SBIR/STTR Applicant Overview (Batch 11)

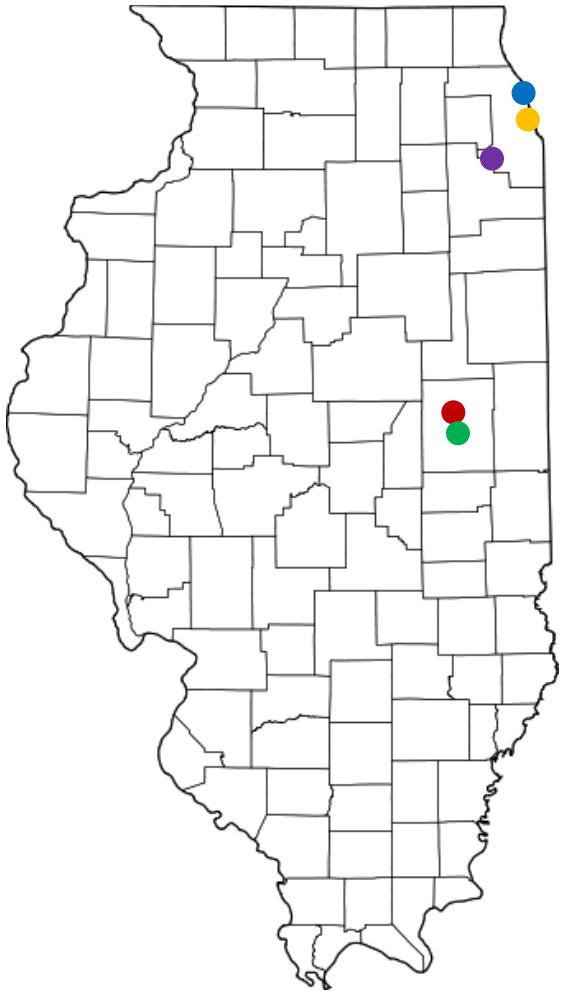
Submitted for Director Approval: 12/16/25

Applicant	Award
Celadyne Received $199,565 from the Department of Energy for work towards advancing the proton exchange membrane and enabling higher temperature operation, fuel cells can be made significantly more economical	$50,000
Earnest Agriculture Received $274,918 from the National Science Foundation to assess the impacts of a different microbial consortia on maize for nutrient availability and disease suppression.	$50,000
Laborecom Therapeutics Received $388,036 from the Department of Health and Human Services for cardiovascular diseases research to develop a cell-permeable peptide therapeutic to reduce myocardial reperfusion injury	$75,000
memQ Received $156,327 from NASA for work towards optomechanical photonics on a commercial integrated photonic foundry.	$75,000
Integrated Dynamics Received $245,300 from the National Science Foundation to develop a process to divert organic waste from landfills using a novel high-temperature fermentation process which quickly and sustainably decomposes biomass into H2, CO2, and volatile organic compounds (VOCs) like ethanol, acetone, and isopropanol.	$75,000

SBIR/STTR Applicant Overview (Batch 10)

Submitted for Director Approval: 10/14/25

Applicant	Award
AI Tech Holdings Received $74,925 from the U.S. Air Force to develop operational tracking capabilities for Air Force Special Operations teams, particularly in GPS-denied environments. The focus is on evaluating hardware and software enhancements, with an emphasis on determining the most effective and durable mounting positions for tracking devices.	$50,000.00
Starfire Industries Received $250,000 from the Department of Energy to develop a neutron generator, wireline, prompt-gamma neutron activation analysis (PGNAA) tool to reduce the cost and time associated with exploration activities through the reuse of existing wells or other boreholes, a technology to be used to identify and source Critical Minerals and Materials (CMM) for our domestic supply chain.	$50,000.00
Sivananthan Laboratories Received $179,987 from the U.S. Air Force to develop metasurface-coupled type II superlattice (T2SL) long wavelength infrared detectors that are predicted to outperform mercury cadmium telluride detectors, a technology with a multitude of applications in security, defense, and firefighting.	$50,000.00
Rhaeos Received $298,772 from the National Institute on Minority Health and Health Disparities for work towards lowering economic, infrastructure, & physical barriers with noninvasive, wireless telemedicine cerebrospinal fluid flow Sensing for pediatric hydrocephalus patients in Puerto Rico.	$50,000.00
Tiptek Received $274,995 from the National Science Foundation to improve a critical method called nanoprobing used to manufacture semiconductors by enabling the technique to probe smaller and more complex electrical devices for longer periods of time. Nanoprober instruments are used to diagnose and analyze electrical faults in the most advanced computer chips made today; without them, the manufacture of state-of-the-art advanced semiconductors would be impossible.	$50,000.00



SBIR/STTR Applicant Overview (Batch 9)

