

## FORCE PROTECTION AND MEDICAL

BLUF TITLE	BLUF STATEMENT
A-Lid	<p>Why overdose on a prescription when you have A-lid?</p> <p>A-Lid,</p> <ul style="list-style-type: none"> <li>• Allows user to know the number of times, pill container has been opened</li> <li>• Prevents potential medicine overdose</li> <li>• Facilitates dosing compliance</li> <li>• Avoids user guessing whether pill has been taken or not.</li> </ul>
Point of Trauma Intervention: Force Protection, Resilience, and Saves	<p>911Medical Devices (911MD) has patented on-demand thermal dressings to fill major capability gaps in acute trauma care to protect the Warfighter and improve U.S. Armed Forces greatest threat, which is injury. ODTD are field dressings with a thermal component to rapidly, safely treat a variety of primary traumas (musculoskeletal, hemorrhage, burns) and secondary injuries (infection, cerebral hypoxia), at the point of acute trauma. We combined Johnson &amp; Johnson's first commercial product, sterile dressings and reinvention of the 65 year old instant cold pack to produce 911MD first and novel thermal dressing for a wide array of traumas.</p>
Acosta Medical Group - UroGard	<p>Acosta Medical Group provides high quality incontinence products to improve the quality of care received, reduce community effort to support long-term care needs, and improve the quality of life of our customers.</p>
Universal Self-Retaining Surgical Retractor System	<p>Uncontrolled bleeding after injury is a major cause of death in both military and civilian patients, and surgical retractors are tools used by surgeons to facilitate bleeding control and prevent death as a result. Designed for both civilian and military operating rooms including austere and forward-deployed settings, our patented surgical retractor technology delivers a portable, non-table-fixed, self-retaining system resulting in superior hands-free exposure of the surgical field. Providing a unique combination of speed and functionality, our technology improves the ability of surgeons to rapidly control life-threatening bleeding in all operating environments, thereby saving lives of Warfighters and civilians alike.</p>
Advanced Technology Inflatable Protection System (ATIPS)	<p>Patented inflatable technology that provides 360-degree extreme protection for valuable, critical equipment in austere environments. Light-weight, flexible, bouyant and ultimately collapsible for space savings. A textile outer case combined with an interior inflatable bladder provides superior protection that conforms to the object and then collapses when not in use. Offers the soldier, sailor, law enforcement officer, etc. a practical means of protecting the gear they rely on without adding unnecessary weight or bulk in harsh environments. Easily</p>

	<p>collapses when deflated for space saving storage as gear is used and no longer requires the protective case/bag. Perfect for limited space environments such as deployment or ship-borne ops. Also shipping container. Our technology protects your technology.</p>
<p>Operator Communication System</p>	<p>Operator Communication System (OCS) is a new covert wearable ring communication system utilizing one's thumb (which has nearly identical ambulatory ability as one's tongue), providing a silent method of communication, unaffected by nearby sound or detection efforts. OCS works with legacy or the new CNR (Combat Net Radio) systems, iOS or Android civilian smartphones, or other computer systems, wirelessly &amp; at distance from them. It is important to know that while the initial building protocol phase of this device was a challenge, the value to our Brave WarFighters, Diplomats, and government/civilian personnel is the simple and intuitive function. Generation-1 at TRL6 now, allows for "SOS", cell call control, full fitness capability with memory, device APP control and "find my phone" feature. Generation-2 allows the tracing out of letters over the small raised disc for transmission. Generation-3 works together with vilal-sign gathering "EarAide" to automatically gather and transmit one's health status &amp; combines all data into a unique "BioGeoSignature" of the wearer. In addition we have discovered that direct silent communication appears to produce an incremental increase of intuitive communication, perhaps as a result of the bypass of audible speech.</p>
<p>KneeStim – Enabling Accelerated, Mobile Physical Rehabilitation for Active Individuals</p>	<p>Articulate Labs' wearable medical devices accelerate joint rehabilitation by augmenting a patient's everyday muscle usage with electrical muscle stimulation. By leveraging everyday activity to actively combat muscle atrophy and inhibition related to injury, chronic conditions, or surgery, our devices make physical rehabilitation more accessible, convenient, and effective. The first application of this technology, KneeStim, will intelligently target and stimulate quadriceps (thigh) musculature during gait to accelerate muscle strengthening and re-education. A goal for KneeStim usage is to help return post-arthroplasty patients return to full mission-ready status faster and with less oversight.</p>
<p>STRATUSFORM producing IFAST, XFAST, and RFAST</p>	<p>RYSE is an orthopedic and sports bracing provider. We create and implement technologies based on biomechanics and the needs of our end users. We build these unique technologies into both our off-the-shelf and customizable bracing products to mimic natural joint movement and give pre- or post-injury protection and support needed for elevated performance. Our customizable, 3D-printed bracing is available through STRATUSFORM, our cutting-edge, patent-pending scanning technology.</p>

<p>Therapeutic Garments: Provide Comfort in Any Care, Anywhere Apparel Supportive Throughout the Recovery Journey</p>	<p>Warfighters suffering traumatic injuries undergo a series of life-saving treatments and grueling rehabilitative efforts. AudreySpirit Therapeutic Garments are specialized apparel providing comfort during any care, anywhere: hospital, clinic, rehab, home, or upon return to desk duty. Looking like a regular shirt but unlike typical clothing or hospital gowns, ergonomic fasteners are positioned to promote independence and self-care. This assistive technology finally equips warriors throughout their healing mission. As resilient as the warfighter, this apparel allows full accessibility throughout medical treatment, rehabilitation and recovery, maintains mental health, accommodates prosthetics, and eases clinical and family caregivers' tasks.</p>
<p>IRIS-L: An Intelligent Retinal Imaging System for Laser Eye Injury</p>	<p>Laser-induced ocular injuries are becoming more common on the modern battlefield. IRIS-L is a handheld medical decision support tool that assess these injuries. The system uses artificial intelligence to detect if retinal damage has occurred, determine if that damage was caused by a directed energy device, and predict the long-term effects on the patient. The diagnostic exam is battery powered, works offline, and can be administered by any combat medic, allowing service personnel to be diagnosed and treated closer to the point of injury.</p>
<p>VirtuaCare Platform for Musculoskeletal Telerehabilitation</p>	<p>Musculoskeletal (MSK) injuries in the military pose an ongoing health risk to the Warfighter and result in 25 million days of limited duty per year for service members which also leads to billions of dollars in lifetime disability costs. MSK injuries are recognized by the Department of Defense, multiple service branches, and Commands as a threat to troop readiness and mission performance. Band Connect's VirtuaCare™ platform is addressing this challenge to the health and readiness of the Warfighter by providing physical therapists a telerehabilitation tool to extend the high-quality in-clinic experience to a non-clinic environment via asynchronous virtual care in order to increase access to care, improve treatment adherence, and reduce return to duty timelines.</p>
<p>Fruitful Yoni™: Plant-based Feminine Care</p>	<p>Fruitful Yoni Feminine Care Products are uniquely designed for women who are seeking to be proactive in their Vaginal health, Menstrual health, Sexual health, and Reproductive health. Unlike others, our Sanitary Pads are 100% Natural and safe, using sustainable resources such as Industrial Hemp and Pure Cotton for enhanced comfort and maximum absorption — reusable for affordability or disposable for convenience. Eliminating chemical burns, reducing painful cramping, lowering risk of Yeast and Bacterial infections, AND preventing Cervical Cancer, we empower women to be Mindful of how we care for our Body, to promote Wellness and Longevity. Made in Oklahoma.</p>

