

## VCU-connected blood-clot product is closer to battlefield

Approval for WoundStat, developed by VCU scientists, would bring money to school

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Dr. Kevin R. Ward showed a bag of WoundStat at VCU Medical Center in May. Virginia Commonwealth University scientists working at the school's Reanimation Engineering Shock Center developed WoundStat in 2004. Photo By: JEFFREY KELLEY

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As the nation approaches the fifth anniversary of the Iraq War, a Virginia Commonwealth University-created blood-clotting product is one step closer to getting into the hands of U.S. soldiers.

The Army could decide in early April whether to outfit troops with WoundStat, a mix of minerals that, when applied to wounds, stops heavy bleeding.

That decision will follow testing by the Army Institute of Surgical Research, which studies combat care and products for injured soldiers. A recent test of five products found WoundStat to be the most effective. WoundStat was the sole product found effective "100 percent of the time."

Major blood loss is responsible for nearly 50 percent of deaths on the battlefield, the institute said.

So far during the Iraq War, nearly 4,000 U.S. military deaths have been reported.

While the Army has no time frame for approval, TraumaCure, the Bethesda, Md.-based company that holds the license to sell WoundStat, will have produced by the end of this month enough WoundStat for every soldier in Afghanistan and Iraq.

Devinder S. Bawa, chief executive officer of TraumaCure, said his company is confident it will win the contract and can meet the Army's needs.

Bawa said the Navy, which supplies the Marines, is also studying the same five products.

An Army contract could generate about \$5 million in sales for TraumaCure. Some of those proceeds would go to VCU and the scientists who developed WoundStat in 2004.

Ivelina Metcheva, director of VCU Tech Transfer, which handles intellectual properties for the school, would not discuss how much its share was. But she did say that 40 percent of revenue for the school would go to royalties for the scientists who designed WoundStat.

The packets come with a perforated top that can be opened with one hand or the teeth.

TraumaCure worked with Special Forces medics to design the package coloring and labeling so it can be seen with night-vision goggles and can be used under enemy fire or in inclement weather.

In the Army institute, research attempted to simulate battlefield trauma using pigs. A "femoral artery injury" that mimics a bullet wound was created, and each of the products was applied after 45 seconds of bleeding. When possible, two applications of each product was applied.

The animals were monitored for three hours to see if bleeding resumed.

"WoundStat appears to be the most effective treatment," the study's authors found. The pigs treated with WoundStat lost the least amount of blood post-treatment, the study found.

TraumaCure is also working on selling WoundStat for emergency response crews and hospitals. It received approval in September from the Food and Drug Administration.

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