What We Do

The Medical Technology Enterprise Consortium (MTEC) is a nonprofit collaborating with the U.S. Army to facilitate funding of biomedical innovation to advance military and civilian health.
This past year, MTEC experienced significant growth and surpassed $1B in total awards and commitments for medical R&D! MTEC also expanded membership support to include advanced commercialization services, increased exposure to outside funding, and offerings by the M-Corps network of service providers.

Looking ahead, the transition of leadership to the Defense Health Agency (DHA) presents opportunity to build strong relationships and expand utilization of MTEC. We are excited about the future prospects, anticipating expanded access to funding sources, and enhanced opportunities for our members.

Key highlights from 2023 include:

- 50% of projects advanced at least one Technology Readiness Level
- 70% of projects had timely milestone achievements
- 29K+ human subjects were enrolled in studies
- 60% of proposals were rated fundable
- 2 new products commercialized:
  - ARA
  - 4TDS
- 53% of projects secured funding following initial MTEC award
- In 2023, MTEC awarded $242M, with an additional $2M in cost share to 60 new projects that were proposed to 11 funding opportunities covering 68 topic areas
- 50% of proposals were rated fundable
- 70% of projects had timely milestone achievements
- 60% of proposals were rated fundable
- 2 new products commercialized:
  - ARA
  - 4TDS
- 53% of projects secured funding following initial MTEC award
- In 2023, MTEC awarded $242M, with an additional $2M in cost share to 60 new projects that were proposed to 11 funding opportunities covering 68 topic areas
- Since inception, MTEC small business members secured a total of $720M in follow-on funding
- Since inception, MTEC small business members secured a total of $623M was private
- Since inception, MTEC small business members secured a total of $97M was non-MTEC Government

Event & Engagement Metrics

- MTEC hosted 24 Webinars
- Attended over 40 events
- Evaluated 2K+ companies for military relevance
**Funding & Membership Growth**

- **Award ceiling is up 24% from 2022**
- **MTEC projects awarded increased 26% from 2022**

**Membership at 2023 Calendar Year End**
- **SMALL BUSINESSES:** 453
- **ACADEMIA:** 110
- **LARGE INDUSTRY:** 49
- **MULTI-MEMBERS:** 9
- **NON-PROFITS:** 53

- **MTEC membership increased 12% from 2022**

**Member Benefits**

<table>
<thead>
<tr>
<th>Capabilities</th>
<th>Member Benefit</th>
<th>Outcomes</th>
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<tbody>
<tr>
<td>Funding</td>
<td>Non-dilutive funding source</td>
<td>Prototype and technology development</td>
</tr>
<tr>
<td>Educate</td>
<td>Webinars, newsletters, events</td>
<td>Fill knowledge gaps</td>
</tr>
<tr>
<td>Mentor</td>
<td>Leverage expertise</td>
<td>Learn from experts</td>
</tr>
<tr>
<td>Network</td>
<td>Partnerships</td>
<td>Create business opportunities</td>
</tr>
<tr>
<td>MTEC Grants</td>
<td>Non-dilutive funding</td>
<td>Advance business opportunities</td>
</tr>
<tr>
<td>Accelerators</td>
<td>Entrepreneurship support</td>
<td>Accelerate product development</td>
</tr>
<tr>
<td>M-Corps</td>
<td>Access to subject matter experts</td>
<td>Advisory services</td>
</tr>
<tr>
<td>Foundations</td>
<td>Funding and branding</td>
<td>Advocacy and influence</td>
</tr>
<tr>
<td>Industry Partners</td>
<td>Market access</td>
<td>Follow-on funding or exit</td>
</tr>
<tr>
<td>Commercialization Services</td>
<td>Regulatory, market, reimbursement</td>
<td>De-risk and drive commercialization readiness</td>
</tr>
<tr>
<td>Investors</td>
<td>Access to funding</td>
<td>Growth and market access</td>
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### Funding Distribution