Submitted for Director Approval: 4/15/2025

Applicant	Award
Azul 3D Received ~$204k from United States Army for the development of 3-D printing platforms for use by U.S. industries and government agencies. This work will develop materials and processes to manufacture ballistic protection eyewear lenses with integrated prescription correction for soldiers.	$50,000.00
Enscue Received ~$500k from National Institutes of Health for development of drug therapies for the treatment of neurodegenerative diseases and psychiatric disorders for U.S. industries and government agencies. This work will further develop a small peptide, JB-2 as a novel therapeutic to reverse or at least significantly delay the onset of cognitive disfunctions.	$50,000.00
Enzyme By Design Received ~$400k from National Institutes of Health for development of safer cancer therapeutics for which there is a large unmet clinical need for use by U.S. industries and government agencies. This work will engineer the next generation of L-asparaginases drugs to treat not only pediatric acute lymphoblastic leukemia (ALL), but to treat ALL and other cancers in adults.	$50,000.00
QuantCAD Received ~$156k from NASA to develop an all-electric chip scale atomic magnetometer for room-temperature and high-temperature applications used by U.S. industries and government agencies. This work will develop a compact, all-optical quantum magnetometer using nitrogen vacancy centers in diamonds to meet the demands of operating in extreme environments such as high radiation and cryogenic conditions.	$50,000.00
QuesTek Innovations Received ~$146k from United States Navy to develop and validate the novel manufacturing pathway of the steel-carbon nanotube nanocomposite wire using cryogenic ball milling of powders, spark plasma sintering, feedstock rod machining and cold drawing. This work will design, model, test, and analyze new materials that can be used by U.S. industries and government agencies.	$50,000.00

SBIR/STTR Applicant Overview (Batch 9)

Submitted for Director Approval: 4/15/25

Applicant	Award
Rhaeos Received ~$306k from National Institutes of Health to develop a wearable sensor for the precise, real-time, continuous monitoring of wound healing through dressing layers with miniaturized, wireless, wearable comfortable thermal sensors.	$50,000.00
SmartChats Received ~$275k from National Science Foundation to develop an artificial intelligence-powered visualization tool to transform complex acute care rehabilitation notes into clear, actionable visuals for better patient discharge planning. This work will integrate machine learning and data visualization to transform post-disease, diagnosis, and injury rehabilitation.	$50,000.00
TearDx Received ~$275k from National Science Foundation for the research and development of devices that unlock the potential of tear fluid for medical diagnostics for U.S. industries and government agencies. Using an ever-growing set of knowledge from this research and development, the Grantee's technical staff will develop a diagnostic test for ocular herpes infections.	$50,000.00
Third Coast Dynamics Received ~$657k from National Institutes of Health for research and development of precision medicine for the treatment of thoracic aortic disease for U.S. industries and government agencies. This work will develop an artificial intelligence platform that will develop a risk analysis from computed tomography angiography and magnetic resonance angiography images.	$50,000.00
Molecular Interfaces Received ~$275k from NASA for the development in molecular interfaces to improve cathode deposition for better transparency and light extraction in OLEDs that will be used by U.S. industries and government agencies. The Grantee's technical staff will develop chemical products that can allow the use of thinner metal electrodes in OLEDs.	$50,000

SBIR/STTR Applicant Overview (Batch 8)

Submitted for Director Approval: 1/27/2025

Applicant	Award
Caporus Technologies * Received ~$207k from Department of Energy for the development of engineered substrates for radiation-hard sensors in high energy physics. The next generation high-energy colliders will require high-resolution detectors that can output data at high speeds and survive high radiation levels. This effort will develop new silicon-based detector technologies to enable next-generation detectors for high energy physics, with applications to aerospace, defense, and life sciences.	$50,000.00
Additive Monitoring ** Received ~$110k from Air Force for development of sensor fusion for additive manufacturing in-situ inspection. Applications include added reliability and decreased waste for the production of complex, critical, and expensive parts for national defense and other industries	$50,000.00
memQ, Inc.* Received ~$156k from NASA for work on waveguide integrated superconducting nanowire single-photon detector (SNSPDs) on foundry silicon photonic integrated circuits (PICs), a crucial milestone on the roadmap for many quantum technology companies developing hardware based on integrated photonics.	$50,000.00
Temprian Oncology Received ~$275k from National Science Foundation to demonstrate proof of concept for supercarriers that will treat stage III and IV melanomas. The solution should drastically decreased side effects when compared to competing treatment alternatives. The method allows for off-the-shelf delivery, giving patients living in remote locations access to state-of-the-art therapy.	$50,000.00
O2M Technologies Received ~$400K from National Institutes of Health for the development of methods for fast and efficient oxygen imaging to aid in cancer detection and diagnosis research.	$50,000.00

SBIR/STTR Applicant Overview (Batch 8)

