



<p>West Lafayette, Indiana https://akrotome.com/</p>	<p>Akrotome Imaging, Inc. Diagnostics, Medical Devices</p>
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Technology Name: Quenched, Smart, Fluorescent Probes for Guided Resection of Solid Cancer Tumors

Technology Description: We have a unique portfolio of quenched, fluorescent probes that target cancer marginal tissue for the guided resection of solid cancers. Unlike other probes which require administration of large amounts of probe by IV hours or days before surgery, our probes can be topically administered (either in vivo or ex vivo) during surgery and activate in as little as 5 minutes. This flexibility enables a shorter and more cost-effective path to market as regulatory overhead is reduced significantly.

Company Description: Akrotome is focused on the clinical translation of cancer-targeted molecular probes into enhanced approaches for surgery and diagnostics, leading to improved outcomes and patient quality of life while positively impacting healthcare economics. With initial focus on the treatment of solid tumors, Akrotome's technology portfolio of protease-binding/activated, quenched, near-infrared (NIRF) probes supports a wide range of clinical applications from tumor margin detection to therapeutic monitoring, companion diagnostics, and management of inflammatory disease.

<p>Research Triangle Park, North Carolina http://www.AscentBioNano.com</p>	<p>Ascent Bio-Nano Technologies, Inc. Medical Devices, Research Tools</p>
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Technology Name: Separation of Cells and Particles Using Sound

Technology Description: We develop gentle and safe cell/particle separation research tool and medical device based on world leading patented acoustofluidic technology. Our technology will not damage cells, which will enable research and applications that conventional technologies could not offer. We are developing a series of applications based on this technology platform, including cancer diagnostics, cell sorter, blood separation, etc.

Company Description: Ascent Bio-Nano Technologies, Inc. is a research spin-off formed in 2012. It is based in Research Triangle Park, NC. The mission is to develop biocompatible and biosafe cell/particle separation research tools and medical devices. The company motto is Innovation for Impact. Our passion is to commercialize world-leading acoustofluidic technologies to advance research, enhance healthcare, and improve life quality.



Montville, New Jersey http://bioinvenu.com	BioInvenu Research Tools
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Technology Name: BioInvenu’s applied for drug target enabling assays

Technology Description: LinkLight technology enable us to monitor a protein signal transduction pathway through protein-protein interactions (PPIs). The technology is not only can be used to find compounds inhibiting PPIs, but more commonly be used to find compounds modulating a drug target through its PPI signaling pathway. In addition, conventional "undruggable" proteins could also be accessed based on their protein interaction networks. Thus, the technology can be broadly applied for drug target enabling assays.

Company Description: BioInvenu Corporation is a biotech company. Our mission is to provide the proprietary cell-based assay products and services to drug discovery researchers. BioInvenu is dedicated to develop assay products and services by utilizing a novel cell-based protein-protein interaction assay technology, LinkLight technology. BioInvenu also interest to collaborate with business partners to identify new drug leads and candidates for highly valued drug targets.

Ann Arbor, Michigan http://www.biomedware.com	BioMedware, Inc Modeling, Simulation, Software and Apps
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Technology Name: METRIC Software to Measure Cancer Health Environment

Technology Description: The objective of this project is to develop the first GIS-based software that offers tools specifically designed for the automated access, homogenization, and visualization of data for computing and disseminating customized environmental metrics. The software tools that will allow users to develop their own environmental metrics and take advantage of the wealth of resources from interactive and frequently updated web sources are lacking.

Company Description: BioMedware is a research and software development company with considerable experience creating theory, algorithms, and software implementations for spatial analysis. Its mission is to research, develop and disseminate innovative software and database technologies for the identification, description and quantification of spatial and space-time patterns in health outcomes and their causative factors.



