TWO DEDICATED UW BOTHELL SCHOOL OF STEM GRADS and their professor teamed up with a visionary Woodinville biotech company to tackle a rare but deadly health care issue: the spread of diseases caused by abnormal proteins that affix themselves to medical instruments.

Prion proteins can multiply out of control in the brain. They are nearly impossible to destroy by methods typically used to disinfect instruments. But Woodinville’s Briotech devised a solution that has now been proven pure, stable and effective with the help of Lori Robins, associate professor in chemistry, and two of her former students, Luis Contreras and Virkamal Dhaliwal.

The students were co-authors of a paper showing the mild, bleach-smelling acid eliminated prions that cause mad cow disease and Creutzfeldt-Jakob disease. Researchers also suspect prions of causing Alzheimer’s. Dipping probes and tools into Briotech HOCL sterilizes them, says Jeff Williams, the company’s chief scientific officer.

Jeff says the UW Bothell team helped open new avenues of research into preventing dementia and destroying pathogens that threaten global health. Both students graduated in 2015 in biology; Virkamal is at now at John Hopkins University while Luis still works with Briotech and UW Bothell.

“We have taken advantage of bright young people and facilities on our doorstep,” the Briotech exec says. Luis, whose family came from a small town in Mexico, says he never imagined graduating from a university or being a co-author on a paper.

“This opportunity has been amazing in terms of the learning experience as well as working with different individuals,” he says.

Virkamal, who has a younger brother with a neurological disorder, says she’s always wanted to help and to have a career in science, research and medicine — “to be able to contribute something and be able to make an impact in a field so relevant to my own life and upbringing.”

The research conducted for the National Institutes of Health was proven in testing at the Rocky Mountain Laboratories in Hamilton, Montana. Now, Briotech is asking the U.S. Food and Drug Administration for regulatory approval for instrument decontamination.

“We think if there continues to be a flow of evidence that Alzheimer’s disease is indeed transmissible and that Alzheimer’s prions are clearly able to survive on medical and dental instruments when they are processed using current practices, then the flood gates will open,” Jeff says.
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JEFF WILLIAMS, BRIOTECH, CHIEF SCIENTIFIC OFFICER