NSF spurs the translation of fundamental research into innovation through investment in high-tech small businesses and in broad-based, regional collaborations between academia and industry.

DIAGNOSTICS AND MONITORING

**APERIOMICS INC.**

Technology to identify every bacteria, virus, parasite and fungus present in a single biological sample; a transformative approach to pathogen testing for clinical, agricultural and other markets.

Crystal R. Icenhour | cichenhour@aperiomics.com | @aperiomics

SBIR

**APPLIED BIOSENSORS LLC**

Provides single-use sensors for continuous monitoring of multiple biochemicals (glucose, lactate, pH, osmolality, etc.) primarily for biopharma manufacturing industry. The technology is applicable to several markets, including biomedical research, human metabolic monitoring, and water quality management.

Prashant Tathireddy | info@appliedbiosensors.com

STTR

**CENTERSPACE SOFTWARE**

An online system for verification of mHealth app effectiveness.

Trevor Misfeldt | misfeldt@centerspace.net | @CenterSpaceSoft

AIR
<table>
<thead>
<tr>
<th>Company</th>
<th>Description</th>
<th>Contact Person</th>
<th>Email/Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>CytoMag</td>
<td>Developing the next generation of rare cell isolation devices enabling personalized medicine.</td>
<td>Matthew Kerby</td>
<td><a href="mailto:matt@cytomag.com">matt@cytomag.com</a></td>
</tr>
<tr>
<td>Elucid Bioimaging Inc.</td>
<td>Developing a computational image processing system that uses computer-aided prognostics to quantitatively evaluate the severity and composition of plaque inside arteries.</td>
<td>Andrew Buckler</td>
<td><a href="mailto:andrew.buckler@elucidbio.com">andrew.buckler@elucidbio.com</a></td>
</tr>
<tr>
<td>Georgia State University</td>
<td>Carbohydrate based biosensors for point-of-care diagnosis of infectious agents, specifically for detection at primary care physician’s office, at home and resource poor areas.</td>
<td>Suri S. Iyer</td>
<td><a href="mailto:siyer@gsu.edu">siyer@gsu.edu</a></td>
</tr>
<tr>
<td>GlucoSentient</td>
<td>Innovative technology offers a convenient solution to bring hard-to-access medical tests to the hands of patients who need them.</td>
<td>Tian Lan</td>
<td><a href="mailto:tianlan.glucosentient@gmail.com">tianlan.glucosentient@gmail.com</a></td>
</tr>
</tbody>
</table>
| NanoView Diagnostics    | ExoView allows characterization of large panels of extracellular vesicles without the need for purification or enrichment. | David Freedman | dfreedman@nanoviewdx.com | @nanoviewdx
MONTANA MOLECULAR

Develops genetically encoded fluorescent biosensors and probes for cell-based assays and live cell imaging.

Anne Quinn | amq@montanamolecular.com

SBIR

PHARMASEQ INC.

Developing an ultra-small microtransponder tag called the p-Chip, the first microchip with a sensor that can be injected into live cells to transmit information from within without a physical connection.

Wlodek Mandecki | mandecki@pharmaseq.com

SBIR

PICOSENSE

Creating the first fully contactless, miniaturized and portable heart rate monitor and medical magnetocardiography device. The device can be placed in a pocket, integrated in a necklace or wearable device enabling a continuous, comfortable and seamless way of monitoring the heart functions.

Gerardo Jaramillo | info@picosense.com | @picosense

SBIR

TEXAS TECH UNIVERSITY

Creating a microfluidic device to help with the drug screening process.

George Watson | george.watson@ttu.edu

AIR
CARMOT THERAPEUTICS INC.

Applies its proprietary Chemotype Evolution technology to discover novel drug candidates that target pathways related to metabolic disease, oncology and inflammation.

Dave Jobes | djobes@carmot.us

SBIR

LONGEVITY BIOTECH INC.

Developing a new class of therapeutics based on the Hybridtide platform technology across therapeutic areas. Hybridtides blend biological specificity with small molecule stability resulting in stable yet potent drug candidates with oral delivery potential.

Scott Shandler | scott@longevitybiotech.com

SBIR

PROTEIN DYNAMIC SOLUTIONS LLC.

Focuses on a breakthrough technology to directly address protein aggregation, a key bottleneck in the development of new protein therapeutics in biologics and biosimilars.

Belinda Pastrana | belinda.pastrana@gmail.com

SBIR
Lignolink, Inc.

Developing a patented technology for the genetic modification of crops to enhance digestibility for biofuels feedstock and livestock forages.

Jason Collens  |  jcollens@lignolink.com

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Mango Materials

Produces biodegradable plastics from methane that are economically and functionally competitive with conventional oil-based plastics.

Anne Schauer-Gimenez  |  anne@mangomaterials.com

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Modern Meadow

Modern Meadow is developing cultured animal products with no animal slaughter and much lower use of land, water, energy and chemicals.

Sarah Sclarsic  |  sclarsic@modernmeadow.com

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PhylloTech LLC

Redefining the production of therapeutic antibodies and protein-based biologics in plants by eliminating expensive purification and downstream processing steps.

Ryan Shepherd  |  ryan.shepherd@phyllotech.com

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Vaxess Technologies Inc.

Uses silk to enhance stability of vaccines, biotherapeutics, and diagnostics so they can be stored and shipped without refrigeration, reducing the need for the cold chain.