<table>
<thead>
<tr>
<th>Agency</th>
<th>Program</th>
<th>Funding</th>
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<tbody>
<tr>
<td>USAMMDA</td>
<td>U.S. Army Medical Materiel Development Activity</td>
<td>$228M</td>
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<tr>
<td>NMRC</td>
<td>Naval Medical Research Center</td>
<td>$141M</td>
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<tr>
<td>CCCRP</td>
<td>Combat Casualty Care Research Program</td>
<td>$180M</td>
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<td>MOMRP</td>
<td>Military Operational Medicine Research Program</td>
<td>$139M</td>
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<tr>
<td>TATRC</td>
<td>Telemedicine &amp; Advanced Technology Research Center</td>
<td>$53M</td>
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<tr>
<td>MIDRP</td>
<td>Military Infectious Diseases Research Program</td>
<td>$90M</td>
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<tr>
<td>MSISRP</td>
<td>Medical Simulation &amp; Information Sciences Research Program</td>
<td>$34M</td>
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<tr>
<td>CRMRP</td>
<td>Clinical &amp; Rehabilitative Medicine Research Program</td>
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<td>USUHS</td>
<td>Uniformed Services University of the Health Sciences</td>
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<td>USAIR</td>
<td>U.S. Army Institute of Surgical Research</td>
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<td>ONR</td>
<td>Office of Naval Research</td>
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<td>DHA</td>
<td>Joint Operational Medicine Information Systems</td>
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<td>DTRA</td>
<td>Defense Threat Reduction Agency</td>
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<td>MTEC</td>
<td>Medical Technology Enterprise Consortium</td>
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<td>WRAIR</td>
<td>Walter Reed Army Institute of Research</td>
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<tr>
<td>USAMRDC</td>
<td>U.S. Army Medical Research &amp; Development Command</td>
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<td>USAISR</td>
<td>U.S. Army Institute of Surgical Research</td>
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<td>BIRCO</td>
<td>Blast Injury Research Coordinating Office</td>
<td>$800K</td>
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Over the past 8 years, MTEC has created a diverse portfolio of funding sponsors:
Military Infectious Diseases

OBJECTIVE
Prevent, predict, and treat infectious disease threats to eliminate their impacts on operational readiness and performance.

AREAS OF INTEREST:
- Far forward diagnostics of unknown pathogens
- Treatments against combat wound infections
- Pathogen agnostic countermeasures to prevent and treat sepsis
- Prevention of Bunyavirales and dengue virus infection
- Prevention and treatment of biofilm formation
- Prophylactic for endemic diarrheal diseases
- Prevention and treatment of emerging infectious diseases

2023 NEW FUNDING: $8.9M
2023 FUNDING INCREASES: $1.7M

NEW PROJECT SPONSORS: MIDRP, NMRC
NEW PROJECT AWARDEES:

BioFire Defense LLC
Funding: $4.6M
BioFire Diagnostic Wound Panel
BioFire Defense is designing and optimizing a wound infection identification panel for the FilmArray 2.0 and Torch platforms. The panel can detect bacterial and fungal organisms as well as antimicrobial resistance markers using swab samples.

University of Maryland, Baltimore
Funding: $4.7M
Dengue Human Infection Model (DHIM) Prototype Development
The University of Maryland, Baltimore has developed a human challenge model for assessing DHIM-4 infection. The goal is to utilize the model for vaccine efficacy testing. An open-label clinical trial is now underway.

Immuron, Ltd.
Funding: $3.4M
Supplement that Prevents Traveler’s Diarrhea
Immuron obtained IND-approval from the U.S. FDA to proceed with a phase 2 clinical study to evaluate Travelan® for prevention of Traveler’s diarrhea. In 2023, 60 subjects completed the challenge with enterotoxigenic E. coli; results are expected mid-2024.

Project Highlights
OBJECTIVE
Reduce mortality and morbidity associated with combat trauma from the battlefield to the hospital.

