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SINTX TECHNOLOGIES FILES PATENT RELATED TO ANTIPATHOGENIC COMPOSITIONS AND METHODS

SALT LAKE CITY, UT, March 23, 2020 (GLOBE NEWSWIRE) -- SINTX Technologies, Inc. (NASDAQ: SINT) ("SINTX" or the "Company"), an original equipment manufacturer (OEM) ceramics company focused on silicon nitride applications, today announced that US and international patent applications were published on March 12, 2020 in which certain claims made in the applications address the potential surface antiviral effect of silicon nitride. The US application is numbered US 2020/0779651 A1 and titled "Antipathogenic Devices and Methods Thereof." The international application is numbered WO 2020/051004 A1 and titled "Antipathogenic Compositions and Methods Thereof."

Dr. Sonny Bal, Chairman and Chief Executive Officer of SINTX, explained that "As background, SINTX manufactures spine implants made of silicon nitride; these have been used in thousands of spinal fusion surgery patients for over ten years. Basic science and clinical data have repeatedly shown the efficacy and safety of silicon nitride as a spinal implant material. Of interest is a particularly unique property of silicon nitride, i.e., its ability as a biomaterial to resist bacterial adhesion, a precursor to implant-related infections. Silicon nitride's resistance to bacteria has been verified in several *in vitro* and animal studies that have been published by SINTX scientists, as well as by independent investigators."

"The impetus for testing silicon nitride against viruses was to extend our understanding of the unique surface chemistry of silicon nitride, and attendant antibacterial properties. In our experiments, we exposed three strains of pathogenic viruses to silicon nitride, namely, Influenza A virus (A/Puerto Rico/8/1934 H1N1), Feline calicivirus, and Enterococcus 71 (EV-A71). These three viral entities were selected because of their different genomic and virion structures, surface isoelectric points, and their propensity to mutate. The individual molecular composition of the capsid proteins and RNA of the selected viruses confer distinct specificity and infectivity characteristics. Of note, these studies were undertaken before the novel COVID-19 coronavirus and its health risks became known."

"Remarkably, we found inactivation of all three viral strains as early as one minute after exposure to silicon nitride. The primary mechanism of inactivation appears to be RNA cleavage and fragmentation induced by specific, off-stoichiometric chemical reactions, and by the release of reactive nitrogen species on the surface of our material."

"Our findings with viral inactivation on silicon nitride are consistent with prior knowledge of the other properties of silicon nitride, (*i.e.*, bacterial resistance, and enhanced bone formation). Mechanistic details of the antibacterial effects of silicon nitride have been previously published by SINTX in the peer literature. A scientific paper related to the antiviral findings is under preparation for peer review and publication."

“Recent findings published in the *New England Journal of Medicine* by the National Institute of Allergy and Infectious Diseases show that the COVID-19 coronavirus survives for hours, and even days on materials such as stainless steel, plastic, cardboard, and even copper. Viral persistence on these surfaces contributes to the risk of disease transmission. Ideally, surface inactivation of viral contamination should be effective within minutes, not hours or days. We are anxious to see how the COVID-19 coronavirus will react when exposed to silicon nitride. We are looking for testing facilities and partners who can help us examine the effect of our silicon nitride on the COVID-19 coronavirus, and have applied for federal funding to support this effort.”

“While SINTX has the technology to apply silicon nitride coatings and treatments to a variety of surfaces and materials used in daily living, at this stage the antiviral effects of silicon nitride published in our patent filing reflect *in vitro* experimental findings only, and we strongly caution against making any inferences beyond that limited data set. We look forward to independent work by others in this area, and seek partners who can help us with further inquiry into the observed antiviral surface properties of silicon nitride. It is our hope as a company to reduce the risk of microbe transmission, contribute to improved global health, and make the world a safer place” said Dr. Bal.

About SINTX Technologies, Inc.

SINTX Technologies is an OEM ceramics company that develops and commercializes silicon nitride for medical and non-medical applications. The core strength of SINTX Technologies is the manufacturing, research, and development of silicon nitride ceramics for external partners. The Company manufactures silicon nitride material and components in its FDA registered and ISO 13485 certified facility.

For more information on SINTX Technologies or its silicon nitride material platform, please visit www.sintx.com.

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. Risks and uncertainties that may cause such differences include, among other things, the uncertainties inherent in research and development, including the cost and time required advance our products to regulatory submission; market acceptance of our products once cleared and commercialized; our ability to raise additional funding and other competitive developments. 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. There can be no assurance that any of the anticipated results will occur on a timely basis or at all due to certain risks and uncertainties, a discussion of which can be found in SINTX’s Risk Factors disclosure in its Annual Report on Form 10-K, filed with the Securities and Exchange Commission (SEC) on March 11, 2019, and in SINTX’s other filings with the SEC. SINTX disclaims any obligation to update any forward-looking statements. SINTX 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.

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