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Korea's Hyundai Bioscience develops multi-treatment drug to treat mosquito-borne viral infections

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Accelerating preparations for dengue fever basket clinical trial scheduled to be conducted in Brazil



Hyundai Bioscience, which is preparing for a dengue fever basket clinical trial in Brazil, has successfully developed a multi-treatment drug for mosquito-borne viral infections, including dengue fever, using niclosamide as the main ingredient.

This treatment, which contains niclosamide as the main active pharmaceutical ingredient, can maintain a blood niclosamide concentration (IC50) to inhibit the proliferation of viruses such as the four serotypes of dengue virus, Zika, Chikungunya, and Yellow Fever, by 50%.

To effectively treat dengue fever, the antiviral must be administered early, before the viral load increases significantly. For early administration, the treatment must be effective not only against dengue fever but also against other mosquito-borne viral diseases with similar symptoms, such as Zika, Chikungunya, and Yellow Fever.

Leveraging its patented technology, Korean firm Hyundai Bioscience has enhanced the bioavailability of niclosamide, enabling it to treat arbovirus infections caused by Zika, Chikungunya, and Yellow Fever viruses in addition to dengue fever.

Hyundai Bioscience has formulated the multi-treatment antiviral into a tablet form to facilitate mass production and to make it convenient for transportation and storage. The company has decided to conduct the dengue fever basket clinical trial in Brazil, the country most affected by dengue fever. Hyundai Bioscience USA will soon select a Contract Research Organization (CRO).