<p>Concord, Massachusetts www.cellardoorlabs.com</p>	<p>Cellar Door Labs Healthcare IT, Food Science and Nutrition</p>
<p>Technology Name: NutriSnap</p> <p>Technology Description: CDL has developed NutriSnap™, a mobile application that interprets the nutrition and ingredients information directly from photos of packaged food items. NutriSnap employs state-of-the-art image analysis algorithms to automatically extract this information from any box, bag, can, or other packaged food item with a nutrition facts panel. AI-based cross-validation and categorization algorithms further refine and organize the collected information providing an accurate and continuously up-to-date picture of food products in the marketplace.</p> <p>Company Description: Cellar Door Labs (CDL) was founded with a mission to improve quality of life by leveraging modern techniques from AI, machine learning, computer vision, and robotics. Launched in 2015 by Neal Checka and Dr. Shawn Schaffert, CDL has developed intelligent automation services for the healthcare and nutrition industries. Mr. Checka and Dr. Schaffert are seasoned technical leaders and have proven experience in developing technology solutions under the SBIR program and successfully transitioning them to a variety of commercial markets including robotics, healthcare, and social media.</p>	

<p>Winston-Salem, North Carolina www.cellfbio.com</p>	<p>CELLF-Bio, LLC Biotechnology for Healthcare, Medical Devices</p>
<p>Technology Name: BioSphincter- Bioengineered Internal Anal Sphincter</p> <p>Technology Description: The BioSphincter™ is bioengineered from cells and stem cells, retrieved in a simple biopsy procedure, from the patients own cells (eliminating rejection risk). The newly grown autologous sphincter is implanted over the defective sphincter, becoming a new continuum of gut, and reconnects with the local neural reflexes in the area. Cellf BIO maintains patent protection for the critical platform technologies and processes. These technologies also enable Cellf BIO to create additional products for urinary incontinence(UI) and esophageal reconstruction.</p> <p>Company Description: Cellf BIO is an innovative biomedical research company focused on the development of regenerative tissue solutions for Gastrointestinal disorders. Cellf BIO is developing a novel regenerative medicine-based therapy for fecal incontinence. It is a problem faced by 1 in 12 people, or 18 million adults in the US. Cellf BIO manufactures bioengineered sphincters using autologous progenitor cells that replace the dysfunctional internal anal sphincter, the root cause of FI. This new product, called a BioSphincter™, allows the patient to regain full control of bowel movements and rejuvenate their quality of life.</p>	



Chicago, Illinois http://www.coaptengineering.com	Coapt, LLC Medical Devices
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Technology Name: COMPLETE CONTROL system for upper limb prosthetics

Technology Description: In late 2013 Coapt introduced the COMPLETE CONTROL system for upper limb prosthetics. This was the first time pattern recognition algorithmic technology was commercially applied to myoelectric prostheses, making them natural and intuitive for users to control. Pattern recognition uses an array of electrodes to detect intertwined combinations of muscle signals that are repeatable for an amputees natural intended motions.

Company Description: Coapt was formed to transition research rehabilitation technologies to the commercial market. Coapt licensed a pattern recognition control system developed at the Rehabilitation Institute of Chicago and transformed it from a mature research prototype to a commercial product. The mission of Coapt is to use our strong clinical research background, licensed technologies, and our reputation for innovation and clinical implementation to develop, market, and distribute products to improve the quality of life for prosthesis users. Our vision is to use our clinically oriented research background and strong strategic partnerships to commercialize value-add componentry for the medical device industry.

Research Triangle Park, North Carolina http://www.dignifytherapeutics.com	Dignify Therapeutics LLC Pharmaceuticals
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Technology Name: Drug Development for Urologic and Gastrointestinal Disorders

Technology Description: The DTI-100 program is focused on drug-induced "on demand" bladder and bowel voiding for people with severe bladder and bowel retention. Since physiological voiding only lasts 1-2 minutes, the DTI-100 target product profile is designed as a rapid-onset (2-5 min), short duration (~10 min) therapy. Rapid onset is achieved by parenteral (subcutaneous, sublingual, intranasal) administration for rapid systemic absorption. Short duration is achieved by rapid plasma degradation of DTI-100 to inactive, rapidly eliminated amino acids within minutes. A short plasma half-life enables administration of multiple doses throughout the day without drug accumulation.

Company Description: Dignify Therapeutics is focused on developing novel bladder and bowel therapies to restore the dignity of voluntary excretory function for patient populations with voiding dysfunction. The combining of novel pharmaceutical agents with drug delivery technology will provide a safe, effective, convenient alternative to current invasive therapies for bladder and bowel emptying.