<p>An Innovative Software Solution to Optimize Medication Prior Authorization</p>	<p>An increasing number of medications are now requiring prior authorization (PA) by physicians, who spend 10-20 hours weekly completing them. 92% of physicians report that the PA process delays care. 64% of patients wait up to three days to access medication, and over a third of medications requiring PA are abandoned. By 2020, 90% of top-selling medications are projected to require PA. Breezmed automates the medication selection and prior authorization process, increasing provider revenue, decreasing provider burnout and improving patient outcomes.</p>
<p>CanaryBox® – smart music for the OR</p>	<p>CanaryBox® improves focus and communication in medical operating rooms during life-saving situations. By integrating an OR's existing audio system and vital signs from the patient monitor it automatically reduces music volume if the patient condition deteriorates. CanaryBox assures that normal vital signs are a precondition for music to be played in any surgical operating room.</p>
<p>Exosome purification platform enabling next generation diagnostic and therapeutic products.</p>	<p>Clara Biotech is a Kansas City based biotechnology company building an exosome isolation and purification platform that solves a huge roadblock in exosome harvesting to enable the next generation of biotech. Clara's ExoRelease™ technology has the potential to enable the biopharma industry to create future breakthrough diagnostics and medicines with the purity, potency, safety and high quality desired by Regulatory Authorities, like the FDA. Clara provides biopharma companies a path to solve the major problem in exosomes today - purification.</p> <p>The Company's first product, ExoRelease Lab Kit allows researchers to isolate and purify exosomes from any fluid (e.g., plasma, cell culture media, urine, etc) in their own lab, for any use (e.g., diagnose or treat a disease or exposure)</p>
<p>Nasoesophageal obstructer (NEO)</p>	<p>The Nasoesophageal obstructer (NEO) is an airway device designed to protect and maintain a casualties' airway during medical care. It is designed to prevent airway obstruction from the tongue and prevent aspiration of gastric contents into the lungs. Airway obstruction is the 2nd most common cause of preventable combat deaths and aspiration of gastric contents remains the leading cause of airway management related deaths. This patented technology resists dislodgement, even with extreme patient movement. It is lightweight, easy to use, and extremely versatile. These features allow the NEO to improve warfighter survival making it easier for providers to address injury and lethality closer to the point of injury.</p>

<p>Rapid SARS-CoV-2 live virus testing for medical + environmental detection + in-vitro diagnostics</p>	<p>CodeClear Ventures Inc., is creating the next generation of rapid diagnostic tests ideal for living safely in a world of infectious diseases, STDs, food borne illness and COVID-19. The company developed a platform of non-toxic color-changing nanoparticles visible to the naked eye and requiring no lab equipment to enable rapid detection. CodeClear has partnered with leading tech design/engineering firms to create a single sample multiplex diagnostics tool capable of detecting multiple threats from infectious disease and environmental contamination. The veteran-led company recently was awarded a NIH RADx grant for COVID-19 rapid testing using patented quantum dots and has secured a cooperative research and development agreement (CRADA) with the U.S. Army Combat Capabilities Development Command (CCDC) Chemical Biological Center.</p>
<p>FEAM: Dramatically Better Protection Against Harmful Vibration and Impact Energy</p>	<p>Blade pass frequency in turboprop &amp; helicopter aircraft generates heavy vibration. Pilots and crew are subjected to harmful Whole-Body Vibration (WBV). For short term exposures, WBV hurts force readiness by worsening fatigue &amp; lower back pain. For exposures over the long term, WBV is linked with debilitating spinal, neuro and other chronic diseases. Currently used aircraft seat foam cushion materials attenuate little WBV vibration. Unlike current foams, Corsair's Fiber Energy Absorbing Material (FEAM) can absorb vibration and impact energy in X, Y and Z dimensions. FEAM can be customized to optimally handle specific aircraft frequency conditions.</p>
<p>Zitches™, Taking the pain out of skin closure</p>	<p>Zitches™ is patented (US 2015/0313593) skin closure device that allows rapid precise skin closure without traumatizing the skin. The device is FDA class I, which means it is very low risk and has the least regulatory controls. Unlike the primary competitor, stitches, there is no puncturing of the skin nor risk of needle sticks, which allows safer and faster closure. Unlike staples and glues, Zitches™ does not trade off precision of closure for speed. In short Zitches™ is skin closure better, faster, and cheaper.</p>
<p>Narwhal Skin</p>	<p>CSM will provide divers the ability to conduct operations in extreme weather conditions while still being safe and effective, boosting their morale and commander's confidence.</p>
<p>YELLOWJACKET Attributable NanoUAS</p>	<p>Darkhive's YELLOWJACKET drone is an ultra light-weight, low-cost, NDAA/Blue sUAS compliant nanoUAS integrated directly with the Tactical Assault Kit (TAK) family of systems and designed to support both single user and swarming functions. Darkhive's software stack was built to enable any user to pick up and begin instantly using the platform with little-to-no training required, making the YELLOWJACKET ideal for the joint operations environment with multi-national partner force elements.</p>

<p>Oumen+- Advanced Physiological Monitoring for Performance Optimization &amp; Bodily States</p>	<p>Devali's Oumen+ is an advanced physiological monitoring system that uses our proprietary sensors and algorithms to monitor cardiovascular, respiratory and nervous system function along with core body temperature, hydration, stress, sleep quality and human adaptability from the comfort of your socks. Partnered with Thorlo, the only clinically proven socks to reduce foot fatigue, pressure, and wick moisture, we are creating the most comfortable and comprehensive medical grade monitoring solution on the market. With multiple customizable user interfaces, the data can be used for anything from performance optimization to medical monitoring- recognizing everything from nervous system adaptability changes (PTSD) to Arrhythmia.</p>
<p>Interoperable &amp; Secure Medical Data Transfer Network Supporting Rapid Deployment</p>	<p>Rapidly deploy an interoperable medical data transfer network supporting collaboration across medical organizations and Telemedicine. Transfer DICOM® (Digital Imaging and Communication in Medicine) studies, medical images, and DICOM'ized medical records / data between organizations with disparate IT systems, IT policies, Picture Archiving and Communication Systems (PACS), Vendor Neutral Archives (VNA), and clouds. Transfer medical data in the DICOM® format via Secure File Transfer Protocol (SFTP) packets that are managed, encrypted, and compressed and that are resilient to intermittent internet connections. Transfer medical data without a Virtual Private Network (VPN) and without overloading an organization's existing network.</p>
<p>Eye Drops Simplified: Improving Outcomes, Improving Safety</p>	<p>Dropless Dropaids has developed a versatile applicator that enables the warfighters to effectively instill eye drops seamlessly, on-the-go regardless of body position, manual dexterity, or visual acuity. Dropaids are patented and precise, applying eye drops independent of gravity, away from line of sight, while improving and reducing waste. Because they are disposable, they reduce the risk of inadvertent eye dropper contamination which could lead to viral outbreaks and hamper unit readiness. Durable and compact, portability is not a concern as these featherweight, pocket-sized flat-packs can fit anywhere, making them mission-ready for every setting from clinical to rapid deployment situations.</p>

