Grant Information: Institution, Principal Investigator(s), Contact Information, Grant Number	**Stemloop Inc.** **Project:** A Paper-Based Synthetic Biology Platform for the On-Demand Testing of Water Quality **Project Leader**: **Khalid K. Alam, Ph.D.** **Funding Period:** Phase II: September 2022 – August 2024 R44ES031899
Technology	Stemloop is developing an inexpensive, easy-to-use, and rapid test for lead in drinking water.
Innovation	Stemloop's ROSALIND™ technology (*Nature Biotechnology* **38**, 1451–1459, 2020) rewires an ancient bacterial protein to sense lead and activate a genetic response in a "cell-free" biochemical reaction. The reaction is freez¸-dried for shelf-stable torage and distribution, is activated by adding water, and measured using a lateral flow device.
Contaminant and Media	Lead in drinking water
Sites/Samples	Stemloop is collecting and testing drinking water samples from systems across the United States, with a focus on Chicagoland and the surrounding Great Lakes region.
Technology Readiness Level	TRL 7 — System prototype demonstration in operational environment

uSense for Lead – an inexpensive, easy-to-use, and rapid test for lead in drinking water.