Case Medical Awarded Patent for Multi Enzymatic Solution for Cleaning Medical Devices and Food Industry Utensils and Surfaces Exposed to Brain Wasting Diseases

Patent is a significant step toward commercializing cleaning products to effectively inactivate and degrade prions

South Hackensack, NJ – June 16, 2020 – Case Medical today announced that it was awarded U.S. patent number 10,699,513 B2, by the U.S. Patent and Trademark office for “compositions and methods for handling potential prion contamination.” The patent is a significant step for the company toward commercializing cleaning products that will enable prion contaminated devices and surfaces to be processed without resorting to the extraordinary methods required today.

Prions are a type of protein that can cause unfolding in normal prion proteins most commonly found in the brain, but also in the spine, eye, spleen, and lymphoid tissues. Prion diseases are described by the CDC as “…a family of rare progressive neurodegenerative disorders that affect both humans and animals. They are distinguished by long incubation periods, characteristic spongiform changes associated with neuronal loss, and a failure to induce inflammatory response.” The CDC also indicates that “the abnormal folding of the prion proteins leads to brain damage... Prion diseases are usually rapidly progressive and always fatal.”

Prions are transmitted by eating of meat infected with prions, but also in healthcare settings from blood transfusions and from medical devices, especially from surgical instruments, even from apparently cleaned devices, having residual prion contamination.

“The challenge with prions is that they are almost impossible to detect before a fatal occurrence of the disease and they are also extremely hard to remove from contaminated devices and surfaces,” said Marcia Frieze, CEO of Case Medical. “The logical solution would be to make prion decontamination a standard part of medical device processing but the current options are extremely time consuming and so harsh that they significantly reduce the useful life of the devices themselves.”

Currently, prion contaminated materials are either incinerated or pre-treated with sodium hypochlorite, sterilization, oxidizing agents, peracetic acid, or pre-treatment at temperatures above 100°C for extended periods of time. These methods and materials are environmentally unfriendly and excessively corrosive to the materials being cleaned. The cleaning solution patented by Case Medical uses a multi enzymatic formulation to achieve a safer, more thorough result and requires much less time and effort, suggesting a feasible process for healthcare settings and the food processing industry.
In brief, Case Medical’s formulation uses specific enzymes combined with a surfactant. The enzymes effectively digest or inactivate prions rendering them ineffective and the surfactant lowers the level of friction to allow easy rinsing. The process is easy, biodegradable, and environmentally preferred.

“If prion diseases are currently rare and a much bigger issue in Europe than in the U.S., the coronavirus pandemic has hopefully taught us the value of being prepared,” said Frieze. “We still have many regulatory steps before we can fully commercialize this product and process, but we are continuing to work as fast as we can.”

Testing and validation were performed in conjunction with the U.S. Geological Service (USGS) through their National Wildlife Health Center at the Class III prion lab in Madison, Wisc.

About Case Medical

Case Medical is a FDA registered, ISO certified manufacturer of validated, sustainable, and cost effective products for instrument processing. Our reusable sterilization containers and instrument chemistries meet the highest standards for patient safety and environmental preference. Case Medical was an inaugural recipient of the U.S. EPA Safer Choice Partner of the Year award. Visit www.casemed.com for more information.

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