<p>Immediate Clean Air Solutions</p> <p>Retractable, Ventless, Deployable Isolation Booth– Anytime and Anywhere</p>	<p>Duroair’s current military and commercial users report to us that our retractable ventless air quality systems allows repairs to Warfighter assets anywhere and anytime saving mission critical time, energy, operating costs and capital costs.</p> <p>Our systems are not vented and are on wheel making them mobile. That allows immediate repurposing of any area within any building to a clean room, preparation room, dust/ blast control room or coatings application room. This saves on the need to build new facilities and thereby reduces capital cost investment. Retractable isolation booths are extended only when needed to isolate a process. When isolation is not required you can retract the isolation booth and return the area to production. The system is then available to be moved to wherever required within the building, to a new building or a forward operating base. Our 250 plus customer installations were on budget, on time, every time.</p>
<p>ESP-DLux™ - Automated Germicidal Light Infection Control/Biosecurity System</p>	<p>The ESP-DLux™ provides continuous disinfection of air and periodic disinfection of hard surfaces using a patented system combining industrial-strength UVC light, sensors and wireless controls. With the ESP-DLux™ installed in a facility, a continuous log of disinfection is maintained, documenting that dangerous pathogens including COVID-19 have been eradicated. The ESP-DLux™ is offered in 2 models to facilitate different needs: the stand-alone Series 100 is designed to be rapidly deployable, while the Series 300 model features advanced Safety-Net™ technology, allowing multiple UVC fixtures to be networked and wirelessly controlled throughout an entire facility. Both models provide powerful, automated UVC disinfection.</p>
<p>Telemental Healthcare</p>	<p>Encounter Telehealth provides behavioral and mental healthcare for distant communities and patients over a HIPAA-compliant video platform. Patients are treated for depression, anxiety, PTSD, substance abuse and severe mental illnesses (schizophrenia, bi-polar disorder, major depression). New patient evaluations, follow-up medication management, talk therapy and staff training are conducted by Encounter providers. Providers are all licensed and board-certified Psychiatry Mental Health Nurse Practitioners, Certified Social Workers and Licensed Mental Health Professionals.</p>
<p>Englover Glove and Garment Donning and Contaminant Analysis</p>	<p>Englover is a patented system that automatically dons medical and protective garments (gloves, foot coverings, hoods). We have patents pending for safe and automatic removal of those garments and their testing for pathogens, toxins and contaminant evidence. Data from our system will map contaminants of interest for both epidemiology and forensics purposes. We offer garments with greater protection from biological, chemical and radiological sources.</p>

<p>Osteoinductive Orthopedic Implants Using Smart Materials</p>	<p>Bone healing can be challenging when there are large gaps between broken bones or if the patients are tobacco users or diabetic. Evoke Medical has developed a platform technology that improves quality and speeds up bone healing for all patients using motion-activated DC electrical stimulation embedded directly into the orthopedic implant designs. While any orthopedic implant could benefit from use of this technology, Evoke Medical is targeting spinal fusion implants and intramedullary rods for long bone fracture fixation for their first product lines. Soldiers who suffer lower back ejection trauma and IED explosion injuries to lower extremities could benefit greatly.</p>
<p>Trinitas - Universal Remote Testing and Identification Device</p>	<p>Currently in this world, even with and after covid, it is clear that the speed and obstacles in the way for reliable testing results will remain. Also this world currently looks at problems from an incorrect view: software, testing, communications, processes, and so on. What if we were to instead understand the problem and provide a complete solution instead of the other way around.</p> <p>Trinitas is the future, providing a solution to a problem. We will provide to the user (think meat processing plant, schools, Pharma, a mom/dad in the home, etc.) the ability to run a test (think STD, E.coli, bio-attack, fu/covid, CBC, etc.) with clinical results in around 30min and then display those results in real time to a social media platform to make correct decisions.</p>
<p>Far UV Countermeasures for Infectious Wounds</p>	<p>Far UltraViolet (UV) light provides more effective, safer and easier to use countermeasures for infectious disease.</p>
<p>FBB BioMed - Blood test for measuring and predicting disease severity</p>	<p>Our blood test for disease severity is a breakthrough for helping clinicians make critical medical decisions on which individuals are at risk of developing severe symptoms, rendering them potentially unable to perform their duties. Because we look at the immune response to pathogens, this blood test should have wide applicability for acute diseases we know and those diseases that come from novel pathogens. We have run proof-of-concept studies for five distinct diseases, all of them successful, providing hard evidence of our technology's utility. Our first product will be a novel Disease Severity Test for COVID-19.</p>



<p>Using Pürlin will eliminate up to 33% or more of the Laundry Load in Base Operations and Deployed FOBs</p>	<p>Our environmentally sound and sustainable linen products support the warfighter. Pürlin bed and bath linens eliminate the need to launder and maintain traditional linens. They are single-person and one-time use, super-soft, hypoallergic, and 100% recyclable. Our linens disrupt a 150-year inefficient and resource laden linen laundering and maintenance process. First designed to eliminate the need for water in drought prone areas. Through the R&amp;D process we learned our single-use linens eliminate much more institutionally entrenched O&amp;M expenses than first believed. We are confident you can lower laundering and associated logistics budgets 33% or more annually. Our product is shelf stable and is packaged to take up only 25% of normal warehousing space and a like savings in transportation space. Easily, efficiently, and economically deployable to support contingency operations, natural disasters, or other emergency lodging needs. Service members never have to Sleep on Used Sheets Again - Ever.</p>
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<p>Business Intelligence Solutions for Government and Technology Mentoring</p>	<p>Business Intelligence for Federal Contractors</p> <p>Our custom BI dashboards can help organizations perform analysis, monitor key performance indicators (KPIs), and generate accurate reports. When an organization uses these tools to communicate their findings to stakeholders, they can turn their insights into action.</p> <p>Business Intelligence for Government</p> <p>Our customers include PEO Aviation for Engineering Analytics, for the Army Hypersonics program, AFWERX (we won a Phase 1 Air Force SBIR), Oak Ridge National Lab for Tech Transfer Analytics, numerous NASA projects, TVA and the SBA. We also provide, under Government contracts, programmatic support with our Business Intelligence dashboard to track spending and projections about the programs.</p> <p>Technology Development and Mentoring</p> <p>We help private industry develop and evaluate technology commercialization into the Federal Government. Our team of experts improves both speed and outcomes for companies navigating the technology transfer process. We help your organization through the process of taking an idea to market and creating financial value. We help you take it from mind to market by assisting you through the innovation process of developing a new product or service or creating a new business.</p>
<p>HeartToHeart CareApp</p>	<p>HeartToHeart’s platform connects with patients across lifetime health journeys. HeartToHeart’s disruptive approach integrates AI, cloud technologies, and remote collection of data from medical devices to engage clinicians, patients, and their families in ‘shared care’. Our technology addresses challenges from supporting patients with neurological conditions to reducing mortality related to pediatric cardiac surgeries from 20 percent to zero. The latter resulted in the 2017 Microsoft Health Innovation Award. Our vision is to reduce the cost of patient management and improve quality of life by optimizing the timely recognition of potential complications and declines in function, allowing cost-effective quality interventions.</p>