Michael Schrader  |  contact@vaxess.com  |  @Vaxess

SBIR
**ADVANCED POLYMER MONITORING TECHNOLOGIES INC. (APMT)**

Developing systems to detect and monitor common problems such as aggregates, particulates and other stressor dependent solution instabilities of biopharmaceuticals from discovery through formulation.

Alex W. Reed | alex.reed@apmtinc.com

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**CONTINUUS PHARMACEUTICALS INC.**

Commercializing a continuous manufacturing process for pharmaceuticals that delivers more affordable and higher quality medications to patients faster.

Bayan Takizawa | btakizawa@continuuspharma.com | 203-507-5716 | @BayanTakizawa

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**COVARIS**

Focused ultrasonic energy (Adaptive Focused Acoustics™) controls crystal nucleation and growth allowing drug nanoparticle production, which enables development of entirely new and more effective drugs.

Carl Beckett | cbeckett@covarisinc.com

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**GRAPHENE FRONTIERS LLC**

Develops thin film graphene solutions and products. Graphene Frontiers is building low-cost commercial-scale graphene production and processing technologies to enable revolutionary products using nanoscale films on a macro scale. Consumer electronics applications include flexible, resilient displays for tablets and smartphones, and low-cost, low-power, high-sensitivity chemical detection for wearable sensors.

Bruce Willner | info@graphenefrontiers.com | @TeamGraphene

AIR
**Nano3D Biosciences Inc.**

Seeks to use its core technology, magnetic 3D bioprinting, to disrupt markets in drug discovery, toxicology testing, personalized medicine, and tissue engineering.

Glauco Souza | info@n3dbio.com | @nano3d

**Nanofiber Separations LLC**

Produces hybrid nanofiber materials that provide economical and easy access to clean and safe end products such as (bio)pharmaceuticals, blood and blood products, water and air. The materials allow for improved cell viability, more efficient nutrient transport and enhanced rates of tissue formation for tissue engineering/regeneration applications.

Craig Arnold | craig@nanofiberseparations.com

**TeraPore Technologies Inc.**

Developing cutting-edge membrane technology for high-permeability, high-resolution separations needs.

Rachel Dorin | rmd224@cornell.edu
TREATMENTS

**Actuated Medical Inc.**

Focuses on actuation, motion, and acoustics technology, including low-power transdermal delivery of large molecular weight medications, devices for clearing occlusions, and minimally invasive tools for controlled penetration of bone and tissue.

Maureen L. Mulvihill  |  maureen.mulvihill@actuatedmedical.com

SBIR

**Arytha Biosciences**

Develops nano-sponges to locate toxins in the bloodstream. The sponges are made of red blood cell membranes and serve as a synthetic decoy to capture and neutralize toxins regardless of their molecular structures.

Weiwei Gao  |  wgao@arythabio.com

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**AreteX Engineering**

Developing a machine learning-based technology to assist clinicians in optimizing the sedation level of intensive care unit patients to reduce their length of stay.

Behnood Gholami  |  bgholami@aretexeng.com  |  @behnoodg

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**Extend Biosciences Inc.**

Harnessing the biology of Vitamin D to improve the half-life and bioavailability of peptides and proteins. Applying the technology to peptides that can treat two rare diseases and reverse cancer cachexia.

Tarik Soliman  |  soliman@extendbio.com  |  @extendbio

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**GigaGen Inc.**

Creating novel natural antibody therapeutics through the capture, analysis and expression of full immune repertoires. Developing the first recombinant version of IVIG, and partnering with leading researchers to discover new therapies for oncology, autoimmune and infectious disease indications.

David Johnson  |  djohnson@gigagen.com

SBIR
**Jade Therapeutics**

Uses locally administered polymer technologies – either on a standalone basis or to deliver drugs and biologics in a sustained-release manner – for the treatment and/or prevention of ophthalmic diseases, conditions, and injuries.

Arthur Klausner | arthur.klausner@jadetherapeutics.com | @ArthurKlausnerd

**LambdaVision Inc.**

Developing a high-resolution, protein-based retinal implant to restore vision to millions of patients suffering from severe end-stage retinal degenerative diseases, such as retinitis pigmentosa and age-related macular degeneration.

Nicole L. Wagner | Nicole.Wagner@lambdavision.com | @lambdavision

**OrteoPoniX LLC**

Developing a biodegradable bone fixation device for low load bearing applications, and a biomimetic bone graft material with a layer by layer structure to support improved healing in critical size defects.

Mike Zilm | michael.zilm@uconn.edu

**Prolynx**

Developing a disruptive drug delivery system for half-life extension of peptide and protein drugs.

Gary Ashley | gary@prolynxllc.com

**Remedium Technologies**

Developing Hemogrip, a handheld, lightweight canister that delivers an expanding hemostatic biopolymer foam for the rapid treatment of hemorrhage within a body cavity.

Matthew Dowling | matt@remediumtechnologies.com
**Sensulin LLC**

Developing a 24-hour glucose-responsive insulin that could eliminate the four-to-seven daily required injections for Type I diabetes patients and offer better compliance for Type II patients.

*Michael Moradi-Araghi* | mikemoradi@gmail.com

STTR

**TeVido BioDevices**

Uses innovative 3D bio-printing of a woman’s own living cells to develop custom grafts for breast cancer reconstruction; the first product is targeted to improve nipple reconstruction, where current procedures often flatten and fade over time.

*Laura Bosworth* | Bosworth@tevidobiodevices.com | @tevidobiodevice

SBIR

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**FOR MORE INFORMATION CONTACT:**

*Sarah Bates* | 703.292.7738 | sabates@nsf.gov