

Shionogi and NEC Enter into Strategic Research Collaboration for Novel Hepatitis B Therapeutic Vaccine

OSAKA, Japan and TOKYO, Japan. April 18, 2022 - Shionogi & Co., Ltd. (Head Office: Osaka, Japan; President & CEO: Isao Teshirogi, Ph.D.; hereafter “Shionogi”) and NEC Corporation (Head Office: Tokyo, Japan; President & CEO: Takayuki Morita; hereafter “NEC”), today announced the execution of a strategic research collaboration agreement for the development of a novel hepatitis B therapeutic vaccine. NEC OncoImmunity (Head Office: Oslo, Norway, CEO: Richard Stratford Ph.D.), an NEC subsidiary that specializes in artificial intelligence-driven biotechnology, is also participating in this research collaboration.

Hepatitis B is a potentially life-threatening liver disease caused by the hepatitis B virus (HBV). Chronic infection with HBV results in a high risk of death from cirrhosis and liver cancer. About 300 million people are living with chronic hepatitis B infection worldwide, and hepatitis B resulted in an estimated 820,000 deaths in 2019¹. Although the widespread use of hepatitis B vaccines in infants has considerably reduced the incidence of new chronic HBV infections under the age of 5, the number of new infections by other routes continues to increase².

Interferon (IFN) and nucleotide analog therapy are currently used in the treatment of hepatitis B. However, treatment with IFN has a high frequency of side effects, and nucleotide analog therapy has a high recurrence rate if treatment is interrupted, so it is necessary to take drugs for a lifetime³. Therefore, the unmet medical need for safe and highly effective drugs that can finally achieve a complete cure for hepatitis B is high.

Isao Teshirogi, President & CEO, Shionogi said:

“Shionogi has been engaged in the research and development of infectious diseases for over 60 years. As a leading infectious disease company, we are taking on the challenge of protecting people from the threat of infectious diseases and realizing total care. One company, and even the entire pharmaceutical industry on its own, can only go so far in dealing with a global pandemic like COVID-19. We will further enhance our contribution to global health by integrating NEC's AI technologies while leveraging our strengths.”

Nobuhiro Endo, Chairman of the Board, NEC Corporation said:

“NEC is committed to our vision of ‘Orchestrating a brighter world,’ and we are delighted to collaborate with Shionogi to realize this vision through the development of novel treatments for patients. The innovative AI technologies of the NEC Group have the potential to overcome several challenges in what is usually a long and labor-intensive drug discovery

process . Through this new partnership with Shionogi, a recognized leader in the field of infectious disease, we aim to maximize the contribution of our AI to accelerate the pace of drug discovery, and thereby to contribute to society.”

By fusing Shionogi’s drug discovery capability, focused on the infectious disease field, with NEC’s expertise in artificial intelligence (AI), the companies will accelerate the progress toward a new therapeutic vaccine. Going forward, the companies will continue to actively expand such joint research into other infectious diseases where unmet medical needs remain.

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About Shionogi & Co., Ltd.

Shionogi is committed to “Protect people worldwide from the threat of infectious diseases” as our key focus. We are not limiting ourselves to the research and development of therapeutic medications, but are also focused on the total care of infectious disease, through detection and forecast, prevention, diagnosis, and treating exacerbations, as well as the infection itself. For more information, please visit <https://www.shionogi.com/global/en/>.

About NEC Corporation

NEC Corporation has established itself as a leader in the integration of IT and network technologies while promoting the brand statement of “Orchestrating a brighter world.” NEC enables businesses and communities to adapt to rapid changes taking place in both society and the market as it provides for the social values of safety, security, fairness and efficiency to promote a more sustainable world where everyone has the chance to reach their full potential. For more information, visit NEC at <https://www.nec.com>.

About NEC OncoImmunity AS

NEC OncoImmunity AS is an AI-driven biotechnology company that has developed proprietary machine learning-based software which addresses the key knowledge gaps in the prediction of bona fide immunogenic neoantigens for personalized cancer immunotherapy, in addition to infectious disease vaccines. The AI technology can be used to identify optimal neoantigen targets for truly personalized cancer vaccines and cell therapies in a clinically actionable timeframe, and also facilitate effective patient selection for cancer immunotherapy. For more information, visit NEC OncoImmunity AS at <http://www.oncoimmunity.com/>

Reference

1. [World Health Organization, Hepatitis B](#)
2. [World Health Organization, Global Hepatitis Report, 2017](#)
3. [The Japan Society of Hepatology, Guidelines for the Management of Hepatitis B Virus Infection](#)

Press Release



Orchestrating a brighter world



For Further Information, Contact:

SHIONOGI Website Inquiry Form:

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