Real Time Sensors For PSP Analysis

Tech ID: 34427 / UC Case 2024-235-0

TECHNOLOGY DESCRIPTION

Disease/Indication: paralytic shellfish toxins detection

Unmet Need: PSP outbreaks pose significant risks to public health and commercial shellfish harvesting worldwide, as shellfish can concentrate these toxins. Currently, PSP monitoring relies on the outdated mouse lethality assay, which is costly, labor-intensive, and unsuitable for point-of-harvest testing.

Product: Dr. Dan Minor and his collaborator developed an innovative electronic sensor that combines purified saxitoxin-binding proteins (Saxiphilins) with advanced carbon nanotube-based field effect transistor technology to detect paralytic shellfish toxins (PSPs).

Competitive Advantage: The novel sensor technology is in the proof-of-concept stage and is designed to address the urgent need for modern, efficient PSP detection methods that can be used by regulatory agencies such as the FDA, NOAA, CDC, and state health departments. This novel approach offers a more precise, portable, and scalable solution for monitoring PSP outbreaks and diagnosing PSP poisoning cases, representing a significant advancement over traditional testing methods.

Patent Status: Provisional Application

PATENT STATUS

Patent Pending

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OTHER INFORMATION

KEYWORDS

Paralytic shellfish poison, neurotoxin, detection, nanotube, transistor technology

CATEGORIZED AS

- Medical
- Diagnostics
- Other

RELATED CASES

2024-235-0

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