<p>Vestavia Hills, Alabama http://endomimetics.com/</p>	<p>Endomimetics, Inc. Biotechnology for Healthcare</p>
<p>Technology Name: Bionanomatrix Coating of Medical Devices</p> <p>Technology Description: Over 500,000 U.S. patients have end stage renal disease, and over 80% of them utilize hemodialysis. A significant problem for dialysis patients is the development of a functioning and durable vascular access, preferably an arteriovenous fistula (AVF). After creation, about 60% of AVFs fail to mature successfully for dialysis use. This is due to inadequate vasodilation and smooth muscle cell hyperplasia at the distal venous anastomosis. The Endomimetics bionanomatrix gel is used at the time of AVF creation. The gel recruits endothelial cells, enhances vasodilation and limits smooth muscle cell proliferation which promote AVF maturation.</p> <p>Company Description: Endomimetics, LLC has developed a BioNanomatrix that can be used to coat medical devices and mimic human tissue which minimizes the need for additional surgeries, improves the longevity of the device, reduces complications associated with having foreign items implanted in your body.</p>	

<p>Boston, Massachusetts http://www.eyephonedevices.com</p>	<p>Eyephone LLC Healthcare IT, Diagnostics</p>
<p>Technology Name: Mobile Health Care for Eye Doctors</p> <p>Technology Description: EyeTurn from EyePhone delivers accurate and robust strabismus (eye alignment) test results using only a mobile app, not requiring purchase of a dedicated device or add-on module, this is completely novel and unique in the market. A vision screening program performed by a lay person using EyeTurn rather than by a skilled eye care professional will significantly reduce program cost and yet bring more patients to the doctor. EyeTurn takes a picture and automatically performs a Hirschberg test providing the eye deviation measurement. The connectivity of the EyeTurn app will provide important telemedicine benefits without any extra hardware cost.</p> <p>Company Description: EyePhone LLC develops state-of-the-art smartphone-based solutions that help with the measurement, screening, diagnosis, and treatment of various eye diseases or vision disorders, allowing eye doctors to provide faster, easier, and cheaper medical care to the affected patients. EyePhones prototypes contribute to the mission of tele-ophthalmology, a new telemedicine concept tailored for eye doctors. Non-dilutive grant funds and a capital-efficient mindset ensure prototype development with the lowest possible cost. EyePhone is a spin-off from the Harvard Medical School and it is working with this institution to obtain exclusive licensing of the relative IP.</p>	



Athens, Georgia https://www.glycoscientific.com/	Glycoscientific Research Tools
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Technology Name: Development of Site-Specific Antibodies to Proteins Modified by O-GlcNac

Technology Description: GlycoScientific anticipates that antibodies recognizing O-GlcNac modified peptides/proteins in a site-specific manner will enjoy a commercial success similar to that of site-specific antibodies recognizing phosphorylated peptides/proteins. There are currently no site-specific O-GlcNac antibodies or affinity reagents of any kind for this particular class of epitopes.

Company Description: GlycoScientific is focused on the development of carbohydrate-related reagents to serve the scientific, diagnostic and therapeutic communities. The company envisions a range of commercial products resulting from this effort, including antibodies for various glycoconjugates (including site-specific antibodies for O-GlcNac modified peptides), standard glycans and glycoproteins, and a variety of methods for glycan quantification.

Purcellville, Virginia http://www.HealthcareTM.com	Healthcare Technologies and Methods, LLC Healthcare IT
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Technology Name: Interactive, Personalized System for Hearing Aid and Communications Education and Training

Technology Description: TELLYHealth is an innovative, interactive and personalized telehealth system that enables a patient, at home, to view health education videos and other vital information, and answer various healthcare questions at home on their TV using their mobile device as a remote. The patients system communicates with their healthcare professionals secure website. This integrated cloud-based platform and its patient-tailored interactive video and animation content are specially designed for ease of use and comprehension by older adults who are not tech-savvy. TELLYHealth will initially be applied to audiology and subsequently will be applied to chronic illnesses such as diabetes and heart failure.

Company Description: We develop innovative, interactive, and personalized information technology and content that improve self-care education and communications between older patients and their healthcare providers. Our interdisciplinary team applies: (1) human factors to enhance system usability, (2) health literacy principles to optimize learning, and (3) cost-effective methods to maximize healthcare providers' ROI. We develop and test our systems then provide training and technical support for our healthcare system clients. Our products promote self-efficacy and better health outcomes for older adults who are not tech-savvy. We believe our patent-pending TELLYHealth system will become a "must have" for patients fitted with new hearing aids.



