



**THE UNIVERSITY of TEXAS**

**HEALTH SCIENCE CENTER AT HOUSTON**

Office of Technology Management

## **METHODS AND COMPOSITIONS FOR RAPID INACTIVATION OF PROTEINS**

**Introduction:** Toxic proteins have been, and will continue to be, a major focus of research and product development. Of particular interest is how these proteins act to cause human disease and how, in the wrong hands, they may be used to nefarious ends. Clearly, the need exists for ways to protect people from the effects of these harmful toxins. Whether it is properly sterilizing an operating room following surgery on a patient who is suffering from a prion related disease, or disinfecting a school that may have been infected with ricin, the need for formulations that can reliably and rapidly disinfect in a variety of circumstances is of clear value.

**Current Problems:** At this time, there are several products on the market that work to protect against toxic proteins. They all have some combination of the following drawbacks: cost, amount of time needed to disinfect, inability to work at room temperature, lack of effectiveness against a wide variety of toxic proteins, and reversion of the protein to a toxic state once the disinfectant is removed. An ideal solution to the problem of toxic proteins would work, while having none of these problems. Namely, it would: work rapidly, be inexpensive, not be toxic itself, be usable in a wide array of environments, be able to work at or near room temperature, and be able to work irreversibly.

**The Technology:** The present invention describes compositions and methods for the rapid (20-30 seconds) inactivation of toxic proteins at room temperature. Through a novel combination of chemicals, an inventor at the University of Texas Health Science Center has developed a formulation that does just this. It has been tested against several toxic proteins (including: hirudin, cardiotoxin, and prion aggregates), and has performed well against all. Furthermore, the formula can be incorporated into a variety of mediums from sprays to gels and foams, thus giving it greater flexibility for whatever needs may arise. Obviously, given the current concerns about toxic proteins, new inventions that effectively combat these proteins are going to be an area of great demand.

### **NON-CONFIDENTIAL TECHNOLOGY DESCRIPTION**

The preceding is intended to be a non-confidential summary of a novel technology created at the University of Texas Health Science center at Houston (UTHSC-H), for which the University is seeking patent protection.

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**Patent Status:** Pending United States Patent Application 11/566,595

**License Available:** World-wide; exclusive or non-exclusive

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