2019
Spike Award

University of Alaska Southeast Invention Disclosure

Nematode Biosensor for Shellfish Toxin Home K it

Inventors:

Matthew R. Pawlus and Shane Bennett

- Biomedical Learning and Student Training (BLaST) grant support
- Developed by Dr. Pawlus in collaboration with undergraduate Shane Bennett
- Current algal toxin testing methods for shellfish are inefficient, inconvenient, and cost-prohibitive for recreational/subsistence shellfish gatherers.
- A simple, inexpensive, portable, method of detecting toxins in shellfish is necessary for consumer health.
- “Low-tech” nematode bioassays using C. elegans are an incredibly sensitive and inexpensive way to detect a variety of harmful toxins quickly in shellfish tissue.
- Construction of a home-based kit based on C. elegans bioassays can promote the recreational and subsistence use of shellfish and increase food security in remote regions of coastal Alaska.

UAF™