

September 10, 2018



# **AMEDICA ANNOUNCES FILING OF KEY PATENT APPLICATION RELATING TO THE ANTI-VIRAL EFFECT OF ITS SILICON NITRIDE**

SALT LAKE CITY, Sept. 10, 2018 (GLOBE NEWSWIRE) -- Amedica Corporation (NASDAQ: AMDA), a company that develops and commercializes silicon nitride for biomedical applications, today announced the filing of a U.S. patent application for breakthrough research findings that have identified a new property of its proprietary silicon nitride.

Amedica investigators led by Dr. Giuseppe Pezzotti, a professor at the Kyoto Institute of Technology (Japan) and consultant to Amedica Corporation, have developed micromeritic silicon nitride powders as well as bulk surfaces that are effective against several strains of commonly prevalent viruses - including Influenza A virus (H1N1), the virus responsible for the 2009 flu pandemic. The research has also identified the surface chemical properties of silicon nitride that contribute to the observed virucidal effect.

The mechanism, known as alkaline transesterification, is known to cause genomic cleavage in active viruses leading to their inactivation and lysis. The investigation employed a commonly accepted assay of measuring mammalian cell viability in the presence of high concentrations of virus particles. In the case of Influenza A virus, a 5-minute exposure to Amedica's silicon nitride either at room temperature or at 4°C was enough to result in complete virus lysis and inactivation such that 100% of the exposed cells survived. In an identical parallel test conducted without silicon nitride, the virus remained intact and was able to infect and destroy exposed cells. Silicon nitride proved to be an effective disinfectant of the virus thus providing a protective effect to cells exposed to the virus.

"These unexpected results are of course entirely welcome, and the remarkable discovery opens new frontiers in our evolving understanding of silicon nitride as a biomaterial and in practical applications of it," said Dr. B. Sonny Bal, Chairman and CEO of Amedica Corporation. "The discovery is particularly timely given our recent divestment of the retail spine business to CTL Medical and our transition to an OEM manufacturer and biomaterials company."

"From the standpoint of spine surgery, the antiviral properties of silicon nitride implants probably have little consequence since viral infections of implanted biomaterials are not a practical problem. On the other hand, systemic viral infections and their spread through contaminated surfaces are a global concern. Drug treatments of established Influenza A

infections, such as Tamiflu, are effective only in controlling symptoms by reducing viral load and the virus can still mutate to newly resistant, dangerous strains. The control of viral propagation by surface sanitization is therefore of worldwide interest; witness the hand sanitizers and other protections used commonly during the flu season. Surface sanitization destroys the virus itself, and commonly-used methods rely on ammonia, alcohol, silicon nanoparticles, and certain pH conditions to inactivate virus particles.”

“The latest findings show the above-surface conditions for viral disinfection are already manifest on Amedica’s silicon nitride whether the material is studied in bulk form or as a micron-layer coating on other surfaces. This property is a powerful advantage toward safe and reliable methods for viral inactivation and elimination. This fortuitous, intrinsic anti-viral effect of Amedica’s silicon nitride has broad applications in health care, from medical therapies to various medical devices and equipment such as examination tables, clothing, filters, masks, gloves, catheters, endoscopic instruments, and well beyond.”

“Previous data, supported by clinical studies, have established that Amedica’s silicon nitride enhances osteogenesis while resisting bacterial adhesion; both highly desirable properties in spinal fusion implants. Now, the material appears to be equally effective against the world’s most common pathogens, i.e., viruses that are responsible for a number of diseases and their global spread. Going forward, we will seek commercial applications and partnerships that can leverage the unique antiviral behavior of silicon nitride, a property that, to our knowledge, is not present in any other biomaterial known in the world today.”

Further to today’s announcement, Amedica will host a conference call on September 13, 2018 to discuss the agreement with CTL Medical and to provide a business update. Details related to this call will be provided at a later date.

Amedica is an innovative biomaterials and OEM company that develops and commercializes silicon nitride for various biomedical applications including orthopedic, dental and arthroplasty.

## **Forward-Looking Statements**

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 (“PSLRA”) that are subject to a number of risks and uncertainties, including without limitation the risks associated with generating data to support the patent application for the technology and of obtaining a patent that provides commercially significant protection for this technology; the risk that the technology may infringe the proprietary rights of third parties. Readers are cautioned not to place undue reliance on the forward-looking statements, which speak only as of the date on which they are made and reflect management’s current estimates, projections, expectations and beliefs. A discussion of those risks and uncertainties can be found in Amedica’s Risk Factors disclosure in its Annual Report on Form 10-K, filed with the Securities and Exchange Commission (SEC) on March 29, 2018, and in Amedica’s other filings with the SEC. Amedica disclaims any obligation to update any forward-looking statements. Amedica undertakes no obligation to publicly revise or update the forward-looking statements to reflect events or circumstances that arise after the date of this report.

Contacts:  
Amedica IR  
801-839-3502  
IR@amedica.com



Source: Amedica Corporation