# INNOVATION HIGHLIGHTS 

August 2022

## LATEST FSU INNOVATIONS

- ZCnet - An 8-channel wireless communication technology for Low Power Wide Area Networks that achieves higher capacity while using less resources. (19-043 MT)
- Wavy Solar Pipe - A symmetric wavy parabolic trough absorber pipe that accounts for heat transfer enhancement and pressure drops for significantly improved efficiency. (19-047 MT)
- Assessment that measures elementary and middle school children's understanding of how words can be broken down into smaller units to be understood. (19-051 RA)
- Peripheral arterial disease pain significantly reduced and subsequent increased mobility with use of new therapy ( $20-008 \mathrm{BE}$ )
- Evidence based curriculum and treatment manual to support the transition from incarceration to returning to the community. (20-027 RA)
- An evidence based clinical assessment tool to guide individualized services for incarcerated individuals. (20-028 RA)
- Assay for determining response of keloids to steroid treatment (20-035 BE)
- An assessment to measure the implementation of evidence-supported best practice quality care for residential group homes for children and youth. (20-039 RA)
- Assessment for children in PreK-2nd grade in a gamified version. (20-040 RA)
- Drug therapies for fibrosis of the liver and other organs, as well as antifibrosis drugs that inhibit the production of compounds which lead to fibrosis of the liver and other organs. (20-047 BE)
- Water Seepage Meter - A device installed in an aquifer, with a water level regulator that records base measurements, remotely sent, to determine if water is leaching out. (20-054 MT)


## RECENT FSU INNOVATIONS

- An evidence-based graphic novel to introduce children to dyslexia. (20-055 RA)
- Software to solve second order linear differential equations via closed form solutions common in physics and applied math. (21-004 RA)
- A digital assessment for parents of children's reading ability in K-3. (21-007 RA)
- A general effective, efficient, delivery system for various forms of therapeutic drugs to humans. (21-010 BE)
- A general effective, efficient, delivery system for various forms of therapeutic drugs to humans. (21-016 BE)
- Evidence based training curriculum for dealing with post-traumatic stress, specifically for individuals in law enforcement. (21-022 RA)
- Evidence-based activities to promote children reading. (21-037 RA)
- A therapy for an overactive immune response. One category of which, is toxic shock syndrome. (21-039 BE)
- Improved material for next-generation solid-state batteries. (22-003 GE)
- A heater assembly with six individually controlled heating zones. It allows for no leakage, no gaps in insulation, and a much larger work zone. (22-012 MT)
- Hands-free nursing bra clip system to hold a shirt up while breastfeeding (22-014 GE)
- Highly accurate protein design via improvements to Google's Alphafold (22-021 GE)
- Improved method to deliver therapeutics during adoptive macrophage therapy; potential use for a variety of diseases, including cancer. (22-022 GE)
- A method and device for the harvesting of brain tissue from thin brain slices for research study. (22-024 BE)
- Evidence based curriculum to teach educators about social emotional learning and cognitive behavioral therapy. (22-038 RA)
- Evidence-based book for children to learn about emotions and social-emotional skills and calming tools. (22-039 RA)
- Assay for determining response of keloids to steroid treatment. (22-044 BE)
- Photomechanical polymer "muscle" that contracts when exposed to light. Potential uses in Aerospace engineering, robotics, solar fields, etc. (22-045 GE)
- Technology used to help prevent electromagnets from failure. (22-047 MT)

