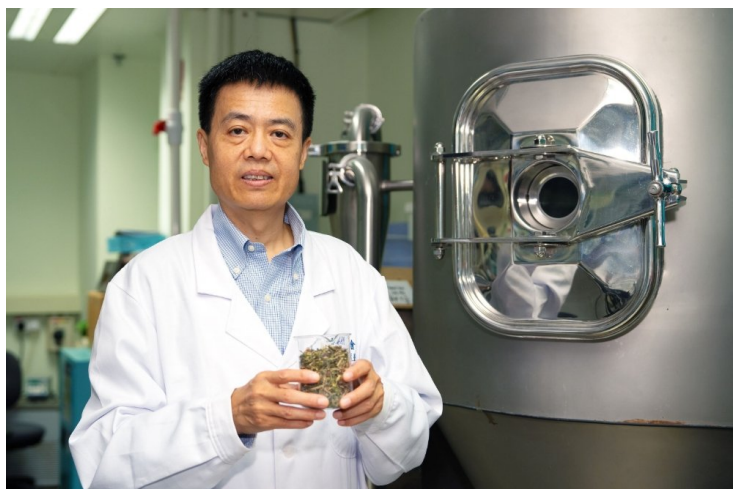


Hong Kong combats viruses causing zoonotic diseases using medicinal plants

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HKBU aims to use the breakthrough to support the development of safe and cost-effective antiviral veterinary products



A research team led by Hong Kong Baptist University (HKBU) has discovered that extracts from the *Justicia* Chinese medicinal plants possess strong antiviral properties, which were shown to be able to inhibit multiple viruses such as avian influenza, SARS-CoV-2, and Ebola viruses effectively.

HKBU aims to use the breakthrough to support the development of safe and cost-effective antiviral veterinary products as well as animal feed additives. It also opens a new pathway for developing Chinese medicine treatment for veterinary viral diseases and provides essential reference for developing potential drugs for treating viral diseases in humans in future.

Zoonotic diseases caused by viral infections pose ongoing risks to the agricultural and pet industries and have the potential to incur substantial economic losses. Viruses which infect farm animals also pose a genuine risk of transmitting to humans, causing lethal emerging infectious diseases with huge public health impact.

Through structure comparison analysis, the research team found that the antiviral compounds in *Justicia* Chinese medicinal plants are lignans, a class of natural substances known for their diverse biological activities. They inhibit the viral infection process by preventing the acidification of endosomes (intracellular sorting organelles), a crucial step for viral entry into host cells. Subsequent replication of the virus within cells is thus impeded.

The research team is currently conducting preclinical trials to rigorously assess the efficacy and safety of the extracts and related compounds from *Justicia* Chinese medicinal plants. After the preclinical phase, clinical trials will be initiated to evaluate the safety, effectiveness, and appropriate dosages in specific animal species.