



Axon Announces Positive Pre-Clinical Results for its Peptide Vaccine (ACvac1) Against Novel Coronavirus

- The new peptide vaccine ACvac1 generated a high titer of antibodies in vaccinated mice.
- The generated antibodies completely neutralised the live SARS-CoV-2 virus.
- No signs of off-target effects or adverse reactions were observed in the vaccinated mice.
- These results put Axon in a strong position to enter phase I clinical trials in the last quarter 2020.

09 September 2020, Bratislava – AXON Neuroscience SE (“Axon”), a clinical-stage biotech company pioneering research in neurodegenerative diseases with a unique peptide vaccine platform, announced positive pre-clinical results for ACvac1, its vaccine candidate against novel coronavirus SARS-CoV-2. This key pre-clinical study confirmed the efficacy of the vaccine on the live SARS CoV-2 virus.

First, mice vaccinated with ACvac1 generated a high titer of antibodies in blood. These antibodies selectively targeted a specific, vulnerable part of the Spike protein that allows the virus to infect the cells and replicate. Second, we demonstrated that the raised antibodies efficiently neutralised the live SARS-CoV-2 virus. Neutralisation was tested by examining whether blood from recently vaccinated mice can prevent cellular infection on in-vitro exposure of cells to SARS-CoV-2. Third, the vaccinated mice did not show any signs of off-target effects or adverse reactions.

“We identified the weakest points of the SARS-CoV-2 virus and instructed the immune system to target these small areas of up to 20 amino acids in order to completely eliminate the viral infection. The data from the virus neutralisation test showed that our strategy was successful. ACvac1 very precisely instructs the immune system to neutralise the virus. In contrast, other vaccine candidates overwhelm the immune system by producing numerous ineffective antibodies by introducing a 1200-amino-acids-long Spike protein as an antigen.” said Norbert Zilka, MVD, DSc, Chief Science Officer at Axon.

“With today’s positive results, our peptide-based vaccination platform has proven its potential use for COVID-19. We are progressing toward clinical trials to bring the world a vaccine without compromising safety and efficacy. This work is based on more than 10 years of experience in developing exceptionally safe and immunogenic peptide vaccines for neurodegenerative disorders.” said Michal Fresser, Axon’s Chief Executive Officer.



About ACvac1 (COVIDAX), Axon's peptide vaccine candidate against COVID-19

ACvac1 is a prophylactic COVID-19 vaccine intended to protect healthy individuals from infection. The vaccine contains only key elements of the virus Spike (S) glycoprotein capable of inducing desirable immune responses to prevent the virus from interacting with its target host cells, thus preventing the cells from getting infected and the virus from multiplying.

In creating ACvac1, Axon has benefited from its experience in developing a safe and effective immunotherapy for neurodegenerative disease for elderly patients, a group highly vulnerable to COVID-19. The elderly are often neglected by other vaccine candidates in the race to find an effective vaccine quickly and the adverse events do not allow to use higher doses, which is required to induce sufficient levels of antibodies among elderly who suffer from weakened immune system. In its previous clinical trials in neurodegenerative disorders, Axon already proved that its vaccination platform can induce a sufficiently high antibody response even in populations over 70 years.

Axon's peptide-based approach is designed to prevent the unwanted serious side effects observed in the trials of novel nucleic acid or conventional vaccine candidates against SARS-CoV-2. Axon plans to begin first-in-human trials as early as the fourth quarter of 2020.

About Axon Neuroscience

Axon Neuroscience is an industry leading, clinical stage biotech company at the forefront of 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 for treating Alzheimer's Disease.

Axon's lead vaccine AADvac1 is the most clinically-advanced tau therapy in development for treating and preventing Alzheimer's Disease. In late 2019, Axon 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 to be 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. The therapy was able to significantly slow-down the process of neurodegeneration in treated patients by almost 60%.

Axon's extensive knowledge in producing safe and immunogenic vaccines and well-established scalable technology allowed it to move very quickly in creating its novel peptide vaccine against COVID-19.



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