<p>Personal emergency alert notification system triggered by biometric sensors.</p>	<p>The most critical factor in responding to any personal emergency is getting to the victim as fast as possible. What if he or she is unable or being prevented from calling for help? Our patented emergency alert system uses one very simple human response to trigger an alert when you encounter unexpected danger... your heart rate. We have developed a fast and reliable method to automatically send a distress alert to the nearest responders including your GPS location in real-time, whenever your heart rate goes above or below normal or safe thresholds.</p>
<p>Dosing Lactate as Medicine to Treat PTSD and Depression</p>	<p>Lactate, once thought of as a waste product, is now understood to be the preferred energy source by the brain and serves as the principal metric for both the evaluation of and prescription of precision-based exercise. Using low-cost equipment with a small footprint, this technology evaluates the individual's body type to determine the optimal exercise(s) to release lactate; available exercise options include field-based Blood Flow Restriction. The quantity of lactate released over time is estimated so that there is a sufficient level of lactate to treat Post Traumatic Stress Disorder (PTSD) and Depression. Performance optimization is enabled through discrete, anonymous, and non-pharmacologic treatment of PTSD and depression.</p>
<p>Humane water treatment system</p>	<p>The system is designed for treating and removing pathogens, arsenic, iron, manganese and other organic and inorganic compounds in contaminated Water and supply potable water for drinking, cooking, showering, and lawn and gardening purposes. Natural and man-made environmental disasters continually threaten the world's fresh water resources, ecosystem and environment. Surface water is tainted by industrial and agricultural pollution and human and animal waste. Vulnerable populations across the world consume pathogens and contaminated water on a daily basis. Over-pumping of groundwater and harvesting of river water for agricultural irrigation and industrial use has caused groundwater arsenic poisoning in many underdeveloped nations.</p>
<p>Automatic Identification System for Warfighters (Smart Dog Tag)</p>	<p>This innovative technology relates generally to wireless communication devices and more specifically, integrating automatic identification technology with one of the most recognizable articles of military equipment: The United States Dog Tag. The current Dog Tag is antiquated as an identifier; providing only identification of the Warfighter's blood group and type. The primary purpose of the tag now is not to save lives but to identify bodies in the event of death or the inability to communicate. The i-TagL.ink modernizes the Dog Tag by allowing access to vital medical information in multiple military situations by potentially avoiding and reducing casualties during triage and the crucial Golden Hour of treatment.</p>
<p>14 Bit Monochrome Display – Full medical bit-depth</p>	<p>Immersion 3D Plus Company aspires to be at the forefront of display technology, bridging the gap between current technologies and the limits set forth by human vision. Our 14 bit monochrome display is designed to provide precision and quality viewing experience of medical images at full bit depth. The display uses digital light processing technology and custom software. Unlike competing displays, our provisional patented process</p>

	<p>shows more image information than other displays can. This display is ideal for displaying smooth grayscale images that can show the entirety of what medical imaging devices can capture.</p>
Testing for Pathogen Infections	<p>Microbial infections can cause operational disruptions and are the leading cause of death in hospitals today. Targeted antibiotic or drug treatment is necessary for efficacious treatment of these infections. Pathogen identification can occur quickly.</p> <p>However, susceptibility testing -screening a panel of antibiotics (AST) or drugs (DST) and dosages requires a minimum of 2 days, often 3-5d for most infections and up to 3-5 weeks for slow growing pathogens (e.g., TB). Our technology enables AST/DST results to be evidenced in hours.</p>
INdev	<p>The INdev Atomizer will compartmentalize and simplify all emergency medical treatments and large-scale vaccination efforts. Any medication suitable for intranasal drug delivery can be rapidly prepared, dose-adjusted, delivered (&lt;5 seconds), and consistently redelivered (&lt;1 second) as needed. Pain control, seizures, overdose, hemostasis, sedation, and hypoglycemia can be rapidly managed. Unlike the current standard of care, there are no needles, it is easy to use for operators at any skill level, and is non-invasive, portable as well adjustable for use in any patient position. The INdev Atomizer is a patent-pending, dual-commercializable intranasal multi-tool for military and civilian emergency medical settings alike.</p>
SURVIVOR Portable Ruggedized Telemedicine Technology with Low Bandwidth Operating Capabilities	<p>The SURVIVOR development program is a telementoring and telemedicine capability that can be deployed to far-forward environments and would directly benefit the forward deployed warfighter by allowing for a higher standard of care without the logistical challenges and tradeoffs that accompany evacuating personnel. The SURVIVOR is the only product today that can deliver a physician anywhere in the world in their life-size 3-D form, with direct eye contact while using minimal bandwidth, reducing risk of complications in transit, improving the likelihood of return to duty, and reducing the likelihood of long-term quality of life for injured warfighters.</p>
iC-R 100% Tech Advanced Smart Motorcycle Helmet	<p>Intelligent Cranium Helmets (ICH) is a tech company positioned to truly disrupt &amp; usher in a new era of advanced motorcycle safety with blind spot elimination &amp; Ai. Currently motorcycle riders (including a number of ICH team members) have a huge blind spot around them that has left them vulnerable and susceptible to life threatening accidents, however; ICH has solved this problem by integrating custom and currently available technologies into a motorcycle helmet that alerts and allows the rider to see danger before it's too late.</p>