AREAS OF INTEREST:
- Hemorrhage control and resuscitation
- Prolonged and en route care
- Surgical support and robotics
- Burn wound assessment and treatment
- TBI diagnostics and treatments
- Solutions for extremity trauma
- Blood and blood products
- Temporary cornea repair and preservation

Sense Diagnostics, Inc. Funding: $2.4M
Role 1 TBI Evaluation Using Low Power Radio Frequency
Sense Diagnostics has developed a non-invasive headset to detect and monitor traumatic brain injury. The system includes 9 antennae that transmit safe, low-power radio frequency. They have successfully paired the headset with proprietary algorithms to detect intracerebral hemorrhage. Their pivotal clinical trial will be completed in 2024.

University of Colorado School of Medicine Funding: $6M
Multicenter Implementation Trial of Targeted Normoxia Strategy to Define Oxygen Requirements
This clinical study aims to determine the optimal use of oxygen therapy to treat patients with significant burns and major trauma. They have shown that a multimodal approach to managing these patients improves time in normoxemia, while reducing the amount of supplemental oxygen used across institutions.

MediWound, Ltd. Funding: $5M
Development of NexoBrid as a Non-Surgical Debriding Solution for Far Forward Burn Treatment
MediWound is reformulating NexoBrid for remote military settings. The team validated it in porcine burn models and innovated the packaging for use in a far forward environment. Regulatory engagement with the U.S. FDA is ongoing.

2023 NEW FUNDING: $60.5M
2023 FUNDING INCREASES: $28.1M
NEW PROJECT SPONSORS: DHA, CCCRP, NMRC, USAMMDA, USAMRDC
NEW PROJECT Awardees: Mass General, Wake Forest University, U.S. Army Research Institute, U.S. Army Medical Research Command, U.S. Army Medical Research & Development Command, JAG Consulting, SILC, Wake Forest University, SteriO3, Spectral MD
Military Operational Medicine

OBJECTIVE
Maximize health, readiness, and performance by countering, preventing, and treating injuries.

AREAS OF INTEREST:
- Environmental health and protection
- Injury prevention and reduction
- Psychological and physiological health and performance
- Musculoskeletal injury prevention, treatment, and rehabilitation
- Warfighter performance optimization
- Post-traumatic stress disorder

2023 NEW FUNDING: $37.4M
2023 FUNDING INCREASES: $32.9M

NEW PROJECT SPONSORS: BIRCO, MOMRP, NMRC

Project Highlights

Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc.
Better Together: A Primary Prevention Intervention Targeting Transdiagnostic Interpersonal Emotion Regulation

Better Together, a couple-based program, aims to reduce suicide, partner violence, and alcohol misuse. 44 military couples found it highly acceptable, with 99% planning to use the strategies taught. PREP, Inc. has recently licensed it for commercialization.

International Fabric Machines
Temperature and Sound Detecting Fabric

The team is focused on developing intelligent fabrics for military use. In an arctic field test, they were able to demonstrate the ability to monitor temperatures at specific locations of the body to ultimately predict and prevent injury from frostbite. The fibers are also under development to analyze physiological and ambient sound.

Defender Pharmaceuticals, Inc.
Scopolamine and Synthetic Scopolamine for the Treatment of Motion Sickness and Associated Symptoms

The team has completed multiple clinical studies demonstrating the safety and effectiveness of intranasally-delivered scopolamine for the prevention of nausea and vomiting, induced by motion, in adults. Diligent efforts are underway to obtain U.S. FDA approval for this treatment for military and commercial distribution.
Crimson Government LLC

iMAS Data Analytics and AI Algorithm Development for IACT

This program is integrating AI computer vision into tactical combat casualty care. Crimson has made great progress toward training the system to identify at least 20 procedures commonly conducted by operational medicine providers. Ultimately, this project will be leveraged for the advancement of autonomous battlefield care.

Moberg Analytics, Inc.