Woburn, Massachusetts http://www.thehearth.org	Hearthstone Alzheimer Care Other, Educational, Virtual Learning
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Technology Name: Hearthside Book Club

Technology Description: Hearthside Book Club is an innovative reading and discussion activity for persons with varying levels of dementia. The activity can be used by any person with dementia, whether they are living in nursing homes, assisted living facilities, or their private homes. The innovation inherent in the technology relates to the setup of the book and the careful development of the content. Without proper content development by subject matter experts at Hearthstone, such books would not be possible.

Company Description: Hearthstones mission is to create a life worth living for those with cognitive challenges by enriching lives and offering hope. Hearthstone manages residential care facilities for persons with dementia. Hearthstone's Training Institute conducts extensive training with memory care facilities across the US, using its exclusive onsite embedding process. Hearthstones Research Division conducts NIH-funded research, as well as in-house evaluation to maintain high quality care and programming. Products and training programs developed by the Research Division are initially implemented within our residences (for market differentiation), are next offered to our Centers of Excellence, and finally made available to the public.

Doylestown, Pennsylvania http://imcarebiotech.com	ImCare Biotech Biotechnology for Healthcare, Diagnostics, Medical Devices, Pharmaceuticals
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Technology Name: A Novel Biomarker for Hepatocellular Carcinoma

Technology Description: We are currently developing a new biomarker and the technology is based on the quantitative assessment of a protein called LC-SPIK (Liver cancer-Serine Protease Inhibitor Kazal), which is secreted only in cases of liver cancer. Our technology can effectively predict HCC without interference from other diseases. LC-SPIK is a more sensitive and specific biomarker than the current existing biomarker such as AFP, particularly in detecting early stage HCC.

Company Description: We are currently developing a new biomarker that is based on the quantitative assessment of a protein called LC-SPIK (Liver cancer-Serine Protease Inhibitor Kazal), which differs from normal pancreatic SPIK and is secreted only in cases of liver cancer. Using a monoclonal anti-LC-SPIK antibody IMB-CA1, an ELISA test technology has been developed and we have assessed the performance of LC-SPIK in 146 clinical subjects thus far. The biomarker is more sensitive and specific and can diagnose Liver Cancer earlier than the current standard of AFP.



Marietta, Georgia http://www.inlighta.com/	Inlighta Biosciences LLC Biotechnology for Healthcare, Diagnostics
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Technology Name: MRI Contrast Agents

Technology Description: The lead product is a targeted MRI contrast agent for CXCR4 enable detection of various primary cancers and liver metastasis from uveal melanoma and ovarian cancers. The developed platform technology leads to design MRI contrast agents that specifically target to various major biomarkers that advance current blood pool MR imaging to molecular imaging. These MRI probes exhibit unique capabilities including disease bio-marker dependent imaging contrast enhancement and desirable penetration of tumor tissue and endothelial boundary.

Company Description: Inlighta Biosciences LLC founded on 2012 focuses on the transnational research of developing protein based MRI contrast agents. We are aiming on developing novel imaging reagents designed to fill in major gaps in medical diagnostics for early detection, monitoring disease progression and recurrence, image-guided intervention, and evaluating drug delivery and therapeutic treatment by non-invasive Precision Imaging. Our patented reagents and platform technology provide accuracy for a broad range of human diseases including various types of cancer, metastasis, and fibrosis for preclinical and clinical applications.

St. Louis, Missouri http://www.intactgenomics.com	Intact Genomics, Inc. Pharmaceuticals, Research Tools, Biotechnology for Healthcare, Industrial Biotechnology
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Technology Name: FAC Technology

Technology Description: The FAC (fungal artificial chromosome) technology enables to capture an entire set of full-length gene clusters of secondary metabolites from any fungal strains and species, and move into the engineered Aspergillus nidulans strain for heterologous expression and drug discovery. The FAC technology overcomes the current technical need of working with different fungal strains and species. It also targets with all genes within a gene cluster avoiding partial solution. The FAC technology enables in vitro precisely gene modification to activate silent SM gene clusters for heterologous expression, which is the other key factor responsible for the severe limitations to the sustainable production of therapeutics.

