



## Silver Hydrosol and Ebola Virus

*The Wall Street Journal* calls “nano silver” (silver hydrosol) a high-tech version of one of our oldest germ killers.

Silver is known to disarm viruses, bacteria and fungi. More recently, its use for Ebola treatment is condoned by the World Health Organization (WHO), which convened medical ethics experts to discuss the wisdom of using untested drugs and vaccines in the Ebola crisis, whose numbers of victims were multiplying daily across all international borders.

Silver is used extensively in medicine, and its ability to kill Ebola is not untested. It’s just that the research, sponsored by the U.S. Department of Defense as a threat containment strategy, is in the test tube and preliminary stages of research.

Dr. Simon Agwale, an expert in contagious disease, notes silver’s broad-spectrum effect. “It may be also a source of a cure,” he told the media.

### U.S. Studies Defense Threat Reduction

The American Defense Threat Reduction Agency has also investigated silver in an unclassified report, *Novel Nanotechnology-Based Antiviral Agents*, written by Janice Speshock, PhD and Saber Hussain, PhD, of the Applied Biotechnology Branch 711<sup>th</sup> Human Performance Wing, Air Force Research Laboratory. They found silver interacts “inside the cell lysosomes” to inhibit the protease called cathepsin that is necessary to viral RNA replication. Bulk and nano silver have been shown “to inhibit enzyme activity” and “bind readily to thiol groups” such as cathepsin B, which “has been shown to have an essential role in Ebola virus replication.” Cathepsin L has an accessory role in Ebola virus replication. (Refer to the PDF of their unclassified report).

Jidefor Adibe in *The Daily Trust* says the governments of the world have disempowered average people from even trying something – yet, as known from the unclassified U.S. report, other health professionals are also looking at its potential to provide, if not a cure, additional challenges to the virus before it could infect more people.

Drs. Speshock and Hussain note this in their August 2010 article in the *Journal of Nanobiotechnology* that silver “would likely make a more effective decontamination tool as opposed to an *in vivo* therapeutic agent.”

There is a huge difference between how a 2 nm (nanometers) particle would behave and how a 60 nm particle would behave. In our research, the unprecedented 0.8 nm particle size found in 10 part per million bio-active silver hydrosol or silver first aid gel has been shown to be most effective. So practically speaking, if one is traveling or otherwise possibly going to come into contact with these types of viruses, using bioactive silver hydrosol as a disinfectant, both topically, internally and on surfaces would be a wise decision.

Did you know Xooma’s Silver MAX™ is a superior hydrosol solution? It has the following benefits:

- Particle size .8 nanometers (nm)
- 10 parts per million (ppm)
- 99.99% pure silver hydrosol
- Safe for the whole family
- Bio availability over 96%
- Clear, colorless and odorless
- Bio activity through positively charged nanoparticles

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Refer to the PDF document by the U.S. Defense Threat Reduction Agency in your Back Office entitled “**Novel Nanotechnology-Based Antiviral Agents: Silver nanoparticle neutralization of hemorrhagic fever viruses**”