Breather One	Pocket size device that monitors the effect of individual exposure to inhaled toxic and irritant materials on lung function during and after deployment, medical care team can access this information in real time via portal. A customized database and portal can be created to allow tracking of health outcomes from deployment to civilian veteran status. Having this information along with local environmental conditions in the geographic combat area would help to create a system that links location to individual exposure. Information on individual's lung function can be sent the Electronic Health Record
Watch Over My Rx™ Pharmacogenetic Matching of Drugs to Genetics	Each day 350 people die and 7,400 people are hospitalized from a medication prescribed by their doctor. This is because your response to a medication is in your DNA. Watch Over My Rx™ is a software tool that matches your DNA with the right medication and allows you and your doctor to watch over your medications as new medications are prescribed or as new information becomes known about your existing medications.
360 Degree Vision Enhancement WEearable System for Soldiers in Battle Zones	To minimize damage and improve the effectiveness of our soldiers in an adversarial environment, the proposed technology will allow the soldiers to have 360-degree vision even at night and eavesdrop to locals using the real-time translation of local language discreetly. The user will be in constant contact with his peers and the Command Center electronically for improved safety. Originally, the system was developed for Blinds and Persons with Visual Impairment. Now it is proposed to extend it to the battle zone.
YumDOD: Customizable, Culturally Relevant, Medical Nutritional Therapy for Warfighter Wellness	Obesity negatively impacts service-members' physical performance, alertness, and is related to long-term health issues including hypertension, diabetes, depression, and PTSD. These conditions contribute to lower productivity rates and pose a substantial risk to military readiness. YumDoD, a user-friendly mobile application that utilizes artificial intelligence to provide personalized medical nutritional therapy, has proven success in solving these issues in the civilian sector. YumDoD will facilitate connections between warfighters and registered dietitians who will provide culturally appropriate medical nutrition therapy plans that are customizable to ensure patient compliance, help reduce productivity costs, and increase alertness in service-members.
Assisted Tactical Combat Casualty Care (A-TCC)	Remote medical assistance via the augmented reality device is revolutionizing healthcare and poised to enhance survivability in fast-paced, austere environments, reducing human error by delivery of tailored patient vitals direct to the medic's Field of View. A practitioner of the operational arts requires a dependable, light-weight, adaptable Augmented-Reality (AR) device thoughtfully integrated with the operator's existing wearable architecture. The Department of Defense has already realized the value of AR through an Integrated Visual Augmentation (IVAS) Program agreement with Microsoft. However, the engagement of an industry juggernaut without competition endangers the value of equipment to an end-user, the operator.

<p>KRAMPADE</p>	<p>Krampade is a high-potassium sports drink that helps prevent and stop cramp formation. It also increases performance and speeds recovery. Because it supports more efficient sweating, its use helps combat heat stress. In short, Krampade is a revolutionary, novel approach to a sports drink offering a complete human performance optimization solution.</p>
<p>Shipping Container, Hydroponic, Climate Controlled Farm for Military Use</p>	<p>Leafy Green Farms designed a shipping container, hydroponics farm for the military. The farm provides nutrient-dense, hyper-organic produce to our service members year-round. The farm can easily be air-dropped, shipped, or delivered anywhere including disaster relief areas. The sustainable farming method improves the health and well-being of our troops as well as limits the risk associated with food procurement from a security and health standpoint. The farms produce an array of fresh produce that eliminates the degradation factor that occurs with traditionally imported produce. Our service members deserve the best nutrition to help them perform their best - mentally and physically.</p>
<p>LIFELINK+ for Substance Use Disorder and Behavioral Health Treatments</p>	<p>Lifelink+ is a HIPPA compliant patient management platform that leverages people, process, and technology to help in the recovery of those suffering from addiction. Lifelink+ is designed to increase efficiencies, improve patient outcomes, and enhance patient access and engagement utilizing today's digital technology. With features specifically developed to treat substance use disorders, our artificial intelligence platform utilizes real-time data to optimize the efficiency of treatment. Lifelink+ collects data and compares it against the patient profile to identify and predict anomalies that require intervention while engaging patients and providing motivation and guidance.</p>
<p>Pluripotent stem cells from peripheral nerves for cell autograft therapies</p>	<p>A population of quiescent pluripotent stem cells reside within peripheral nerves. The cells are easily propagated from a non-essential nerve into uniform cultures using restrictive media. The cells can be induced to differentiate into cells of all 3 embryonic layers. Until, this discovery, we have lacked a reliable source of pluripotent stem cells for clinical application, because non-self cells will be rejected without immunosuppression of the recipient patient. Pluripotent cells, iPCs, can be created by viral introduction of primitive genes, but these cells can undergo malignant transformation and other unwanted epigenetic changes. This new approach should allow a simple and safe method for self -to-self stem cell autograft cell therapies with minimal expected morbidity.</p>
<p>(NPB) Natural Protective Barrier "Virtual Glove" Technology</p>	<p>Our 100% Natural formula kills in seconds harmful bacteria like: Listeria, Salmonella and E-coli and it creates a protective barrier that coats your hands, like a virtual glove, so you are not in direct contact with any surface. It comes off when you wash it off.</p>

<p>Concussion Mitigation Helmet Liner System</p>	<p>The Concussion Mitigation Helmet Liner System increases the effectiveness of existing helmets and gives the “Warfighter” a much better chance of survival from Concussion level impacts and Traumatic Brain Injury. The electronic liner system has an embedded microprocessor which monitors physical conditions and determines if a concussion event has taken place. The Active Mitigation System is patented, lightweight, expandable and works to prevent serious injury. This makes it possible to keep a Warfighter in the battlefield longer and reduces the need for Medical treatment.</p>
<p>Drug Delivery Using Oral Dissolving Strips (ODS)</p>	<p>Our proprietary drug delivery technology, Oral Dissolvable Strips (ODS) provides access to live-saving, high-quality pharmaceuticals and nutritional supplements. ODS are very thin, stamp-sized films in which we embed pharmaceuticals. They dissolve easily in the mouth, don’t need to be swallowed with water or other liquids, they are fast acting and they are more palatable because of flavor masking. In addition, they are rugged, easy to transport, and difficult to counterfeit</p>
<p>Automated Video Monitoring for Fall Risk Reduction</p>	<p>Ocuvera makes an automated video monitoring system for use by hospitals to automatically monitor patients, predict their behavior, and notify nurses to prevent falls.</p>
<p>Remote Wound Care Prevention and Monitoring System</p>	<p>The Wound Care Prevention and Monitoring System (RWCPMS) is a patented weight-scale like platform uniquely designed for diabetic feet by properly blow dry between toes and soles of feet deterring bacterial growth. It has a built-in camera to capture images to facilitate proper foot inspection. The images are transmitted to a web platform for ongoing footcare prevention, deliver ongoing wound care and evaluate post-surgical care. RWCPMS replaces the ineffective antiquated way of observing diabetic feet and provides for an earlier medical intervention. The web platform can be shared with loved ones forming a team approach to that person’s care by allowing supervision of proper diabetic foot care thus managing our Veterans from the comfort of their home ultimately maximizing their quality of life and independence.</p>
<p>OXY-FIT WIRELESS/WIRED REUSABLE PULSE OXIMETER EAR SENSOR</p>	<p>OXY-FIT PLUS, the wireless or wired reusable pulse oximeter ear sensor is an adjustable ear sensor device. At less than 10 grams in weight, can be molded to fit any ear from child to adult. A small device made of memory material that encircles the ear, it secures the sensor to the ear without compressing the ear. It replaces the finger sensor, eliminates the artifact caused by movement of the finger. It is less expensive than the wired reusable sensors now clipped to the earlobe and is comfortable to wear with no tethering effect. Hospital patients can wear it for complete hospital stays to analyze spo2 levels, pulse rate with accuracy and reduce cross contamination that can protect medical staff and patients. Warfighters can wear the OXY-FIT PLUS during all operations, special or routine, to allow medics to analyze oxygen saturations, pulse rates and pulse rhythm that may be needed to treat trauma injuries, dehydration or other injuries in the field. Tested to be 97% accurate. F-22 Raptor, F35-A Joint Strike Fighter, F-35C, A-10 Thunderbolt and T6 Trainer pilots can avert the consequences</p>