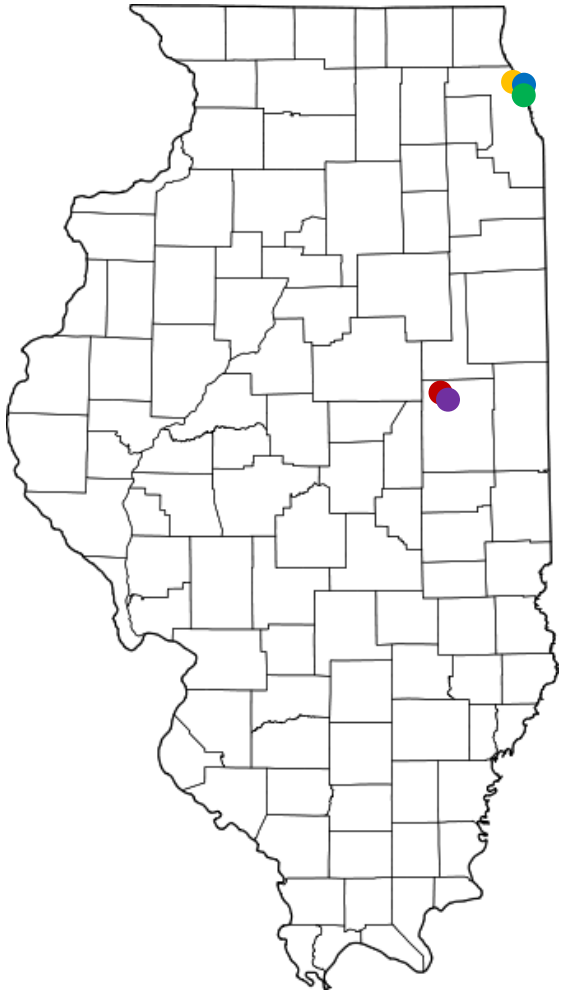
Submitted for Director Approval: 1/27/2025

Applicant	Award
Dolor Therapeutics Received ~$318k from National Institutes of Health for optimizing dual therapy for chronic prostatitis/chronic pelvic pain syndrome. Affiliated with Northwestern University	$50,000.00
Opera Bioscience * Received ~$276k from National Institutes of Health for development of a new platform for inexpensive and scalable recombinant protein and growth factor production to support cell culture applications in therapeutics. Affiliated with Northwestern University	$50,000.00
Good Fibes Received ~$200k from Department of Energy for work on additive manufacturing of recombinant elastic proteins for sustainable non-woven textiles, enabling true textile circularity. Affiliated with Argonne National Laboratory.	$50,000.00

SBIR/STTR Applicant Overview (Batch 7)

Prepared by: Jamie Gladfelter, Emerging Technologies Manager
Submitted for Director Approval: 10/15/24

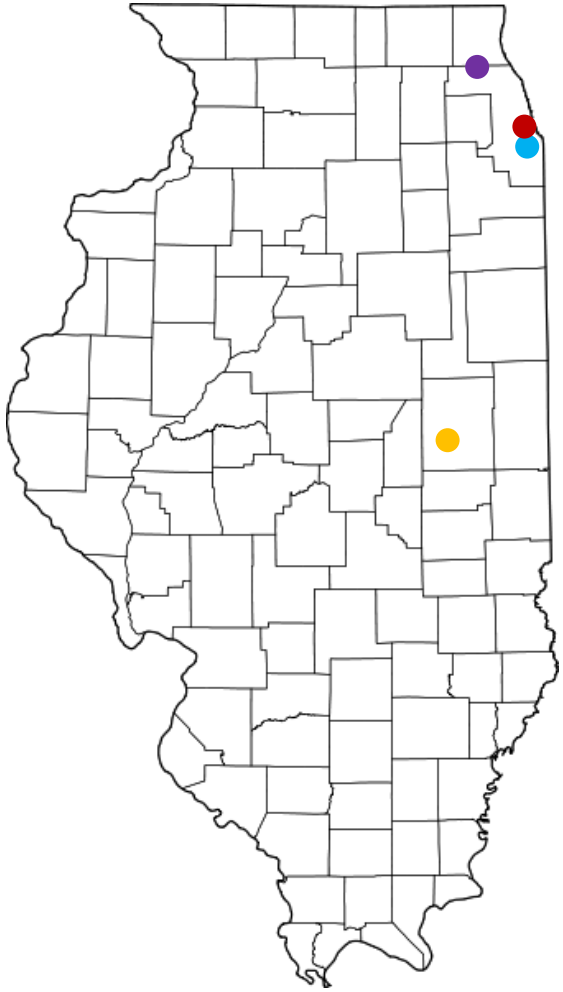
Applicant	Award
BriteSeed Received ~$307k from National Institutes of Health for the development of a new medical device, a multispectral kerrison rongeur, for dura and nerve root detection during spinal surgery.	$50,000.00
Electro Magnetic Applications Received ~$240k from Department of Defense for modeling platform level electromagnetic compatibility performance based on component level testing, improving the process by which Navy aircraft electronic modules must meet MIL-STD-461 radiated emissions requirements. Partnered with UIUIC.	$50,000.00
ForgeBee Received ~$175k from United States Department of Agriculture to develop an automated system for honey bee husbandry that enable high-throughput biological assays, a technology that may have dramatic ramifications for the long-term health of honey bees and other insect pollinators.	$50,000.00
Immunebro Therapeutics Received ~$361k from National Institutes of Health to is develop a simple and novel approach to produce donor-derived off-the-shelf (OTS) cancer-targeting T cells. OTS T cell products developed from this platform are anticipated to significantly improve the survival and life quality of a variety of cancer patients with immediate availability, safety, potency, and affordability.	$50,000.00
Madison Scientific Received ~$470K from National Institutes of Health to develop a smart shunt with ICP-feedback for the treatment of hydrocephalus, an accumulation of cerebrospinal fluid (CSF) occurs within the brain.	$50,000.00



