

February 24, 2022
SymBio Pharmaceuticals Limited
Fuminori Yoshida
Representative Director
President and Chief Executive Officer
(Securities Code: 4582)

SymBio announces results of a collaborative study with the National Institute of Infectious Diseases on adenoviruses and the antiviral agent brincidofovir

TOKYO, Japan, February 24, 2022 -- SymBio Pharmaceuticals Limited (Headquarters: Tokyo, "SymBio") today announced that it has published the results of ongoing joint research with the National Institute of Infectious Diseases on the antiviral drug brincidofovir ("BCV").

In April 2020, Dr. Nozomu Hanaoka, the Fourth Laboratory of Center for Emergency Preparedness and Response, the National Institute of Infectious Diseases (Department of Pathogenesis Diagnosis: Head of Department Dr. Tsuguto Fujimoto), and SymBio initiated this joint study to verify the antiviral activity of BCV against 17 serotypes of adenovirus, including serotypes of unknown responsiveness. The research showed BCV to exhibit a high level of antiviral activity, particularly against D54 or B11, which are known in Japan to cause hemorrhagic cystitis after epidemic keratoconjunctivitis or hematopoietic stem-cell transplantation. Based on these findings, articles were published in the scientific journal, *Microbiology Spectrum*. See note below for further detail on the published articles.

Dr. Nozomu Hanaoka's research group conducts research on the isolation, identification, and analysis of viruses and microorganisms responsible for a variety of infectious diseases occurring in Japan, and is one of the leading research facilities on adenovirus in the world. In this collaborative study, we were able to verify the activity of BCV in various adenovirus serotypes as a basis for further development of BCV as a therapeutic agent.

Statement from Mr. Fuminori Yoshida, President and Chief Executive Officer of SymBio: "There is no previously approved antiviral drug for adenovirus, and there is a high medical need. The results of this joint research suggest the potential of BCV not only for adenovirus infection in children after hematopoietic stem cell transplantation and organ transplantation, which are under development, but also for related diseases, including ophthalmology."

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About Anti-viral Drug Brincidofovir

Brincidofovir (BCV) is a lipid conjugate of cidofovir (CDV). CDV is an antiviral drug already approved and marketed in the United States and the European Union, but unapproved in Japan. As BCV exhibits not only higher anti-viral activity, but also a superior safety profile in comparison with CDV, BCV is expected to be an effective treatment against a wide spectrum of dsDNA viruses such as herpesviruses such as cytomegalovirus (CMV), adenovirus (AdV), Epstein-Barr virus (EBV) and BK virus, papillomavirus. Moreover, BCV is an easy-to-use and novel highly active antimultiviral agent that can reduce the risk of nephrotoxicity, which is a serious side effect of CDV.

SymBio entered into an exclusive global license agreement with Chimerix Inc. (Headquarters: Durham, NC, "Chimerix") for brincidofovir (BCV) on September 30, 2019. Under the terms of the agreement, Chimerix grants SymBio exclusive worldwide rights to develop, manufacture, and commercialize BCV in all human indications, excluding the prevention and treatment of orthopox infections (which includes smallpox and monkeypox).

Summary of the Published Articles

Sensitivity of Human Mastadenovirus, the Causal Agent of Pharyngoconjunctival Fever, Epidemic Keratoconjunctivitis, and Hemorrhagic Cystitis in Immunocompromised Individuals, to Brincidofovir

Seventeen different serotype adenoviruses were infected with cultured cells, and half-maximal inhibitory concentration (IC₅₀) were obtained from the response in which different levels of BCV were added to inhibit replication in a test system in which replication of each viral genomic DNA was determined by quantitative PCR. D54, which is responsible for epidemic keratoconjunctivitis in the country, was the most susceptible (IC₅₀=1 nM) and also showed excellent antiviral activity (IC₅₀=2-7 nM) against other types. On average, it showed 200-fold stronger activity than cidofovir examined as a comparator.

The journal Microbiology Spectrum is one of the scientific journals (peer-reviewed scientific journal) with review of articles published by the American Society for Microbiology that can be accessed from the following URLs.

<https://pubmed.ncbi.nlm.nih.gov/35171015/>

About SymBio Pharmaceuticals Limited

SymBio Pharmaceuticals Limited was established in March, 2005 by Fuminori Yoshida who previously served concurrently as Corporate VP of Amgen Inc. and founding President of Amgen Japan. In May, 2016 the Company incorporated its wholly-owned subsidiary in the U.S., called SymBio Pharma USA, Inc. (Headquarters: Durham, North Carolina, President: Mr. Fuminori Yoshida).

The Company's underlying corporate mission is to "deliver hope to patients in need" as it aspires to be a leading global specialty biopharmaceutical company dedicated to addressing underserved medical needs.