Data Fusion and AI to Optimize Severe Brain Injury Management in Prolonged Care

The Moberg Analytics AI Ecosystem is the only AI-based system that enables clinicians to understand the progression of TBI and provide individualized care. Currently available in Role 4 hospitals, the current project is to create a mobile battlefield version, the TBI Navigator, for triage and prolonged care guidance.

Chenega Healthcare Services LLC

Burn Patient Transfer System (BPTS)

Chenega Healthcare Services has conducted a technology demonstration of a working prototype to triage and manage burn patient transport to hospitals with available beds. The system includes a highly scalable, industry/open standards-based infrastructure, and new technology applications providing highly reliable, high-integrity, resilient capabilities on a nationwide basis.

Objective

Optimize front line medical care and interventions through robotics, intelligent systems, and improved education and training.

Areas of Interest:

- Optimization of medical training
- Battlefield medical automation
- Autonomous care at the point-of-injury in austere environments
- Remote tele-monitoring
- Health informatics
- Human-machine integration
- Virtual and augmented education tools
- Interoperable automatic systems
- AI/ML support of battlefield triage and resupply

New Project Sponsors:

- DHA, USUHS

New Project Awarded to:

- UNIV OF COLORADO
- STRAC
- Deloitte
- Nebraska Medical Center
- THE GEORGE WASHINGTON UNIVERSITY
- MDB, Inc.
- UNC DAVIS UNIVERSITY OF CALIFORNIA
- LONG BEACH
- DaVinci Research Institute
- California State University Long Beach
- Methodist Dallas Medical Center

2023 New Funding: $25.7M

2023 Funding Increases: $23.9M

2023 New Project Sponsors: DHA, USUHS

New Project Awarded to:

- UNIV OF COLORADO
- STRAC
- Deloitte
- Nebraska Medical Center
- THE GEORGE WASHINGTON UNIVERSITY
- MDB, Inc.
- UNC DAVIS UNIVERSITY OF CALIFORNIA
- LONG BEACH
- DaVinci Research Institute
- California State University Long Beach
- Methodist Dallas Medical Center

Medical Simulation & Information Sciences
OBJECTIVE

Improve restorative treatments and rehabilitative care to maximize function for return to duty or civilian life.

AREAS OF INTEREST:

- Cellular therapies for trauma and critical care
- Craniofacial and extremity regeneration
- Anti-scarring and skin regeneration
- Genitourinary/lower abdomen reconstruction
- Ex vivo/on demand blood
- Musculoskeletal injury rehabilitation
- Sensory systems preservation and restoration

NuShores Biosciences LLC

NuCress™ Intelligent Factory in a Box

NuShores innovated an automated platform for their patented bone regeneration scaffolds. The team is refining the system, integrating quality monitoring, and aiming for high-quality, sterilized products. The vision is an adaptive, hands-free factory for large-scale or remote production with tailored solutions.

University of Pittsburgh

Large Scale Manufacturing of Extracellular Matrix Hydrogels for Regenerative Medicine Applications

The team has developed a novel extracellular matrix hydrogel with both hemostatic and tissue regenerative properties. They have produced the hydrogel under GMP conditions and demonstrated safety and efficacy in a rodent liver laceration preclinical model.

Labtec GmbH

Anti-Scar Treatment for Deep Partial Thickness Burns

This project is conducting formulation and process development, supported by IND-enabling studies, to repurpose Pirfenidone (generic drug approved for pulmonary fibrosis) for use in deep partial-thickness burns and other wound types for reducing hypertrophic scarring.

2023 NEW FUNDING: $5M

NEW PROJECT SPONSORS: NMRC

NEW PROJECT Awardees:

Funding: $2M

Funding: $3.3M

Funding: $6.3M

2023 FUNDING INCREASES: $16.9M

Project Highlights

Clinical & Rehabilitative Medicine

2023 NEW FUNDING:

$5M

NEW PROJECT SPONSORS: NMRC

NEW PROJECT Awardees:

Funding: $2M

Funding: $3.3M

Funding: $6.3M

2023 FUNDING INCREASES: $16.9M

Project Highlights
OBJECTIVE
Developing products that maintain technological superiority in countering chemical and biological threats, mitigating the risks of surprise, and responding to the warfighter’s urgent needs.