SBIR/STTR Applicant Overview (Batch 7)

Prepared by: Jamie Gladfelter, Emerging Technologies Manager
Submitted for Director Approval: 10/15/24

Applicant	Award
NanoAffix Science Received ~$294k from National Institutes of Health for the development of graphene-based nanosensors for rapid detection of low-concentration PFAS in water. PFAs are widely used, long lasting chemicals that may be harmful to human and animals.	$50,000.00
PrairieLearn Received ~$275k from National Science Foundation to develop an online learning and assessment platform for sophisticated and secure exams, providing a robust and sophisticated assessment tool to a wider range of STEM (Science, Technology, Engineering and Mathematics) educators to improve student learning, make teaching more efficient, and reduce the incidences of cheating.	$50,000.00
QDIR Received ~$110k from Department of Defense to develop reduced size, weight, power, and cost infrared thermal imaging solutions for drone operations.	$50,000.00
Tanda BioTech Received ~$275k from National Science Foundation to develop large scale filtration technologies for perfusion cell culture, cell harvest, and downstream applications. This technology will contribute to reducing operational costs and minimizing plastic waste associated with polymer filters used in bioproduction, particularly in cell separations	$50,000.00



SBIR/STTR Applicant Overview (Batch 6)

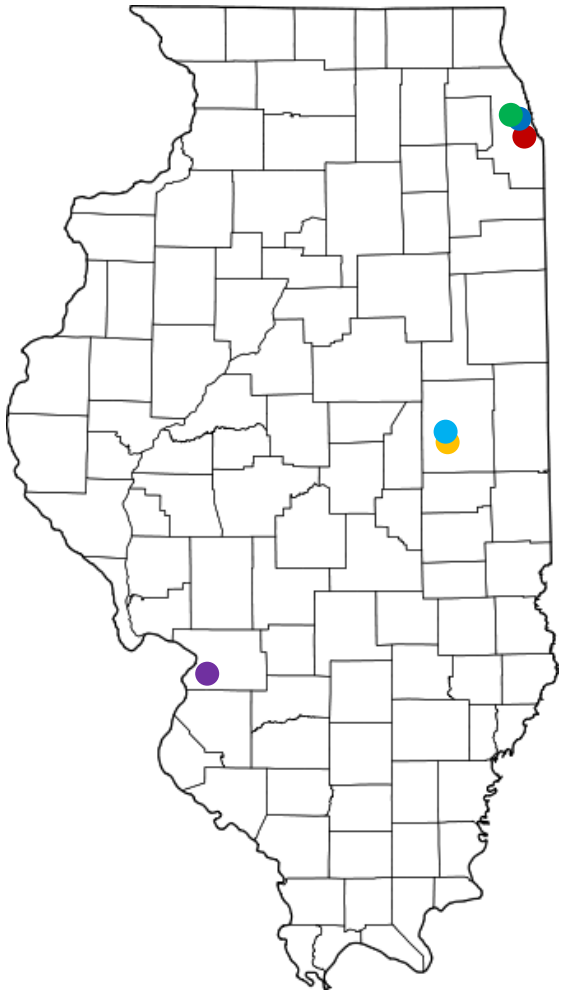
Prepared by: Jamie Gladfelter, Emerging Technologies Manager
Submitted for Director Approval: 6/18/24