Company Description: Intact Genomics, Inc., founded in 2013, develops high-quality life science research products and technologies for DNA amplification, cloning, sequencing, genomics, synthetic biology, and function studies. Intact Genomics is building a novel fungal drug discovery pipeline with the fungal artificial chromosome technology*. Intact Genomics is also developing large DNA cloning related technologies can be



licensing to others, and the fungal drug discovery pipeline will enable large-scale natural product and drug discovery first-time with substantial business opportunities.

<p>Research Triangle Park, North Carolina http://jerichosciences.com</p>	<p>Jericho Sciences, LLC Diagnostics, Pharmaceuticals, Research Tools</p>
<p>Technology Name: HIV Therapeutics and Diagnostics</p> <p>Technology Description: The commercial goal is a candidate small molecule providing a clinically meaningful synergistic effect as an integral part of cART. Jerichos drug candidate will greatly reduce cART dosing and adherence burdens and possibly result in a dramatic paradigm shift in HIV therapeutic treatment toward reducing the source of persistent virus infection in the latent reservoir. We are also developing a clinically relevant, corresponding diagnostic assay for personalized clinical management of antiviral therapeutics intended to reduce the size of the HIV latent reservoir. This technology assesses patient-specific responses across comparative conditions using multiparametric measures from the full peripheral blood immunologic compartment.</p> <p>Company Description: Jericho Sciences develops novel antiviral therapeutics and personalized diagnostics to specifically address the limitations of current combination antiretroviral therapy (cART) in the clinical management of HIV-1 infection, with the goal of reducing the persistent reservoir of latently-infected cells, toward a functional cure.</p>	
<p>Atlanta, Georgia http://www.kdhrc.com</p>	<p>KDH Research & Communication Healthcare IT, Virtual Learning</p>
<p>Technology Name: KDH Research & Communication</p> <p>Technology Description: Allowing organizations to use an online web-based toolkit to learn how to formulate, implement, and evaluate promoters programs that provide health information and services to low-income Latinos. This bypasses the logistic and cost burdens of in-person trainings and allows a standardization of capacity-building for organizations across the country.</p> <p>Company Description: KDH Research and Communications is an award-winning, public health and communications company located in Atlanta, Georgia. KDRC takes highly scientific information and research and uses it to develop, easily digestible and actionable information for specific populations with unique or niche public health needs. KDRC specializes in four specific focus areas which are: drug abuse prevention education, vulnerable populations, Latino health, and organizational studies. In addition to developing,</p>	



evaluating, and disseminating our NIH-funded programs, we also serve as evaluation and scientific contractors for several established advocacy agencies and research institutes.

Clifton Park, New York http://www.kitware.com	Kitware, Inc. Health IT
<p>Technology Name: Medical Computing Software</p> <p>Technology Description: This strategically important initiative introduces our leading-edge computing tools into the neurophysiology community.</p> <p>Company Description: Kitware develops open source, scientific computing tools.</p>	

Brooklyn, New York http://www.mirimus.com	Mirimus Inc. Biotechnology for Healthcare, Research Tools
<p>Technology Name: RNAi and CRISPR/Cas9 animal models</p> <p>Technology Description: With the advent of RNAi and more recently CRISPR/Cas9 technologies, the speed and precision in which genetically engineered mouse models of disease can be created is unprecedented. Mirimus has brought RNAi technologies to its peak, by increasing potency and reducing off-target effects of RNAi, such that it can be effectively exploited to preclinically mimic drug therapy in live mice. By combining CRISPR/Cas9 with RNAi-mediated gene silencing, we now have an advanced platform to perform target validation and toxicity assessment of novel candidate targets in vivo, moving our models into a new era of reliably predicting patient outcomes.</p> <p>Company Description: Mirimus is engaged in the design, development and pioneering of new genome editing technologies to develop animal models that are crucial for the preclinical evaluation of new therapeutics. We are a high-tech business unlike any other with expertise in RNAi technologies critical for development of</p>	



rodents that can pave the way we develop drugs, by pin-pointing potential toxicities and preventing harmful side-effects of therapeutics in patients. We are revolutionizing the creation of animal models with introduction of CRISPR/Cas technologies for development of models beyond mice, such as rats.

