Sona Nanotech’s gold nanorods improve cancer treatments

written by InvestorNews | February 24, 2022

For virtually everyone on the planet, cancer is a four letter word. One has to have a pretty rosy outlook on life for any form of cancer diagnosis to not be earth shattering. Fortunately, great strides have been made in the identification and treatment of most forms of cancer that provide us all with hope and optimism. Nevertheless, you never want to go through a situation where you, or someone close to you, hears the words “you have cancer”, as I can attest to from recent and historical experience. That’s why I’m always paying attention to advancements in every regard to prevention, early detection and treatment of this far too common malady.

Having just found out a family member will soon be undergoing radiation therapy, I thought it might be a good time to have a look at a company that could be making a dramatic improvement in the application thereof. Sona Nanotech Inc. (CSE: SONA | OTCQB: SNANF) is a nanotechnology life sciences firm that has developed multiple proprietary methods for the manufacture of various types of gold nanoparticles. Sona Nanotech’s gold nanorod (GNR) particles are CTAB (cetyltrimethylammonium) free, eliminating the toxicity risks associated with the use of other gold nanorod technologies in medical applications. It is expected that Sona’s gold nanotechnologies may be adapted for use in applications, as a safe and effective delivery system for multiple medical treatments, subject to the approval of various regulatory boards, including Health Canada and the FDA.

However, what currently intrigues me the most about this Company is their work in improving the effectiveness and reducing the

harmful effects of radiation treatments. Drugs and radiation used in treatment of cancers, while effective at killing tumor cells, cause damage to organs and healthy cells. Traditional methods of radiation treatment involve non-selective irradiation, damaging the normal tissue surrounding a tumor as well as the cancerous cells. Evidence suggests that GNRs could be more effective at killing tumors with less or no adverse reactions to healthy cells. Photothermal therapy using GNRs involves the placement of specifically tuned GNRs at the tumor site, accumulating the GNRs within the cancer cells, and the use of a near infrared light generating laser, harmless to skin, to penetrate the tumor, triggering the GNR's surface electrons to vibrate strongly and increase the local temperature of the cancerous cells, thereby killing them safely. This method is less invasive and can be more precise than surgery.

I may be a little preoccupied at present on this particular item in Sona's arsenal, so I'll take a step back and quickly discuss other GNR applications that Sona is developing. Their primary focus right now is a saliva based rapid screening test for Coronavirus. On November 8th the Company announced a U.S. partnership and preliminary evaluation results for its COVID-19 saliva test. Sona entered into a binding licensing agreement with U.S. FDA registered Arlington Scientific Inc. of Springville, Utah, to bring Sona's rapid saliva COVID-19 test to market. The market was pretty excited about this news as the stock popped 87% the day after the press release, and that was before anyone was aware of the omicron variant. If an FDA Emergency Use Authorization is granted, Arlington will coordinate manufacturing and distribution of the test in the U.S. exclusively on a profit-sharing basis. Albeit, many have suggested we are moving from pandemic to endemic so it remains to be seen if this product will be viewed as importantly as it was three and a half months ago.

Other developments going on at Sona include a rapid screening tool to help farmers combat the threat of Bovine Tuberculosis in herds, which is being developed with a consortium of companies as part of a Canada/UK industrial research and development program. Currently, a diagnosis is typically made either through a skin test, with a turnaround of 48-72 hours, or through post-mortem examination and tissue culture, which can take up to 12 weeks. It has cost the taxpayer £500 million to control the disease in England in the last 10 years. It is estimated that the costs of bovine TB control will top £1 billion over the next decade, if no action is taken.

There is also a concussion test for mild traumatic brain injury that aims to detect a series of biomarkers enabling the screening for mild concussions. The test is intended to detect the presence of GFAP (Glial Fibrillary Acidic Protein), a biological marker associated with concussions, typically released into the blood stream within minutes of an impact to the head. This could be a tremendous benefit to society as a whole, particularly children. But the capitalist in me is thinking about how much the NFL would pay for a product that could see a player be cleared to resume play in a matter of minutes.

I'm always appreciative of the smart people around the world who work hard every day to make life a little bit better for all of us. I hope the team at Sona Nanotech continues to make inroads with their GNR technology to make the world a better place. And with a market cap of just under C$24 million, any success could translate well for investors.