

InvenioIP - Technology Details

Institution: University of Maryland, Baltimore

Docket: NC-2007-068

Title: A Signal-Enhanced Point of Care Rapid Test for Detection of Toxins in Oral Fluids

Summary: The detection of biothreat agents, including ricin, is a priority for national security because the agents can be easily disseminated, result in high mortality rates, cause public panic and social disruption, and require special action for public health preparedness. Extraordinarily small quantities of these biological toxins are sufficient to be lethal to a large number of individuals. The difficulty in detecting low levels simply and rapidly is a major limitation of current methods. The present technology is directed towards the development of a signal-enhanced point of care rapid test for the detection of biological agents such as ricin, botox, and SEB.

Applications: • Point of care test for applications in biological warfare first response efforts.

- Advantages:**
- Offers simple and rapid method that can be taught to a variety of personnel who lack formal laboratory training in order to be used in first responder testing venues.
 - Offers sensitive (allowing detection in the fg/ml range) that has the capability to detect lethal toxins (purified or synthetic) where organism nucleic acid is not present to be detected by PCR methods.
 - Offers a visual readout for easy interpretation of results without the need for electronic readers.
 - Offers use of easily collected oral fluids as the testing medium.
 - Detection of toxins in oral fluid, blood samples.
 - Detection of toxins such as ricin, botox, SEB, etc.

State of Development: The technology has been successful in preliminary experiments thus far but requires further development for oral fluid and blood sample point of care testing.

R and D Required: More R&D required for point of care testing.

Licensing Potential: UMB seeks to develop and commercialize via an exclusive or non-exclusive license agreement and/or sponsored research with a company active in the area.

Patent Status: Patent Pending

Related Publications: None.

Files:

Technology Inventors: Niel Constantine

Contact Info: Technology Licensing Officer
cvip@umaryland.edu
620 West Lexington St.
Baltimore, MD, 21201
410-706-1187