

Our view: Research, innovation keys in fighting pandemic

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AJ Media Editorial Board

Within the urgency of a global pandemic, innovation and inspiration will often help win the day. As the coronavirus continues to wreak havoc, bright minds are at work across numerous disciplines looking for ways to reduce the impact of COVID-19.

Some of those bright minds are right here in West Texas. For example, you might have seen our story recently about the decontamination wipe invented by a Texas Tech researcher. The three-layer nonwoven wipe, which cleans up toxic agents, also holds promise so far as cleaning up bodily fluids contaminated with the coronavirus.

The technology, known as FiberTect, has an activated carbon core between absorbent top and bottom layers. As a wipe or mitt, researchers say it could be an important tool in clean-up efforts of settings conducive to transmission of the virus.

It was invented by Seshadri Ramkumar, a professor of chemical countermeasures and advanced materials in the Texas Tech Department of Environmental Toxicology. He says the structure of the wipe has been effective in containing bodily fluids such as saliva and mucus through which the virus can be transmitted. Likewise, its activated carbon also absorbs particles transmitted in vapor phase through the air, according to our story.

"It can be used to clean wet surfaces contaminated with bodily fluids," Ramkumar said in our story. "Highly porous carbon in the structure can trap the vapors and aerosols in which microbes are contained. The wipe structure is flexible and can take the shape of the objects to be cleaned. The three-ply structure without glue helps this effective cleaning."

In a similar vein, technology developed at West Texas A&M University originally intended to protect soldiers from anthrax has been repurposed and will be deployed across the Canyon campus to protect door handles from viruses and bacteria.

Doors all over campus are scheduled to soon receive Copper Clean stickers over handles and push plates, according to information from the Texas A&M University System. These stickers, a highly engineered copper-alloy foil with adhesive backing, are a product developed by Engineering Dean Emily Hunt and a group of graduate engineering students working to commercialize patents obtained for WTAMU and the A&M System.

Combined with other standard infection control practices, the stickers will reduce germ-related impacts on high-touch surfaces throughout campus. "The stickers are made with a copper-alloy that has been proven to kill 99.9 percent of harmful pathogens, like MSRA, staph, aureus and E. coli within two hours," Hunt said. Testing against other virus-type threats, such as COVID-19, is scheduled to begin soon.

Officials say copper has long been known as an antimicrobial. The WTAMU team originally began looking at ways to apply it to high-touch surfaces four years ago. According to A&M's news release, Hunt first began researching antimicrobial materials more than 10 years ago after receiving a grant from the U.S. Department of Defense and the National Science Foundation to pursue ways of protecting soldiers and civilians from biological weapons.

The Copper Clean stickers are made by an EPA-approved, American manufacturer with the first shipment just arriving and WTAMU being the first customer. However, Hunt indicated discussions are taking place with interested school districts across the state.

We are fortunate to have great universities with outstanding researchers developing solutions locally that might ultimately benefit the world, especially in these uncertain, unpredictable times.

The coronavirus threat is one that impacts everyone, and it is good to know that bright minds right here in West Texas are hard at work doing what they can to help win this battle.