Applicant	Award
Episensors Received ~$140k from Department of Defense to build a digital system to mix passive RF with a pre-existing IR image processing core. A passive multimode IR and RF sensor fusion platform in a missile seeker guidance system would greatly benefit a missile's capabilities in tracking and locking to a target.	$50,000.00
Celadyne Technologies Received ~$200k from Department of Energy for the development of a catalyst coated membrane that is ready for integrated fuel cell testing. New hydrocarbon membranes can catalyze adoption of a hydrogen economy by enabling a pathway to market starting with heavy industrial applications	$50,000.00
Terry Ventures Received ~$272k from National Science Foundation to develop a device for ensuring a safer and more consistent transition from a sit-to-stand posture in patients using front-wheel walkers. Partnered with SIU-Carbondale.	$50,000.00
Institute for Practice and Provider Performance Improvement Received ~$222k from National Institutes of Health to build a prototype system that performs automated 4C (Content Coding for Contextualization of Care) coding of transcribed audio-recorded medical encounters. Partnered with UIC.	$50,000.00
Thyreos Received ~$297k from National Institutes of Health to develop a live-attenuated HSV-2 (herpes simplex virus) vaccine based on their R2 technology platform. Partnered with Northwestern University.	$50,000.00

SBIR/STTR Applicant Overview (Batch 5)

Prepared by: Jamie Gladfelter, Emerging Technologies Manager
Submitted for Director Approval: 1/15/24

Applicant	Award
Electro Magnetic Applications Received ~$140k from Department of Defense (Navy) for the generation of fully polarimetric synthetic radar signature data for targets of interest to NAVAIR. Partnered with UIUC.	$50,000.00
Starfire Industries Received ~$200k from Department of Energy to pathfind means to apply superb anti-corrosion coatings with low interface contact resistance and enable recycling/reconditioning of used bipolar plates at end of life. This incremental step will further the DOE's comprehensive energy portfolio goal to achieve net-zero emissions—particularly in the transport sector. Partnered with UIUC	$50,000.00
QuantCAD Received ~$156k from NASA for the development of a quantum sensor for deuterium-to-hydrogen ratio (D/H) ratio measurement in water in outer planets. The ratio of deuterium to hydrogen in water helps determine where in the solar system an object originated. Affiliated with Duality quantum accelerator at UoC.	$50,000.00
Somatolynk Received ~$500k from NIH to advance a first-in-class Somatostatin receptor-4 agonist drug for Alzheimer's Disease treatment. Affiliated with SIU-Edwardsville	$50,000.00
RESDEF Received ~$105k from Air Force for the development of headset directional - noise isolation and communication (HD-NIC) platform, the first over-ear headset offering both comfort (through noise isolation) and enhanced communication, thus positively increasing mission performance	$50,000.00
Orbital Transports Received ~$140k from NASA for the development of an artificial intelligence for systems engineering, a digital design assistant enabling reuse of systems models.	$50,000.00



SBIR/STTR Applicant Overview (Batch 4)

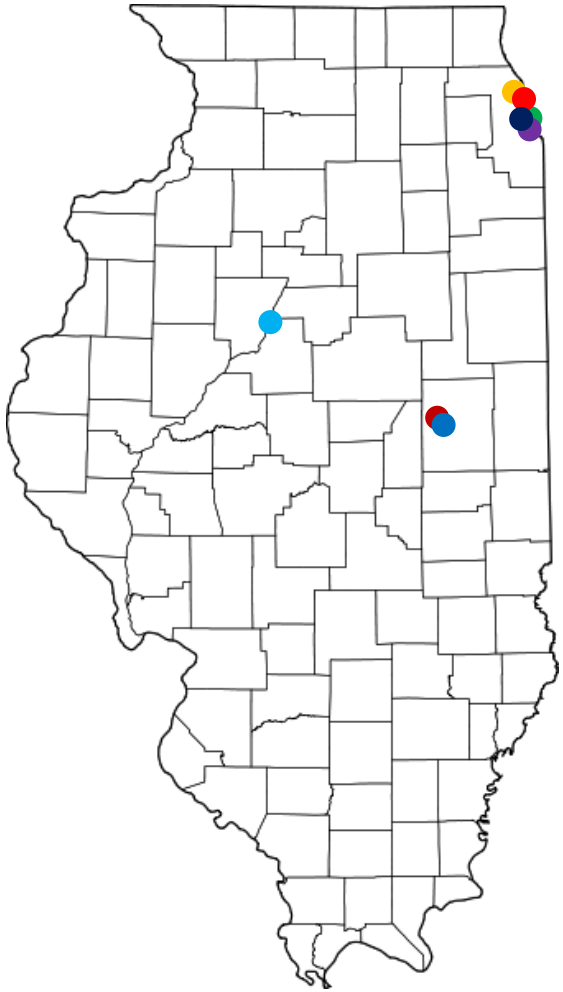
Prepared by: Jamie Gladfelter, Emerging Technologies Manager
Submitted for Director Approval: 11/7/23

