



Axon Neuroscience has a promising peptide vaccine against COVID-19 in development

09 April 2020, Bratislava – AXON Neuroscience (“Axon”), a clinical-stage biotech company and an industry leader in treating and preventing neurodegenerative diseases, is developing a promising vaccine candidate against COVID-19.

Axon has over 20 years’ experience in development of safe and immunogenic peptide vaccines. Its well-established scalable technology allowed the company to move quickly in recent weeks to create a novel peptide vaccine in support of the global fight against COVID-19.

Norbert Žilka, Chief Scientific Officer of Axon said: *“We have over sixty scientists with expertise in key disciplines – immunology, pharmacology, structural biology, proteomics, genomics – making Axon ideally placed to deliver a rapid solution for combatting the new coronavirus.”*

Axon’s peptide vaccine candidate against COVID-19

Axon used its established peptide-based vaccine platform to produce a novel prophylactic COVID-19 vaccine, intended to treat infected patients and protect healthy individuals from infection. Axon’s vaccine contains only selected epitopes capable of inducing desirable T cell and B cell mediated immune responses to prevent interaction of the virus Spike (S) glycoprotein with its target human cells, thus preventing the virus from entering the cells and spreading. This approach is designed to prevent the unwanted serious side effects observed in previous studies of conventional vaccines against SARS-CoV.

The elderly patients most at risk for COVID-19 are prone to develop serious respiratory complications and pneumonia, which might result in permanent lung damage or even death. In general, elderly individuals typically do not respond as well to vaccination, resulting in ordinary vaccinations having a limited effect. Axon has developed innovative proprietary technologies to stimulate the immune systems of elderly people and people with immunodeficiencies in order to produce a high antibody response in these vulnerable populations.

“The human immune system slowly deteriorates with age. This immunosenescence, combined with other comorbidities, makes elderly people highly sensitive to SARS-CoV-2 infections and prone to severe respiratory complications. We believe we have a safe and effective vaccine concept to prevent future outbreaks of COVID-19 and at the same time protect the most vulnerable groups” said Professor Eva Kontseková, Immunologist and the Head of Immunotherapy at Axon.



The recent workshop co-chaired by both the European Medicines Agency (EMA) and Food and Drug Administration (FDA) confirmed that an expedited regulatory pathway could be available for well-tested vaccine platforms, such as Axon's. Data from Axon's previous Alzheimer's Disease clinical trials could facilitate a quick move to first-in-human clinical trials with the new COVID-19 vaccine.

Peptide vaccines represent a promising alternative to conventional vaccine approaches, particularly given their speed of development and ease of production. Axon's longstanding strategic collaboration with the European-based global leader in peptide vaccine manufacturing means that the transfer to GMP production is quick, inexpensive and highly scalable due to the established analytical and manufacturing methods used in Axon's other development programmes.

"The emerging global health threat of COVID-19 requires a rapid response. More potent and versatile vaccine platforms are urgently needed. Given the expedited regulatory procedures for COVID-19, the first-in-human administration with our vaccine could take place as early as September 2020, much quicker than standard vaccine timelines" said Michal Fresser, Chief Executive Officer of Axon Neuroscience.

About Coronavirus COVID-19

Coronaviruses, which are large, enveloped RNA viruses, can cause potentially fatal disease in humans such as MERS-Cov, SARS-Cov and newly discovered SARS-Cov2. As the new coronavirus outbreak has spread with thousands of infected cases globally, WHO declared the outbreak of COVID-19 a pandemic. As of 9 April 2020 COVID-19 is responsible for more than 88,000 deaths. Further, more than 1,500,000 patients have been positively diagnosed with the disease and the estimates of actual cases are several times higher. A vast majority of the fatalities are elderly people above 65 years of age.

About Axon's peptide vaccine platform

Axon has developed its lead vaccine AADvac1, which is the most clinically-advanced tau therapy in development for treating and preventing Alzheimer's Disease. At the end of 2019 Axon has successfully completed a phase 2 clinical trial in almost 200 Alzheimer's patients, which revealed excellent safety, immunogenicity and efficacy. The evidence from its clinical trials on Alzheimer's disease proved its peptide-based vaccine platform very safe and well-tolerated. Over 80% of the treated Alzheimer's patients demonstrated an exceptional immune response and generated a robust quantity of antibodies.

COVID-19 belongs to a family of coronaviruses that can cause respiratory disease and pneumonia, which is particularly dangerous and lethal for elderly patients. The knowledge and



experience acquired in treating elderly population such as Alzheimer's Disease patients, is highly relevant with respect to COVID-19.

About Axon Neuroscience

Axon Neuroscience is an industry leading, clinical stage biotech company at the forefront of the peptide-based vaccines against fatal human diseases. The company was founded in 1999 and now has the single biggest team in the world dedicated exclusively to peptide vaccine development in relation to treating Alzheimer's Disease. The extensive knowledge in producing safe and immunogenic vaccine and well-established scalable technology allowed the company to move very quickly to creation of novel peptide vaccine against the COVID-19.

--END--

Media enquiries

Juraj Kutak

AXON Neuroscience

+421 903 437 020

media@axon-neuroscience.eu