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ASIA EDITION

Korean firm Hyundai Bioscience soon to initiate global clinical development on dengue antiviral candidate

April 22, 2024 | News

To carry out global clinical tests aimed at treating all serotypes of dengue virus infection



South Korea's biotechnology company Hyundai Bioscience has completed the development of a niclosamide-based formulation to treat dengue fever with a drug concentration level at or above 50% viral inhibition (IC50), which can also work on Zika, Chikungunya, and Yellow fever viruses.

Despite niclosamide's broad-spectrum antiviral activity, researchers failed to develop niclosamide-based antivirals due to its low absorption and short half-life. Hyundai Bioscience tackled the challenges with bio-friendly inorganic substances and polymers based on its proprietary drug delivery system (DDS) technology.

The company would carry out global clinical tests aimed at treating all serotypes of dengue virus infection.

"The fundamental way to deal with Dengue fever is taking the antiviral drug, which is effective on all four serotypes of the Dengue virus, in the early stage of virus infection. To win emergency use authorisation (EUA), we are planning basket clinical trials in such regions as Mid/South America and Southeast Asia", said CEO Oh Sang-gi.

Candidate countries in the Americas are Puerto Rico and Brazil while those in Asia are Malaysia, Thailand, Singapore, and Vietnam.

The number of dengue patients in 2024 amounts to 3.58 million in the Americas, about three times more than 2023, while those stand at about 8,200 in Thailand and 18,000 in Malaysia. There is currently no treatment for dengue fever, which was first confirmed in 1953.