AREAS OF INTEREST:
- Protection and hazard mitigation
- Prevention, reduction, and elimination of chemical and biological threats
- Detection and diagnostics of environmental threats
- Strategic and operational support

2023 NEW FUNDING: $1.2M

NEW PROJECT SPONSORS: DTRA

NEW PROJECT AWARDEES:

MTEC Innovation on the Frontlines

Deployed their disposable, inflatable bubble to provide a sterile environment for medical procedures conducted under austere conditions.

Provided REBOA products for minimally invasive, endovascular hemorrhage control of bleeding casualties in the field and during transportation.

Supplied NexoBrid®, a topical agent that removes eschar, to aid casualties with deep partial and full-thickness burn wounds.

Provided off-the-shelf bioengineered blood vessels to save lives and limbs by repairing vascular injuries resulting from trauma.

Distributed portable blood refrigeration systems to aid in blood transport.

Evaluated their expanding dressing for the treatment of non-compressible torso hemorrhage at the point of injury.
Strategic Partnerships

MTEC engaged in several partnerships in 2023 to increase research opportunities, capabilities, and visibility for medical issues of importance.

**BARDA and CCCRP** State of the Technology meeting for Blood and Blood Products was filled with great discussions with 202 people in attendance.

MTEC partnered with **AUSA** to issue a first-of-its-kind scholarship, which supports the continued academic aspirations of Army medics, soldiers or officers in health care roles pursuing careers in biomedical research or health care services.

MOMRP and the **Orthopaedic Research and Education Foundation** co-funded $2M through MTEC to advance solutions to accelerate return-to-readiness for Service Members with musculoskeletal injuries.

**MTEC joined the Programming, Engagement and Outreach Committee of the American Brain Coalition**, leading outreach efforts and membership engagement activities offered by the Coalition.

**MTEC and BrightFocus Foundation** co-funded $1M to advance novel treatments for repeated, mild TBI:
- University of Kentucky & Mitochon Pharmaceuticals completed pre-clinical work and requested a pre-IND meeting with the U.S. FDA.
- Astrocyte Pharmaceuticals completed their Phase I safety clinical trial.

MTEC funded a military mental health cohort of 3 mentees at the **APA Research Colloquium**.

MTEC was featured on the **American Brain Coalition** podcast, Voices for the Brain. Scan the QR code to give it a listen!

The MTEC accelerator and integrator networks expanded to include multiple formal engagements, like with **MedTech Innovator** and **MATTER**.

**MOMRP and the Orthopaedic Research and Education Foundation** co-funded $2M through MTEC to advance solutions to accelerate return-to-readiness for Service Members with musculoskeletal injuries.
### M-Corps Partners

M-Corps is a group of 32 subject matter expert organizations providing services to MTEC members in the following domains:

#### Regulatory & Clinical
- Navigate complex regulatory pathways and ensure compliance with healthcare regulations.
- Services include regulatory strategy, U.S. FDA meeting assistance, and clinical trial management.

#### Scientific & Engineering
- Offer design and development expertise for medical products that include small molecules, biologics, diagnostics, medical devices, and IT.
- Services include IND and IDE-enabling studies, product design, prototyping, and testing.

#### Business
- Enable refinement and focus on commercial planning and implementation.
- Services include strategic planning, market entry, reimbursement, investment advisory, and corporate development.

### Commercialization Grants

In 2023, MTEC awarded 9 Commercialization Grants totaling $450K in non-dilutive funds to small business members. These grants facilitated partnerships with M-Corps Partners for product development.