	of hypoxia due to extreme 'G' force maneuvers by warnings given by the device when critically low levels of oxygen saturations are occurring during these maneuvers.
AI Application to Improve Patient Experiences and Clinical Outcomes	PatientsVoices identifies specific changes within a health care organization that will improve patient experiences and clinical outcomes. The technology accurately converts patient ideas from survey comments and social media into improvement priorities. The resulting road map for change is displayed in dashboards and answers the tough questions facing health care leaders today, e.g. what do we work on next?' This solution takes the guess work out of identifying and resolving problems that frustrate patients. The result: loyal patients, better outcomes and efficient operations.
Cellular Monitored Automated Medication Dispenser for use in Opioid Addiction Treatment	PillReady® PRN is a cellular monitored automated medication dispenser designed for use in Medication Assisted Treatment (MAT) for Opioid Use Disorder (OUD) patients. It provides medication on an "as needed" basis to encourage behavioral modification and collects data for statistical individualized patient analysis resulting in better patient outcomes.
Minimally Invasive Tumor Treatment System	Microwave ablation (MWA) offers a low cost, non-toxic, outpatient, minimally invasive cancer treatment. Needle-like applicators embedded with microwave antennas are inserted into tumors to heat and kill them. However, current MWA systems can only create a spherical treatment zone, which cannot treat tumors with irregular shapes or those located near critical sensitive anatomy. We developed a directional MWA applicator that can heat targets from the "outside-in," protecting nearby sensitive tissues. This approach is faster, safer, and more effective and could also be adapted for an expanded range of medical conditions beyond cancer (such as gland or nerve ablation).
VivO2, saving babies with biotech, first non-invasive in utero diagnostics	Prenatal Hope has developed a diagnostic tool, the VivO2, that will tell doctors in real time when a baby is in distress due to lack of oxygen during birth. This will eliminate guessing or interpretations of data that aren't currently measuring for this biometric. The VivO2 provides quantitative data that will save lives, reduce doctor liability and unnecessary procedures. We will help recover the US as a safer, cheaper place of birth and get our military women back to active duty faster. Our IP has international patent filing and we've secured Letter of Intent for global distribution to 136 countries.



Immunoactivator and Plug and Play Vaccine Generation Platform

Prommune Inc. develops short peptides that activate the immune system and vaccines that are made and operate in fundamentally different ways compared to “regular” vaccines (there are not many immune activators available today). This platform technology is extremely versatile and can be adapted to work against a large spectrum of pathogens and even toxic chemicals in humans and animals.

This technology is at a Technology Readiness Level 6 and addresses the DoD needs for force protection under situations that require a rapid response to changing biological and chemical threats.

Our short peptide analogues are fully synthetic and can be used prophylactically or therapeutically alone or conjugated to an antigen of choice. Our biologics are fully dissolved in water or saline and are stable at room temperature. Several efficacy proof of concept studies have been conducted on our lead products in mice, rats and pigs with a variety of viral, bacterial, fungal and parasitic pathogens as well as chemical toxins with no observed clinical or pathological adverse events in any of the species tested. Additional advantages include:

In most cases the peptides and vaccines can be generated in half the time the it takes to generate a “regular” vaccine (12-16 weeks)

Our pipeline of peptides can potentially provide wide coverage for many different types of pathogens and toxins and open up various delivery options (injection, absorption, ingestion...etc.)

<p>Biotek Shield by Aero Biotek (PWI)</p>	<p>The pandemic has adversely affected the sense of safety people feel when in enclosed environments. Currently there is no way to stop airborne viruses like COVID-19 from freely circulating in the air. Aero Biotek is developing a device called Biotek Shield which will neutralize 99.9999% of airborne pathogens. Biotek Shield can be designed to be installed in the air conditioning system of any environment and uses UVC (ultraviolet) light technology to neutralize pathogens like bacteria and viruses-including SARS and COVID-19. Biotek Shield's relevance to the combatant command is as force protection and medical.</p>
<p>Qsensus - Ultrasound for better outcomes</p>	<p>We have developed a technology to replace the sensors used in conventional ultrasound instruments, significantly improving performance. These sensors will allow for improved spatial resolution while simultaneously allowing for greater depth of penetration. This will result in better clinical outcomes when ultrasound is used.</p>
<p>Cloud based secure and affordable platform for storing health records and tele-medicine</p>	<p>Our secure digital platform helps to collect and store health information in one place for 24/7 access. Clients can easily upload, view and share their health information with their physicians using our secure portal. Our telemedicine service enables patient engagement with board-certified physicians from anywhere through our platform. Also, Clients can benefit from our affordable pricing for blood tests, imaging, medications and doctor visits.</p>
<p>PathTrac software and laboratory-based bacterial transmission surveillance system</p>	<p>RDB Bioinformatics collects, identifies and reports on Antimicrobial Resistant bacteria threats to the Warfighter. Civilian, Military, and Government (CMG) personnel who are deployed to areas of the world where antibiotic-resistant bacteria are widespread are at risk for dangerous bacterial infections. Why is this important? They come home/base/office carrying drug-resistant or difficult to treat infections...and those potential threats to the health of our personnel must be identified and treated. 1) Decolonize personnel prior to, and return from, close-quarter deployments 2) Develop rapid diagnostic kit's (RDK) based on those tests 3. Deploy border detention surveillance with a similar approach</p>
<p>T-Blocks: A Platform for Producing Personalized Life-saving Biologics</p>	<p>Tissue Blocks (T-Blocks) enable rapid expansion of stem cells isolated from military personnel for treating battlefield injuries. T-Blocks have been used to stimulate neuron growth in small spinal cord injuries, and T-Blocks have been used to rapidly form new skin. This technology produces 3,600X the yield of primary stem cells compared against conventional cell culture technologies while only using 0.1% of the space and at 1% of the cost. T-Blocks can preserve cells from military personnel and be activated when needed to treat battlefield injuries such as paralysis, burns, or wounds.</p>