Research Triangle Park, North Carolina http://www.nirvanasciences.com	NIRvana Sciences, Inc. Research Tools
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Technology Name: Red and Near Infrared Fluorescent dyes

Technology Description: Synthetic fluorescent dye chemistry platform for red and near infrared dyes that will enable new, enhanced spectral properties that will be useful in life science applications such as flow cytometry, microscopy, DNA-based probes, and small animal imaging.

Company Description: NIRvana Sciences is a spin-out from NC State University that is commercializing novel red and near infrared fluorescent dyes with very narrow emissions into life sciences markets that continue to demand greater multiplexing performance. Our entry market is flow cytometry with secondary market opportunities that could involve microscopy, photoacoustic imaging, or DNA-based probes. NIRvana is a dye chemistry company seeking to partner with companies who can use our new dyes to expand their reagent portfolios as well as possibly increase the multiplexing performance of related hardware systems.

Cincinnati, Ohio http://osmicenterprises.com	Osmic Enterprises, Inc. Medical Devices
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Technology Name: Screening Test for Alzheimer's Disease

Technology Description: The OLFACT Test Battery (OTB) is superior to all current tests for the following: 1. the OTB produces olfactory stimuli via an inexpensive miniature olfactometer that can generate olfactory cues in a very reliable, precise manner. 2. administration of the tests and recording of responses is accomplished by a computer. 3. a tablet APP has been developed that allows the test to be given anywhere in the world and the data uploaded to a centralized database In the Cloud.

Company Description: Osmic Enterprises, Inc., developed and is now validating the OLFACT Test Battery, a series of computerized tests to assess olfactory function for use as a screening test for Alzheimers disease. Olfactory stimuli are generated via a miniature olfactometer. The tests are now available as a smartphone/tablet -based APP. Data from the APP is streamed to a Cloud-based centralized database. Data from multiple olfactometers, located anywhere in the world, can be collected in real time in the database for



immediate inspection and analysis. The test battery is now being validated in collaboration with two national Alzheimers Disease Research Centers.

<p>Huntington, West Virginia http://www.progenesistechnologies.com</p>	<p>Progenesis Technologies, LLC Industrial Biotechnology, Biotechnology for Healthcare, Medical Devices</p>
<p>Technology Name: Biopolymer Bacterial Alginate</p> <p>Technology Description: Progenesis has developed genetic changes in the bacterium enabling high and stable alginate production while eliminating potential deleterious products and pathogenicity. Additional genetic engineering will customize the composition of the biopolymer overcoming the limitations of seaweed. Users will select the type of alginate best suited for their pharmaceutical and clinical application.</p> <p>Company Description: Progenesis is bioengineering Pseudomonas bacteria to produce the biopolymer alginate. The current source of alginate is brown seaweed. However due to global warming its yields are decreasing. Further, its alginate composition is fixed and cannot be easily changed to improve performance of the polymer. Progenesis is engineering bacterial alginate with unique ratios of monomer subunits not found in seaweed. While alginate has many applications ranging from industrial lubricant, food and personal care additive, Progenesis' phase II award is focused on improving alginate hydrogels to help speed wound healing, especially in patients such as diabetics with chronic slow healing wounds.</p>	

<p>Pittsburgh, Pennsylvania http://www.qrono.com</p>	<p>Qrono, Inc Pharmaceuticals</p>
<p>Technology Name: Cancer Immunotherapy / Advance drug delivery</p> <p>Technology Description: QR206 is a paradigm shifting immunotherapy and the lead product in a new category of cancer therapies based on Qronos QARRUS platform. QARRUS localizes therapy using a direct injection into the tumor and micron-sized drug particles that hijack the natural reflex of tumor-associated macrophages to eat bacteria. This unique drug delivery strategy simultaneously halts tumor growth and disrupts the protection of its macrophages, which are key contributors to metastasis and recurrence.</p> <p>Company Description: Qrono Inc is a specialty pharma company with a research, funded cancer therapy platform focused on helping the 80% of patients without an effective treatment option. QARRUS, our platform, safely targets chemotherapy to cancer stem cells and tumor associated macrophages, disrupting tumor growth and metastasis. Qrono has demonstrated proof-of-concept for its lead product, a QARRUS-epothilone therapy (QR206), in two head and neck cancer (HNC) models. QR206 is progressing through IND</p>	



studies, culminating in a feline oral cancer veterinary trial and will be ready for clinical translation to patients with treatment-resistant, virus-negative HNC in 18 months.

