine Samples	Raleigh	Wake	\$8,719.00	2022	\$2,719.00

Company Name	Project Title	City	County	Total Grant Amount	Fiscal Year Funds Committed	Amount Paid in FY2023
Vidterra LLC	Low-Power Covert Video Sensor with Onboard Machine Learning Facial Recognition	Wilmington	New Hanover	\$9,035.82	2022	\$9,035.82
Wisely Inc.	Smart food storage system to enable consumer food waste reduction	Raleigh	Wake	\$3,998.20	2023	\$3,998.20
Total Amount Awarded for FY2023 (48 Recipients)						\$345,562.22
Total Funds Disbursed in FY2023						\$395,207.68

NOTE: Committed and disbursed amounts in the table above differ because applications received at the end of the solicitation period are paid early in the next fiscal year. A calculation error necessitated recalculation of all FY 2022 awards. This resulted in a net increase of \$55,592.40 disbursed across 24 grantees.

EDUCATION AND OUTREACH

In Session 2021, G.S. 143B-437.80 was modified to enable the use of up to 10% of appropriated funds for education and outreach components. In FY 2022, the Office of Science, Technology & Innovation released a formal Request for Quotes to provide in-person training sessions across the State in the spring of 2023. The First Flight Venture Center was awarded the \$50,000 contract and held training sessions in **Wilmington**, **Fayetteville**, **Winston-Salem**, and **Boone** in the spring of 2023. Each of these trainings was also broadcast virtually.



The graphic banner includes the following elements:

- NC DEPARTMENT of COMMERCE** logo with the text **SCIENCE, TECHNOLOGY & INNOVATION**
- FIRST FLIGHT** logo featuring a stylized paper airplane
- NC DEFTECH** logo with a circuit-like graphic
- A gold trophy
- The text: **Welcome to Winning more SBIRs and STTRs!**

CONCLUSION

A handful of innovative states, including North Carolina, have seen the value of leveraging federal SBIR/STTR funds with State support. North Carolina's entrepreneurial community has enthusiastically heralded the One North Carolina Small Business Program's creation for its impact on growing the state's entrepreneurial economy, and for the fact that it reflects a substantial recognition by lawmakers of the importance of innovation and entrepreneurship to the economic health of the state. As the impact measures above indicate, the Program enables North Carolina's small businesses to generate the kinds of innovation critical for making the state a leader in the global economy.

Table 3: FY 2023 One North Carolina Small Business Program Funding Sheet

APPROPRIATIONS & CARRIED-FORWARD FUNDS	
FY2023 Appropriations	\$2,000,000.00
Funds Carried Forward from Previous Years*	\$98,420.72
Total	\$2,098,420.72
FUNDS OBLIGATED IN FY 2023	
Matching Funds Grant Program	\$1,702,858.50
Incentive Funds Grant Program	\$345,562.22
Education and Outreach	\$50,000.00
Total	\$2,098,420.72
FUNDS DISBURSED IN FY 2023	
Matching Funds Grant Program	\$2,147,567.93
Incentive Funds Grant Program	\$395,207.68
Education and Outreach	\$50,000.00
Total	\$2,592,775.61

* \$50,000 allocated in FY 2022 for Education & Outreach carried forward along with \$48,420.72 of funds previously obligated that were released as noted in Summary on page 14.