Applicant	Award
Lakril Technologies Corporation* Received ~$256k from National Science Foundation for the development of technology for conversion of corn-derived lactic acid to acrylates and acrylic acid at >90% yield for paints, coatings, and superabsorbent polymer markets at cost parity with existing materials.	$50,000.00
Stochastic Research Technologies Received ~$256k from National Science Foundation for the development of a novel and cost-effective technology to remove NORM (Naturally Occurring Radioactive Materials) from the wastewater produced by fracking.	$50,000.00
Iris Light Technologies, Inc.* Received ~$207k from Department of Energy to development technology that allows printable lasers to be produced at chip foundries, enabling energy-efficient data centers and high-performance computing.	$50,000.00
Additive Monitoring, Inc. (now Phase3D)* Received $~$75k from Air Force for development a real time defect detection system for additive manufacturing (metal 3d printing)	$50,000.00
NeuroLux, Inc. Received $~$260k from Department of Health and Human services for development of design a fully implantable, wireless, battery-free, Mechano-Acoustic (MA) device that allows for multi-parameter physiological data acquisition from freely moving small animal models, via use of high bandwidth triaxial accelerometers.	$50,000.00

SBIR/STTR Phase I Matching Applicant Overview (Batch 3)

Prepared by: Jamie Gladfelter, Emerging Tech Manager
Submitted for Director Approval: 9/19/2023

Applicant	Award
Enduvo Received ~$140k from DOD for the development of a Marine Corps Virtual Classroom utilizing digital twin technology.	$50,000.00
MicroLink Devices Received $150k from NASA for the development of an array for high efficiency power beaming, a technology applicable for powering rovers on the Lunar or Martian Surface.	$50,000.00
CU Aerospace Received $150k from Air Force for development of a universal payload interface for modular components, a technology that allows for the carriage of significant payloads during the launch load of satellites and other aerospace objects.	$50,000.00
Tango Biosciences Received ~$223k from Department of Health and Human Services for a series of experiments leading to development of a pipeline for generating high-quality affinity reagents to phosphothreonine-based epitopes of native proteins.	$50,000.00
Cygnus Photonics Received $150k from Missile Defense Agency for the development of novel technology to measure electron density related to Diode-Pumped Atomic Lasers, a technology applicable to defense and aerospace for debris removal.	$50,000.00
SMYL Fitness RX LLC Received ~$300k from DHHS for the development of novel digital biomarkers for proactive detection of functional decline, a technology with potential to impact over 34 million middle and older age adults	$50,000.00
QuestTek Innovations Received $146k from DOD to develop physics-enhanced machine learning (ML) software for error detection in additive manufacturing (AM) components	$50,000.00
Clearvoya LLC Received $257k from DHHS for the development of motion-resistant background subtraction angiography with deep learning, a technology to be used to visualize blood vessels when a patient is unable to remain still.	$50,000.00



SBIR/STTR Phase I Matching Applicant Overview (Batch 3)

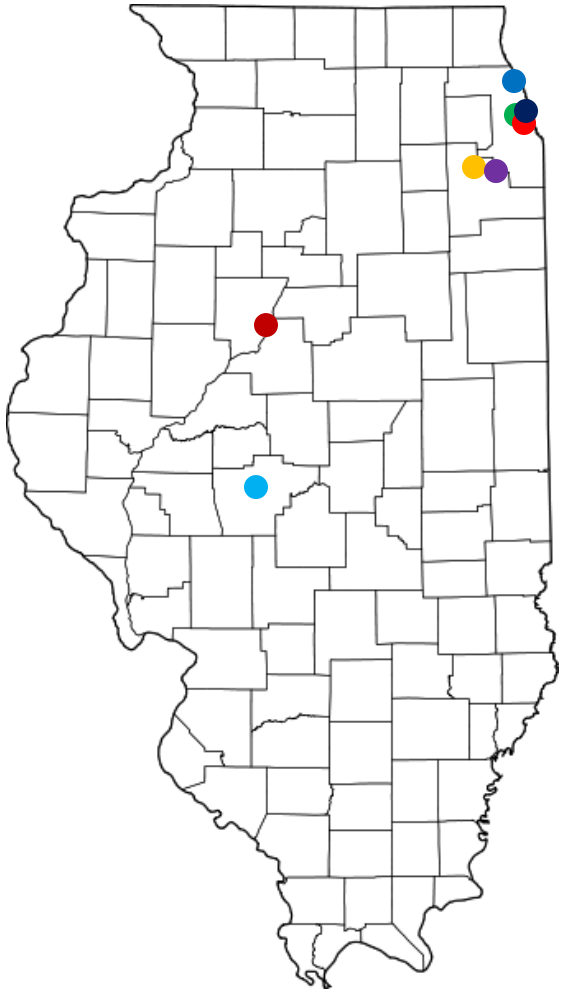
Prepared by: Jamie Gladfelter, Emerging Tech Manager
Submitted for Director Approval: 9/19/2023