Burgess, Virginia http://www.reessi.com	Research, Evaluation and Social Solutions, Inc. Healthcare IT
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Technology Name: Virtual World and Serious Games for Adolescents

Technology Description: The technology contains several primary innovations: (1) Use advanced digital media strategies with games, nested story lines, social interactions and off-line assignments to impact participants choices, behaviors and real-life outcomes. (2) Our curriculum can be implemented with fidelity while requiring minimal program staff time and resources. (3) Provides a scalable and relatively low-cost solution. (4) The REESSI staff will have the capability to regularly update the information and components, accommodating rapid changes in technology.

Company Description: REESSI’s mission is to investigate, design, build, evaluate and diffuse pragmatic digital learning and communication solutions that lead to cumulative and sustained health in under-resourced populations. We meet this mission through three focused corporate goals - 1) to use new digital media to support adolescents from under-resourced families and communities in a positive transition to adulthood; 2) to use mobile technology to improve patient-centered care through patient education; and 3) to use digital education and virtual social networking mechanisms to build the competence and capacity of public health workers.

Santa Fe, New Mexico http://www.spinceptica.com	SpinCeutica Pharmaceuticals
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Technology Name: New Antibiotics for Multi-Drug Resistant Tuberculosis

Technology Description: Our technology is a stable isotope labeled existing TB drug that overcomes drug resistance through an unprecedented mechanism. We plan to achieve regulatory approvals for this compound to treat drug resistant TB.

Company Description: SpinCeutica develops stable isotope labeled versions of existing tuberculosis drugs to overcome antibiotic resistance and potentiate therapy.



Lexington, Kentucky http://www.nanoRANCH.com	UHV Technologies, Inc. Research Tools
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Technology Name: Low Cost Online Real Time Metal Analysis during Pharmaceutical Manufacturing

Technology Description: During this SBIR contract, an inexpensive and easy to use online real-time metal analysis (ORMA) instrument has been developed that is capable of measuring low ppm levels (at least <5 ppm) of a range of metallic contaminants (Pd, Rh, Cu, Zn, Fe and Ir) during manufacturing of pharmaceuticals in powder, liquid, tablet & gel forms. This modular and wireless instrument can be co-located with the reaction and purification equipment where metal removal is performed, and preferably, amenable to continuous monitoring of metal impurities associated with continuous pharmaceutical manufacturing operations.

Company Description: UHV (aka nanoRANCH) is a 23 year old high tech company (~20,000 sq.ft in TX and KY) specializing in nano-materials, electronic devices and equipment/instrumentation manufacturing. The business model involves the steps of (i) Govt. funded R&D, (ii) in-house prototyping, demonstration and small scale manufacturing and (iii) commercialization through spin-offs and strategic partnerships. Past successes have included an IPO, \$22M in VC and over \$15M in combined sales/R&D revenue. Currently, our core technology involves innovative x-ray fluorescence (XRF) elemental analyzer for multiple products, including scrap metal sorters, mercury emissions monitors for coal power plants, and pharmaceutical metal analyzers (this project).

Richmond, Virginia http://vенеbio.com	Venebio Group, LLC Healthcare IT
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Technology Name: Venebio Opioid Advisor

Technology Description: Venebio Opioid Advisor (VOA) is a predictive clinical decision support tool that uses an opioid patient’s medical history to construct a risk profile and predict, with 90% accuracy, their likelihood of experiencing serious life-threatening prescription opioid-related overdose. VOA can be embedded at the point of care in a prescribers EMR system, or can be utilized in a population health mode for larger populations, such as for health payers or Medicaid programs. The tool automatically generates practical, personalized, evidence-based guidance for physicians regarding risk-reduction interventions.

Company Description: Venebio Group is a life sciences consultancy providing comprehensive, customized services to corporate, academic, government, legal and other health-focused entities. Through its network of top scientists covering an array of specialties, Venebio offers customized project teams to ensure optimal



solutions in addressing complex life sciences problems. Venebio also develops evidence-based, personalized, predictive clinical decision support algorithms, two of which have been funded under three SBIR grants.