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>M-Corps: Convergent Clinical, Inc.</td>
<td>M-Corps: AliraHealth</td>
<td>M-Corps: RPMTech</td>
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<tr>
<th>Awardee: Moberg Analytics, Inc.</th>
<th>Awardee: NIRSense, LLC</th>
<th>Awardee: Purgo Scientific, LLC</th>
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<tr>
<td>M-Corps: CORNERSTONE</td>
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<tr>
<td>M-Corps: AliraHealth</td>
<td>M-Corps: greenlight guru</td>
<td>M-Corps: The Conofey Group</td>
</tr>
</tbody>
</table>

Scan to meet the M-Corps!
Accelerators

MTEC’s accelerator partners provide members with support in mentorship, networking, and additional resources.

- Premiere global medical device accelerator.
- Dedicated MTEC Military Medical scouting track.

- Members have exclusive access to Flex.
- Flex is a knowledge library with expert clinics, and other resources for life science start ups.

- In 2024, members can look forward to more opportunities coming from accelerator partners.

COMING IN 2024

MTEC Ventures

MTEC Ventures provides investment preparation support services to MTEC small business members that have gap funding needs and are fundraising to advance their medical technology development for both military and civilian use.

MTEC Ventures Goals

Network Building

Expand investor network for emerging medical technology companies serving MTEC’s mission.

Readiness Enhancement

Enhance investment readiness of MTEC small businesses and connect with investors.

Capital Access

Facilitate capital access for MTEC member medical technology development.
How To Join MTEC Membership

Joining MTEC is Easy!

Step 1: Review the Consortium Member Agreement

Step 2: Fill out and submit the online MTEC Membership Application

To determine if your organization is a good fit, contact MTEC Chief Science Officer at lauren.palestrini@mtec-sc.org

START HERE

www.mtec-sc.org/how-to-join

Annual Membership Dues:

$5,000 - Large Businesses

$1000 - Small Businesses, Academic Research Institutions, Not-for-Profits

$500 - Multi-member Organizations

Testimonials

FOUNDATION PARTNER

“The American Brain Coalition takes immense pride in our collaboration with the MTEC. Our partnership stands as a powerful symbol of the unified commitment shared by civilian and military leaders toward advancing brain health.”

Katie Sale, Executive Director, American Brain Coalition, AmericanBrainCoalition.org

MILITARY SPONSOR

“We are extremely thankful for the assistance that MTEC provided in execution of the 2-day Blood and Blood Products State of the Technology meeting that was co-sponsored by CCCRP and BARDA. The meeting brought together experts from academia, industry, and government for frank discussion regarding current and future technologies, as well as the current state of the national blood system. The output from this meeting will assist the Government in planning for future investments to meet military and civilian blood requirements.”

Captain Travis Polk, Director, U.S. Army Medical Research and Development Command’s Combat Casualty Care Research Program, CCCRP:Health.mil

MTEC MEMBERS

“MTEC, as a consortium manager, provides world-class service to combine a simplified acquisition approach with technology innovation that meet the military’s most challenging needs. From its scientific team to contracts staff, MTEC provides best-in-class support to advance medical innovations for Warfighter health.”

Brad Becker, Co-Founder, Crimson Phoenix, CrimsonPhoenix.com

“MTEC has been and continues to be a key partner with Sense Diagnostics in its development of our prototype device for military use. Their assistance in acquisition of funding and critical feedback has been critical to our success.”

Joseph Korfhagen, VP Product Development, Sense Neuro Diagnostics, SenseNeuro.com

M-CORPS

“Thanks to MTEC for supporting NIRSense with a commercialization grant! We learned a lot working with M-Corps partner Latham Biopharm Group, who is assisting us in transitioning our technology to improve chronic disease management. Dan Rodenhaver and I really enjoyed the pitch practice and dialogue, and I’m excited about what the future holds!”

Casey Boutwell, CEO, NIRSense, NIRSense.com
2023 Highlights:

- $1 Billion Dollars in Ceiling
- 13 Solicitations, 60 Awards, $242M Awarded
- 3 New Funding Sponsors Added to the MTEC
- Released First Prize Competition
- Hosted State of the Technology Meeting with DoD and BARDA