



UTC Project Information	
Project Title	EXPLORATORY STUDY ON THE SUITABILITY OF SELF-HEALING CONCRETE FOR APPLICATIONS WITH ENHANCED MECHANICAL AND DURABILITY PERFORMANCE
University	Florida International University
Principal Investigator	Ankitha Arvan, Ph.D.
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Funding Source(s) and Amounts Provided (by each agency or organization)	IBT-ABC-UTC funds : \$22,500 Match funds : \$22,500
Total Project Cost	\$ 45,000
Agency ID or Contract Number	69A3552348322
Start and End Dates	January 1, 2025 - Active
Brief Description of Research Project	<p>The development of self-healing concrete, particularly using Basilisk-inspired approaches, is an emerging area of research that has garnered significant attention in recent years (1, 2). While conventional concrete is prone to cracking and degradation, self-healing concrete has the potential to autonomously repair damages, enhancing its durability and sustainability (3, 4). Researchers have made notable progress in understanding the underlying mechanisms of self-healing concrete, including the use of bacteria-based healing agents (5, 6), microcapsule-based systems (7, 8), and shape-memory alloys (9, 10). However, significant knowledge gaps remain, particularly regarding the scalability, long-term effectiveness, and cost-efficiency of these self-healing systems (11, 12). Furthermore, the integration of Basilisk-inspired approaches, which leverage the unique properties of basilisk lizards to create self-healing materials, is still in its infancy. As such, further research is necessary to fully realize the potential of Basilisk self-healing concrete and to overcome the existing technical and practical challenges.</p>
Describe Implementation of Research Outcomes (or why not implemented) Place Any Photos Here	The outcomes will be tracked and reported once they are identified.

Impacts/Benefits of Implementation (actual, not anticipated)	The impacts will be tracked and reported once they are identified.
Web Links <ul style="list-style-type: none">• Reports• Project website	https://abc-utc.fiu.edu/exploratory-studey-on-the-suitability-of-self-healing-concrete-for-applications-with-enhanced-mechanical-and-durability-performance/