Tactical Autonomous Treatment - Inflating Retractor (T.A.T.-I.R.)	The T.A.T.-I.R. is a simple, "pen-shaped", injectable device that will allow a caregiver to fully pack and compress a penetrating junctional wound in a matter of seconds. The T.A.T.-I.R. will be a preassembled device that when deployed; self-conforms to any wound cavity/shape, provides complete wound encapsulation, and applies static autonomous pressure directly to surrounding tissues with enough force to stop hemorrhage. Additionally, the T.A.T.-I.R. will be a user-friendly device to allow non-clinical (civilian) bystanders the ability to rapidly control hemorrhage and stabilize gunshot victims until help has arrived.
iINFOVest™ Advanced Canine BioTelemetry Tactical Vest System for Working Dogs	The iINFOVest™ Advanced Canine BioTelemetry Tactical Vest System for Working Dogs is disruptive technology that leverages advanced biotelemetry capabilities, sensor technology, interoperability and AI to measure and monitor working dog safety and performance. Data capture of laboratory quality critical vital signs including heart rate; pulse; respiration; blood pressure; hydration; body temperature; and canine activity, as well as GPS location and other environmental factors is accomplished with a maximum-functionality tactical vest and next-generation embedded sensor fabric to maximize skin contact and signal quality, durability, comfort and performance. Our advanced smartphone APP uses advanced encryption, cloud functionality, and alarm and notification systems.
Safe Portal Tech / Active Shooter Sanctuary	Safe Portal provides security in an active shooter situation. Safe Portal can be installed in any existing building or location with minimal effort. Safe Portal provides 720 degree protection. Safe Portal can take on the appearance of any existing wall or structure so as not to be detectable to an active shooter.
RISC-V System-on-Chip (SoC) computer hardware accelerators for biomedical big data	DNA and RNA sequencing sensors and instruments produce lots of data, but we can't analyze this data cheaply enough or quickly enough, especially in limited-resource settings. Rapid analyses of such data enable timely, effective responses to infectious disease outbreaks and bio-terrorism threats. SeqStream, SiFive, Inc. and other partners will co-design System-on-Chip (SoC) computer hardware accelerators that combine CPUs implementing the RISC-V computer instruction set architecture (ISA) and specialized data analysis logic on the same computer chip. These semiconductor devices and associated compute platforms will enable the fastest possible analyses of DNA and RNA sequence data at any point-of-need.
Shark OFF Shark Repellent Jewelry	Shark OFF as taken technology, developed and patented by industry scientists, and created a shark repellent product that will prevent dangerous shark/human interactions.

Shift Pharmaceuticals	We are developing a drug to address Spinal Muscular Atrophy, the number 1 killer of infants born to military personnel. This is a genetic disease children are born with which does not allow their brain to communicate with their spine. ~80% of our potential patients die by age 2. This drug is an Anti-Sense Oligonucleotide and our current data in animals is equivalent or superior to the gold standard on the market (Spinraza) which is the only drug available for this disease (just launched in late 2016).
Ergonomic Surgical Loupe Strap	I make an ergonomic strap to attach to surgical eyeglasses for surgeons. The strap helps minimize muscular skeletal disorder to surgeons and keeps their glasses secure during surgical practices. I also make glasses for people with no ears or who have craniofacial disfigurement. Microtia is the condition given to children born without ears. I help them. It can also be used for burn victims or victims with major head trauma.
Suicidal Ideation Related Insomnia Treatment	SleepSmartz will produce professional audio sleep sessions that combine proven relaxation techniques with recovery principles for service members struggling with Suicidal Ideation (“suicidal thoughts”). When set to peaceful meditation music, these elements effectively help veterans replace thoughts leading to suicide while inducing deep sleep. Delivered through a smartphone app, they are accessible by everyone. Insomnia is closely linked to Suicidal Ideation and veterans with chronic insomnia are 3 times more likely to report thoughts of suicide. The AMA Journal Psychiatry reported the technology in our sleep sessions can result in the DoD saving \$15,000 to \$16,630 per suicidal patient.
RUMI: 30-Second Biosurveillance Antigen Detection Test	The RUMI is a diagnostic photonic system for biosurveillance, chemical and biological warfare during infectious spread, epidemics, and pandemics. The rapid test is a field detection unit for warfighter disease status in real-time, anywhere – without the use of a lab, on-base or off-base. The system incorporates real-time data sharing capabilities of test results for preparedness and protection. Currently, we are developing an engineered molecular enzyme for detecting COVID-19 in the RUMI, a cell-phone sized device, in 30 seconds. Notes: remove rate of detection, The device can also be used for a rapid response against biological and chemical warfare, field detection unit diagnostic system possiblyThe device uses photonics to amplify a pathogen signal within 30 seconds. Re-do second sentence.
Healium by StoryUP	Healium kits are drugless, portable solutions that use VR and AR to reduce brain stress in as little as four minutes while allowing the user to control virtual assets with their biometrics. The data-driven platform is the world's first VR   AR channel powered by a brain-computer interface and other wearables. In peer-reviewed journals, Healium has been shown to reduce self-reported anxiety and increase feelings of positivity.

<p>Crashworthy and Ballistic Tolerant Self-Sealing Fuel Bladder for Combat Aircraft</p>	<p>Our novel fuel bladder technology is self-sealing and crashworthy, and uniquely versatile and easily adaptable to any geometry and platform. In addition, all materials to construct our bladders are 100% synthetic, reliable, consistent, and readily available in large commercial quantities. Finally, the application process used to construct our bladders can be fully automated, and is able to produce completed bladders in hours, not days or months as with the incumbent World War I and II era fuel bladder materials and designs that continued to be fielded today. Texas High Energy Materials specializes in materials designed that endure the most extreme conditions while staying environmentally friendly. We seek meetings and Phase III discussions with those interested in our bladder technology that enables mission-critical assets, damaged in battle to remain in service without compromising safety or performance of the aircraft.</p>
<p>Wrex Crash Detection System</p>	<p>Wrex is a dynamic hardware system for powersport vehicles. Developed originally as an automatic crash detection system for motorcycles, Wrex also supports ATVs, UTVs, and snowmobiles. The hardware device is a powerful fleet management tool that can be retro fit to any target vehicle to provide diagnostic data, telematic data, and satellite WIFI. Our versatile system can protect the warfighter both on city streets and the modern battlefield.</p>
<p>Thumbscore: The Financial Wellness Amazon for businesses and consumers.</p>	<p>Financial wellness is the gateway to the next generation of financial healthy consumers for the entire financial ecosystem. Research shows that Gen Z and Millennials have an innate desire to be informed, at the moment when they have a question. They do not want to be micromanaged. This is why personal budgeting platforms are limited and some struggling. In contrast, Thumbscore serves as that one source, so that when the user faces a financial moment of truth, Thumbscore intelligently recognizes these moments to inform them. This is possible with highly engineered AI-driven intelligence. Thumbscore also directly connects users to the specific financial product or service they need, when they need it. A US Fortune 100 is using Thumbscore's technology for a Beta of 5,000,000 users.</p>
<p>Rapid Response &amp; Tracking Software</p>	<p>TresCare Software speeds up recognition of a Warfighter's deteriorating conditions (i.e. sepsis, covid, lower respiratory tract infections, pneumonia, etc.) in any Military Health System (hospitals, medical centers, clinics, rehabs) that Warfighters depend on for their health care to improve the rate of survival. The heart of TresCare Software is our Track &amp; Trigger feature that revolves around tracking and monitoring 7 vital signs. Vital signs are the Warfighters story of his/her health; before physical symptoms appear, it is the vitals that first change. By addressing even subtle changes in the Warfighter's vitals, healthcare staff can provide better patient outcomes to our Warfighters before worse medical events occur due to delays in recognition of infections and slow initiation of treatments.</p>

