



FOR IMMEDIATE RELEASE:

## **Researchers at the University of South Florida develop novel technology to naturally purify water using cactus mucilage**

TAMPA, Fla. (Aug. 19, 2015) – University of South Florida (USF) scientists have developed a natural, non-toxic and renewable system to purify water using cactus mucilage. This novel and patented technology was exclusively licensed from USF to Clean Water by Nature, LLC, to develop and commercialize products and processes to purify water.

The innovative technology is based on research conducted at the University of South Florida by Norma Alcantar, Ph.D., professor in the Department of Chemical and Biomedical Engineering at USF. Dr. Alcantar and her team have found that mucilage (extract) from the common and easily grown prickly pear cactus (*Opuntia ficus-indica*) has the potential to treat ground/surface water, well water, and waste water to EPA maximum contaminant level standards.

Using simple, green methods and readily available resources, cactus mucilage filters non-potable water while it removes sediment, heavy metals, parasites, and bacteria. The scientific advantage of this technology comes from the processing and use of cactus mucilage, a plant-based substance that is easily farmed, naturally occurring and 100 percent sustainable. Cactus mucilage is an approved substance by the FDA, the USDA, the EPA, and other government agencies.

The licensing agreement between USF and Clean Water by Nature, LLC, provides the company worldwide, exclusive rights to developing granulated filters and nano-fiber filters manufactured from cactus mucilage and processes for using these filters to purify water. Using cactus mucilage to treat water provides a safe purification alternative to the current processes that use various types of toxic chemicals including ferric sulfate, aluminum sulfate and sulfuric acid to remove the suspended particles from raw water sources.

“We are honored to be working with USF and Dr. Alcantar and her team,” said P. Kathleen Lovell, Chief Executive Officer of Clean Water by Nature. “Water quality and scarcity have been labeled, ‘The Defining Crisis of the Twenty-First Century’. We are running out of fresh water, and we must find ways to recycle used water and return it to the drinking supply in a green and affordable way.”

The company and USF researchers have formed a team for the NSF I-CORPS program, where they hope to gain a better understanding of the customers, markets and valuation proposition of the inventive technology.

“We are very excited to participate in the I-CORPS program and get the training and tools to help transform our technology,” said Dr. Alcantar. “We anticipate the results being the identification of an efficient path to commercialization,” said Dr. Alcantar.

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**About the University of South Florida**

*The University of South Florida is a high-impact, global research university dedicated to student success. USF is a Top 50 research university among both public and private institutions nationwide in total research expenditures, according to the National Science Foundation. Serving nearly 48,000 students, the USF System has an annual budget of \$1.5 billion and an annual economic impact of \$4.4 billion.*

**About Clean Water by Nature, LLC**

*Clean Water by Nature, LLC develops and manufactures natural, non-toxic, renewable and cost-effective systems to purify water. [www.cleanwaterbynature.com](http://www.cleanwaterbynature.com).*

Media Contact: Lauren Golin, 813-974-0102, [lgolin@usf.edu](mailto:lgolin@usf.edu)