Richmond, Virginia	WynnVision, LLC Medical Devices
<p>Technology Name: Antimicrobial Urinary Catheters</p> <p>Technology Description: WynnVision LLC is developing a new approach whereby catheters are overcoated with a thin film that kills bacteria but is compatible with human cells. The stability of these nanofilms allows for long-term antimicrobial effectiveness. Deposition of biocidal and biocompatible moieties is being optimized for large scale manufacturing. Initially, the catheter target is silicone, but the approach is general and may be applicable to other catheter materials.</p> <p>Company Description: WynnVision, LLC develops anti-microbial but bio-compatible coatings to prevent catheter related infections. Customary methods include the release of silver (cytotoxic) and administering antibiotics (promote bacterial resistance). WynnVision's new approach produces catheters that kill bacteria but are compatible with human cells. Our interdisciplinary team has achieved bio-materials engineering breakthroughs in economical chemical deposition and processing. Catheter acquired urinary tract infections are the biggest cause of hospital acquired infections (60%). WynnVision products will address a \$3B catheter market and have a major impact not only by improving patient outcomes but by reducing the rapidly rising cost of medical care.</p>	

Durham, North Carolina http://www.xonamicrofluidics.com	Xona Microfluidics, LLC Research Tools
<p>Technology Name: Neuroscience</p> <p>Technology Description: Xona's technology facilitates the study of neurons in culture. Through phase II funding we have developed new devices that are preassembled and easy-to-use. Xona currently sells a silicone-based device that the end-user then assembles to a bottom glass surface. Over 500 labs world-wide use these devices, thus there is considerable market demand and making the device more user-friendly will likely increase the number of units sold.</p> <p>Company Description: Neuron-cell culture is critical for neuroscience research, testing and drug development. Xona Microfluidics, LLC ("Xona") makes and distributes patented, disposable neuron-cell culture devices which facilitate testing and research with neurons. While traditionally available culture platforms result in random and chaotic outgrowth of processes, Xona's devices allow separate examination of soma, axons and dendrites.</p>	



Over 500 labs worldwide use these devices. Xona's overall mission is to provide tools that enhance experimental capabilities for neuron-cell culture. With patents in the U.S. and Europe, Xona continues to grow and make advancements in manufacturing and design that serve customers' demands for reliability and ease-of-use.

<p>Ann Arbor, Michigan Http://www.xorantech.com</p>	<p>Xoran Technologies Medical Devices</p>
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Technology Name: Point of Care Cone Beam CT

Technology Description: The product in development incorporates advanced imaging hardware and software into a highly compact and portable CT scanner platform with a level of image quality suitable for imaging of the soft tissues of the brain and associated neurological conditions. This will allow point-of-care head and neck imaging to be performed intraoperatively for neurosurgical procedures as well as enable efficient and safe monitoring patients in the intensive care unit.

Company Description: Xoran Technologies is an award-winning medical device innovator and adolescent stage small business with core competence in compact cone-beam CT technology and a corporate mission to improve the quality and efficiency of diagnosis and treatment via point-of-care imaging systems. Our flagship product MiniCAT has performed millions of diagnostic low-dose CT scans in otolaryngology and allergy clinics to date, cumulatively saving the US population thousands of Sieverts of patient radiation effective dose, as well as over 10,000 person-years of personal productivity.

<p>New York, New York https://www.wearshade.com</p>	<p>YouV Labs. Shade (aka YouV Labs, Inc.) Medical Devices</p>
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Technology Name: Shade, Wearable UV Dosimeter

Technology Description: The technology is based on a proprietary detector (trade secret semiconductor chemistry + device packaging). This distinguishes Shade from previous sensors that were either not real time, such as film and polysulphone detectors, or not accurate, such as the discontinued Microsoft Band which measures visible light and inaccurately guesses at UV. Well designed and insightful mobile applications, built on the principles of behavior change, will be essential to the companies success.



Company Description: Shade is the first wearable UV sensor + mobile app that is accurate and sensitively measures UV. Designed for adjuvant care to the UV sensitive patient, shade tracks current and total personal exposure and provides realtime alerts. Shade is in clinical studies and began shipping Feb 2017.