

Revolutionizing Warfighter Survivability: MACE™ System

Military Advanced Circulatory Emergency (MACE™) System





Conceptualized, patented, prototype built and tested by decorated SOF Medic (Tom Bozzay, Lazarus Technologies). Tom designed this life-saving system to change non-survivable deaths into survivable field care to help prevent the death of warfighters like Spc. Stephan Mace, for whom this system is named. By warfighters to save warfighters.

Problem:

- → Uncontrolled bleeding is the leading cause of preventable battlefield death
- → Non-compressible bleeding (chest, abdomen) has limited field treatment
- → Advanced field interventions are severely limited with regard to size, ruggedness, and training expertise

Near-peer conflicts will significantly increase rates of battlefield injury & death, posing serious challenges to military medical operations & casualty care

Working Solution: MACE™ System

- → Recover: Patient's own blood is recovered for return to them
- → Restore: Filter, oxygenate, warm, prepare for return
- → Return: Patient's own blood sustains them with limited to no donor blood



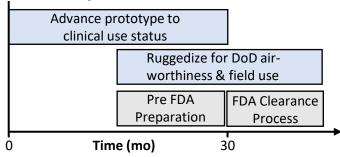
Benefits:

- → Minimizes preventable death, reduces logistics of donor blood and reduces commander risk
- → Prolongs survival until MEDEVAC
 - 80x less donor blood required
 - 6x smaller, portable, designed for austere use
 - Provides warming/hypothermia intervention
- → Estimate of anticipated lives saved in large-scale combat operations: >200,000 American lives

Beneficial utility across the spectrum of military trauma care:

Medic/Field Care → Critical Care Transport

Path Forward, Timeline, & Requested Funds: \$20M



Strong & broad military support for lifesaving, fieldable device – "This is the future of combat casualty care"

Lazarus Technologies - bringing together the MACE Consortium to serve the warfighter.

Commercialization & Manufacturing

Lazarus Technologies UAMS / U of A

- MACE inventor/commer. lead
- Military surgical/trauma exper.
- Preclinical/clinical testing (UAMS and U of A)
- Manufacturing

Arkansas

Product Engineering & Testing

OU Health/Sciperio

- Preclinical testing (OSU)
- Clinical testing (OU Trauma and Injury Care)
- Evaluation
- Manufacturing Scaling

Oklahoma

Product Engineering & Development

Sciperio/U of Miami

- Prototype engineering
- Product development
- Technology
 Commercialization

Florida

Regulatory & Manufacturing

ARMI | BioFabUSA

- DoD manufacturing
- Cost effective mfg.
- GMP
- FDA Regulatory advising

New Hampshire



Collective achievements include:

successfully commercialized technologies • multiple medical support deployments • created bioprinter on ISS • serves as DoD Manufacturing Institute for biomedical technology • >45 combined years technology development with DoD (DARPA, Army, USAF) and HHS (NIH, FDA, BARDA)