Zentek Reports Successful Testing of Aptamer Against Omicron Covid-19 Variant

written by Raj Shah | November 29, 2023

November 29, 2023 (Source) – **Zentek Ltd.** ("**Zentek**" or the "**Company**") (NASDAQ:ZTEK)(TSX-V:ZEN), an intellectual property technology development and commercialization company announces successful testing of its COVID-19 High-Binding Affinity (C19HBA) aptamer against the Omicron XBB 1.5 variant (Omicron) by the Miller Lab at McMaster University in the latest pre-clinical study.

The performance of the C19HBA aptamer was comparable to the performance of monoclonal antibody, according to the Miller Lab, as it once again provided clinical protection against infection with the Omicron XBB 1.5 variant. This is a significant result given that aptamers have the potential to replace or compete with monoclonal antibodies in many therapies due to their advantages including cost of production, stability, and speed of development.

"Our aptamer has now demonstrated that it works very well against both the original Wuhan Covid-19 strain and the latest Omicron XBB 1.5 variant while current monoclonal antibody treatments have been shown to lose their protection for the newer variants as a human therapeutic." said Greg Fenton, CEO of Zentek. "Our aptamer technology can be a powerful resource to provide pandemic readiness against future strains of Covid-19. Following these excellent results, McMaster and Zentek are now leveraging our platform to develop new aptamers for the treatment of influenza and norovirus."

The Company will now begin to explore partnership opportunities in the pharmaceutical space as its aptamer platform may offer a fast, economical, and novel approach to the development of new therapeutics for clinically relevant biological markers. Moreover, the platform technology can simply be added to existing aptamers already in development and bring significant value by substantially increasing the effectiveness of the aptamer or drug while reducing or eliminating the problem of renal filtration. Currently to evade renal filtration, aptamer therapeutics add polyethylene glycol (PEG), but there is a small percentage of the population that is allergic to PEG. Aptamer therapeutics with PEG have failed in clinical trials previously because of this allergic response. HBA aptamers may solve the renal clearance challenge without the need for PEG and this potential risk to some patients.

Matthew Miller commented: “The animal model that was used to assess the C19HBA aptamer for the Omicron variant XBB 1.5, is very susceptible to severe infection. The mice were engineered to have the same ACE2 receptors as humans which makes them very susceptible to COVID-19 infection and allows the disease to progress rapidly. If the treatment was ineffective, the animals would have quickly deteriorated from this dose, as was observed with untreated animals. I highlighted very early on to the Zentek team that if the C19HBA aptamer offered the breadth of protection from the original Wuhan strain and the latest Omicron variant like XBB 1.5 then the therapeutic value would be very interesting. We have now reached this milestone in our testing. I am convinced that this aptamer and delivery system have immense potential to transform prevention and treatment of SARS-CoV-2”.

In this study, engineered mice that have the same ACE2 receptors as humans were used for the trial. The mice were divided into three different groups – he first group was a control, while the

second received the monoclonal antibody and the third received the C19HBA aptamer two hours prior to lethal Omicron infection. The control group demonstrated obvious signs of severe illness within five days of the infection. All animals that received monoclonal antibody or HBA aptamer survived. The HBA aptamer group had a slight weight loss during the initial phase of the trial but regained their original weight by the end of the seven-day study.

Any groups interested in learning more about the high binding affinity aptamer platform or the results of this SARS-CoV-2 study are encouraged to reach out to Colin van der Kuur, Chief Science Officer at Zentek at Cvanderkuur@zentek.com

About Zentek Ltd.

Zentek is an ISO 13485:2016 certified intellectual property technology company focused on the research, development and commercialization of novel products seeking to give the company's commercial partners a competitive advantage by making their products better, safer, and greener.

Zentek's patented technology platform ZenGUARD™, is shown to have 99-per-cent anti-microbial activity and to significantly increase the bacterial and viral filtration efficiency of both surgical masks and HVAC (heating, ventilation, and air conditioning) systems. Zentek's ZenGUARD™ production facility is located in Guelph, Ontario. Zentek's patent pending ZenARMOR™ technology platform is focused on corrosion protection applications.

Zentek has a global exclusive license to the Aptamer-based platform technology developed by McMaster University which is being jointly developed by Zentek and McMaster for both the diagnostic and therapeutic markets.

For further information:

Investorrelations@zentek.com

Francis Dube
Tel: (289) 821-2820
Email: fdube@zentek.com

To find out more about Zentek, please visit our website at www.Zentek.com. A copy of this news release and all material documents in respect of the Company may be obtained on Zentek's SEDAR+ profile at http://www.sedarplus.ca/.

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SOURCE: Zentek Ltd.