<p>Microbial Blockade – Occlusive Wound Dressing</p>	<p>Microbial Blockade is a novel occlusive wound dressing designed to protect surgical or traumatic wounds from bacterial contamination. The patented release method allows use of a cyanoacrylate polymer (i.e. SuperGlue●) to bond the dressing to the skin and allow the dressing’s subsequent removal without skin injury. Use of this bonding polymer not only provides an incomparable bacterial barrier to prevent bacterial wound contamination but also eliminates dressing ‘roll-up’ and creasing on uneven surfaces. Use of such a dressing could decrease incidence of trauma and surgical wound infections, including infections of underlying orthopedic hardware and implantable devices.</p>
<p>Allevia™: AI-powered clinical intake</p>	<p>Allevia™ is an AI-powered mobile health solution that automates clinical intake for healthcare providers. As soon as a patient requests an appointment, the patient works with our application to fill out a “Pre-appointment Questionnaire” before their visit. Allevia™ uses smart algorithms, research data, and the patient’s history and symptoms to identify the most important clinical questions their doctor needs to know. Allevia™ then takes the information provided by the patient and converts it into a clinical note that can be directly sent to the health record, giving their care provider the “best door note” possible – all before ever seeing them.</p>
<p>Precision Nutrients for Next-Generation Bio-Performance</p>	<p>Van Heron Labs is a biotechnology company deploying a novel platform that harnesses genetics and computing to enhance performance. VHL uses genomic data and a proprietary computing pipeline to create bio-matched nutrient profiles. In essence, our platform identifies the exact nutrients needed for optimal bio-function. Our system streamlines metabolism by eliminating unnecessary cellular processes while maintaining or even further enabling focal processes. Our system takes into account biology and environment/stress to enhance bio-systems at the molecular level. Our platform can be used on both specific and broad scales to combat a range of challenges and ultimately stands to become a paradigm shift for bio-productivity across applications the federal and defense sectors. Our technology has supporting data across several laboratory studies in non-mammalian and mammalian cells with excellent results.</p>
<p>MIRA (Minimally Invasive Robot Assistant)</p>	<p>Virtual Incision (VIC) has developed a new minimally Invasive Robot to assist in surgical procedures. It has been developed with multiple Department of Defense and NASA grants. The MIRA is much smaller, lighter, and less expensive than the daVinci surgical robot and has the same or enhanced capabilities in a wide variety of abdominal procedures. VIC is filing an IDE with the FDA and seeking funding to assist with clinical trials and guidance to deploy its robot into the military medical ecosystem and to develop telesurgical capability.</p>

<p>Real Time PCR (qPCR)for rapidly detecting infectious disease pathogens</p>	<p>Volente Diagnostics helps healthcare providers accurately diagnose diseases within 24 hours. Volente is a biotech company that uses DNA molecular technologies to perform infectious disease diagnostic testing using Real Time PCR (qPCR). We are providing solutions to the growing problem of antibiotic resistant infections and overuse of antibiotics. Our customers include physician offices, hospital systems, and long-term care facilities. We can license our technology and can even consult to build a high complexity CAP and CLIA lab.</p>
<p>JP Secure</p>	<p>JP Secure is a post surgical application device. It has been designed to specifically correct the numerous issues involving Jackson Pratt drains. By securing the bulbs and tubing, JP secure decreases the risk of surgical site infections and Hospital-Acquired Infections that stem from early drain removal and suture site tearing. In addition JP secure labels the bulbs promoting proper measurement of fluids from multiple bulb sites. This gives surgeons a better understanding of how the surgical site is healing. JP Secure addresses other vital issues such as patient safety, comfort and mobility. A Real Solution for a True Need.</p>
<p>Smart Phone Application to Enhance Injury Monitoring, Reporting, Decision Making</p>	<p>We all assume that when we drop off our children at sports practice that there is someone present who knows what to do if they get hurt. What if that is not the case? The TeamSafe™ data collection and communication system provides coaches and parents immediate access to the lifesaving information necessary in those first 5 – 7 minutes. The roster of your team is on your phone with emergency contact/ emergency medical information, a team specific emergency action plan, concussion remove/return reports, and emergency care instructions at your fingertips.</p>
<p>Rapid Setting Composite Article</p>	<p>Battlefield injuries present a complexity of medical problems in a hostile environment, often at considerable distance from trauma care. Orthopedic injuries constitute a majority of the combat casualties in recent U.S. military conflicts. Extremity injuries account for 71% of combat casualties, and of these injuries, 19% are fractures. Military medics frequently use the SAM splint or wire mesh splint for tactical combat casualty care requiring fracture stabilization; however, these products provide less than ideal fracture stabilization. With sharp fractured bone fragments, lack of proper stabilization increases the risk of vascular and neural damage during transport. The Center of Innovation for Biomaterials in Orthopedic Research (CIBOR) at Wichita State University has developed a novel composite splint to provide improved stabilization while maintaining low weight, compact size, and ease of use. The composite splint is at Technology Readiness Level 6. Fully functional prototypes have been developed, and lab simulated environment testing has been conducted. Prototype testing included hot and cold weather cure tests as well as biomechanical tests on dummy limbs. The splint is ready to be evaluated by military medics.</p>

<p>Continuous Monitoring, Saving Lives with Biotech, Medical Vitals</p>	<p>The Continuous Vitals Monitor is the cutting edge way to get continuous vitals in real time of the war fighter in the field. A diagnostic tool that will give continuous readout of a war fighter's vitals whenever or wherever needed. The medical vitals needed for quick decision making will be transmitted back to either the attending soldier or medic's cuff, headgear, or any other command center or device. This will get soldiers back to active duty with less complications and provide better outcomes. This technology is at a Technology Readiness Level 4 and addresses the DoD requirement need for Force Protection and Medical.</p>
<p>Smart Glove, Saving Lives with Biotech, Medical Vitals with a Touch</p>	<p>The Smart Glove is the cutting edge way to assess the war fighter in the field or first responders assisting civilians within a fraction of the time it currently takes with injury or accident. This will save lives and provide better outcomes for military and civilians. This technology is at a Technology Readiness Level 4 and addresses the DoD requirement need for Force Protection and Medical.</p>
<p>Energy Absorbing Seat</p>	<p>In the case of emergency landings or roadside explosions, a large vertical force is applied to passengers of the aircraft or ground vehicle, especially around their lower vertebrae. The presented technology is a seat to protect passengers from such a force. The seat includes a shear member and an energy absorbing member. The seat is initially mounted on the shear member. The shear member breaks inelastically from a large vertical force, leaving the seat suspended on the energy absorbing member, thereby protecting the passenger from the vertical force.</p>
<p>Multifunctional Nanocomposite Material</p>	<p>The properties between layers of traditional composites are often the weakest. The composite's layers are bonded only by the matrix because the composites are manufactured using 2-D woven fabric reinforcement. 3 D reinforcements can be used in a composite, but such reinforcements make it difficult to control the composite's thickness, thereby limiting the composite's multifunctionality. The presented technology combats these issues by introducing helical carbon nanotubes (HCNTs) into the matrix of the composite. The HCNTs act as 3-D reinforcements, but without the traditional restrictions of 3-D reinforcements. This technology may provide superior mechanical, electrical, thermal, magnetic, and optical properties.</p>