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CEPI, HKU expand partnership for intranasal COVID-19 vaccine candidate

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CEPI, the Coalition for Epidemic Preparedness Innovations, and the University of Hong Kong (HKU) have announced an expanded partnership to further the development of HKU's intranasal COVID-19 vaccine candidate, based on a live-attenuated influenza virus.

This partnership builds on CEPI's initial investment of $620,000 in March 2020 which supported preclinical testing of the vaccine candidate. Under the expanded partnership, CEPI will invest an additional $4.8m to fund the production of clinical trial materials, and the investigation of mucosal immune responses during a Phase 1 trial of the vaccine candidate, which is being supported by the Government of Hong Kong.

CEPI recently launched a five-year plan to tackle epidemics and pandemics, which includes an urgent programme of vaccine R&D to strengthen our defences against COVID-19. The focused R&D agenda aims to optimize our current vaccines, address variants of concern, and develop next-generation COVID-19 vaccines which are differentiated from those already in advanced development, and could therefore help to fight COVID-19 in the longer term. This expanded partnership with HKU is the second of CEPI's next-generation vaccine investments, which are designed to develop vaccines that are easier to deliver, and address the needs of a diverse range of populations and settings.

The HKU vaccine has several potential advantages which make it a suitable candidate for such CEPI investment. It is unique in the CEPI portfolio in that is delivered intranasally, which could potentially reduce transmission of the virus by stimulating a mucosal response in vaccinated people. In addition, it should be possible to scale production of this vaccine candidate to hundreds of millions of doses. The vaccine platform has the further advantage that it can be easily and rapidly adapted to target emerging variants of COVID-19.

Researchers at the University of Hong Kong have created a vaccine candidate using a weakened version of the influenza virus and have adapted it to express the surface protein of the COVID-19 virus. This approach has previously been used to develop preclinical vaccine candidates against MERS.