Applicant	Award
Novaa Ltd Received $150k from Air Force for the development of a compact, circularly polarized high power antenna.	$50,000.00
Kazadi Enterprises Ltd Received ~$275k from NSF for the development of a technology enabling low-energy, resilient cooling that is capable of mitigating the environmental impacts and high costs of conventional refrigeration.	$50,000.00
memQ Inc Received ~$200k from DOE for the development of a low-loss thermomechanically stable packaging for cryogenic quantum photonic network devices, a technology critical for future applications of quantum networking.	$50,000.00
Covira Surgical Received ~$299K from DHHS for the development of a novel, non-antibiotic, microbiome-directed agent to prevent post-surgical infections	$50,000.00
Opera Bioscience Received $275k from NSF for the development of acost-effective way to produce recombinant proteins and growth factors for the cultivated meat industry.	$50,000.00

SBIR/STTR Applicant Overview (Batch 2)

Prepared by: Jamie Gladfelter, Emerging Technologies Manager
Submitted for Director Approval: 7/25/2023

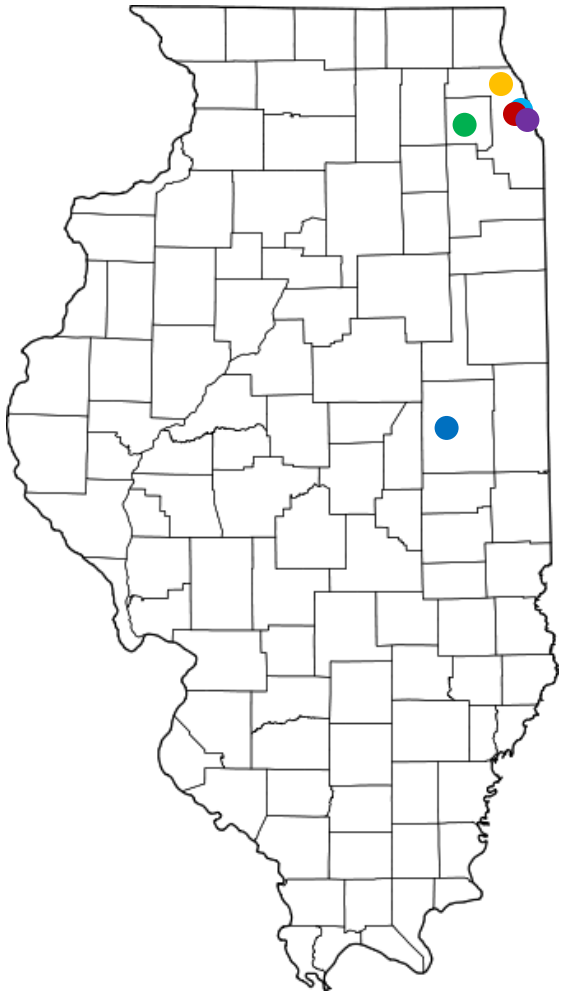
Applicant	Award
Uronext LLC Received ~266k from Department of Health and Human Services for a novel shape memory alloy penile prosthesis. Partnered with Loyola University of Chicago.	$50,000.00
Sivananthan Laboratories, Inc. Received ~150k from Department of Defense for multiscale modeling of radiation events in infrared photodetectors to more accurately predict the failure rate of a new material of device architecture.	$50,000.00
Midwest Bioprocessing Center, LLC Received ~217k in funding from Department of Health and Human Services for production of natural deoxysugars for chemical synthesis of glycosides, which play a crucial role in conferring activity in bioactive natural products, such as antibiotics and anticancer therapeutics. Partnered with University of Iowa.	$50,000.00
Argos Vision Inc. Received ~255k from Department of Health and Human Services for dual targeting mitochondria and GPCR in retinal protection.	$50,000.00
Aplexis, Inc. Received ~397k from Department of Health and Human Services for development of small molecule inhibitors of Pleckstrin-2 to treat thrombosis.	$50,000.00
Caporus Technologies Received ~200k from Department of Energy for development of novel insulators in silicon-on-insulator substrates to improve nuclear physics sensors and circuits, applicable to medical imaging sensors and aerospace/defense sensors.	$50,000.00
QDIR Inc Received ~171k from Department of Defense for a systematic approach to advance quantum dots for high performance infrared photodetection, applicable for unmanned drones for surveillance in contested environments. Partnered with University of Chicago.	$50,000.00
ViSo Therapeutics, Inc. Received ~300k from Department of Health and Human Services for development of a peptide therapy for corneal wound healing. Partnered with University of Illinois at Chicago.	$50,000.00



SBIR/STTR Applicant Overview (Batch 1)

Prepared by: Jamie Gladfelter, Emerging Technologies Manager
Submitted for Director Approval: 2/10/23

Applicant	Award
OceanComm Incorporated Received ~$140k from Department of Defense for development of a scalable platform for unmanned underwater vehicle (UUV)-enabled, digitally steerable transducers, enabling more rapid coordination and deployment of UUV.	$50,000.00
NuMat Technologies Received ~$200k from Department of Energy for continuous synthesis of metal-organic frameworks for xenon capture to expand and de-risk advanced nuclear energy technologies and their associated radioactive waste stream emissions.	$50,000.00
Iris Light Technologies, Inc. Received ~$256k from National Science Foundation for development of printed lasers on silicon photonic chips. Applications include wearable photonic sensors, optical data transfer, autonomous vehicle light detection/ranging, and healthcare applications. Partnered with Boise State University.	$50,000.00
Ontogen Medtech LLC Received ~$259k from Department of Health and Human Services for the development of a catheter specifically designed to reduce bleeding complications from catheter-directed thrombolysis treatment of pulmonary embolism.	$50,000.00
Insigna Inc Received ~$175k from Department of Agriculture for development of a single injection alternative to surgical castration of newborn pigs.	$50,000.00
Additive Monitoring, Inc. Received $~$119k from Department of Defense for development of an in-situ monitoring system for additive manufacturing quality control. Partnered with Argonne National Laboratory.	$50,000.00
IllinoisRocstar LLC Received ~$206K from the Department of Energy for development of state-of-the-art machine learning models and physics-based reduced order modeling capabilities to produce representations of subsurface reactive transports that will run quickly and produce accurate results for nuclear waste repository simulation.	$50,000.00



Applicant	Award
Liv Labs Inc. Received ~$255k from National Science foundation to explore a scalable, high-tech approach to at-home treatment of involuntary urine leakage, a highly prevalent condition affecting 27 million American women.	$50,000.00
EPIR, Inc. Received ~$200k from Department of Energy for development of versatile, high-density, high-yield, low-capacitance 3D integration for nuclear physics detectors. Applications include advanced infrared detector for defense and security application for active imaging systems, such as LAser Detection And Ranging (LADAR) and a wide variety of medical imaging applications	$50,000.00
Cusatis Computational Services Inc. Received ~$173k from Department of Defense for development of computational tools for the multiscale simulation of engineered wood products under impulsive loading conditions resulting from blasts and impacts. Partnered with Northwestern University	$50,000.00
Dynamac Microwave Inc. Received $254k from National Science Foundation for development of a radio frequency (RF) network miniaturization technology and manufacturing methodologies to dramatically reduce the size, weight, and cost of RF filters. This research will develop special filters for a broad range of wireless applications, including smartphones and their infrastructure, WiFi devices, broadcast systems, and satellite systems	$50,000.00
MFNS Tech Inc. Received ~$256k from National Science Foundation to develop a widely deployable sponge technology that attracts oil and resists water to create an environmental remediation platform for oil spills and related contaminants in water bodies. Partnered with Northwestern University.	$50,000.00
Lakril Technologies Corporation Received ~$207k from Department of Energy to decarbonize the acrylic chemicals industry via a lactic-to-acrylic technology to produce sustainable and eco-friendly bio-based acrylics at cost parity with petrochemicals. Cohort company of CRI at Argonne.	$50,000.00

Applicant	Award
Boron Nitride Power LLC Received $256k from NSF for the development of lightweight, thermally safe batteries with high energy densities that can be charged fast, last a long time, are composed of environmentally benign materials, and can store energy at a low cost. Partnered with IIT.	$50,000.00
Rational Cyphy, Inc. Received ~$150k from DoD for the development of a scalable, physics-aware software tool for generating the switching logic for autonomous systems, applicable to unmanned aerial vehicles and aircraft engine control.	$50,000.00
Energao, Inc. Received $125k from Department of Agriculture for development of a novel iron-titanium redox flow battery with two detachable electrolyte storage tanks, creating an ideal solution for fire-safe low-cost and long-duration (>10 h) storage of clean energy generated in rural areas.	$50,000.00
Stoicheia, Inc. Received ~$248k from DoE for the development of a discovery platform for low-Ir anode catalysts in PEM electroyzers, a technology that is integral for driving the transition to a renewable energy economy.	$50,000.00
Automated Water Machines Inc (Kadeya Inc) Received ~$75k from Air Force for development of a platform for safe and convenient bottled water for remote Air Force bases from raw, local water sources, with minimal logistics requirements.	$50,000.00
Hinetics, LLC Received ~$89k from NASA for a detailed study to evaluate the integration of a lightweight, high efficiency 150 kW generator-drive subsystem within the SUSAN concept aircraft. SUSAN is an advanced hybrid-electric concept aircraft designed to minimize environmental impacts and introduce innovative technologies for sustainable subsonic regional transport aircraft	$50,000.00