CEPI collaborates with the Institut Pasteur in a consortium to develop COVID-19 vaccine

- **Consortium to be led by the Institut Pasteur and will include Themis and the University of Pittsburgh.**
- **CEPI to provide initial US$4.9 million for consortium to develop a COVID-19 vaccine candidate based on measles-vector technology.**
- **Partnership becomes eighth COVID-19 vaccine development project that CEPI has signed since Jan 23, 2020.**

OSLO, NORWAY, March 19, 2020 – CEPI, the Coalition for Epidemic Preparedness Innovations, today added an eighth COVID-19 vaccine candidate to its portfolio. CEPI will invest an initial US$4.9 million in a partnering agreement with the Institut Pasteur-led consortium that will include Themis and the University of Pittsburgh to develop a vaccine candidate against COVID-19. This collaboration brings CEPI's total investment in COVID-19 vaccine R&D to US$29.2 million.

In a first step, CEPI funding will support the preclinical testing, initial manufacture of vaccine materials, and preparatory work for phase 1 studies.

To date, CEPI has provided initial funding to Curevac, Inc., Inovio Pharmaceuticals, Inc., Moderna, Inc., Novavax, Inc., The University of Hong Kong, The University of Oxford, and The University of Queensland to develop COVID-19 vaccine candidates[1,2,3,4].

This investment is the result of a recent global call for proposals that CEPI issued in early February,[5] which invited funding applications for proven vaccine technology that could be used to rapidly develop a vaccine against the new coronavirus, and most importantly at scale and with the necessary equitable access provisions.

Richard Hatchett, CEO of CEPI said:

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[1] https://cepi.net/news_cepi/cepi-partners-with-university-of-hong-kong-to-develop-covid-19-vaccine/
[2] https://cepi.net/news_cepi/cepi-to-fund-three-programmes-to-develop-vaccines-against-the-novel-coronavirus-ncov-2019/
[3] https://cepi.net/news_cepi/curevac-and-cepi-extend-their-cooperation-to-develop-a-vaccine-against-coronavirus-ncov-2019/
[4] https://cepi.net/news_cepi/cepi-expands-investment-in-covid-19-vaccine-development/
[5] https://cepi.net/wp-content/uploads/2020/01/Call-text_CfP2_019-nCoV_30.01.2020-1.pdf

“CEPI was set up to accelerate the development of vaccines against emerging infectious threats like COVID-19. One of the ways we’re doing this is by bridging the gap between public and private sectors to pool resources and expertise to jump start the vaccine development process.

“I’m pleased that CEPI has been able to help establish and fund this consortium of leading vaccine developers, through our recent call for proposals, to harness this measles vector platform to develop a vaccine against COVID-19

“It is clear that an effective vaccine against COVID-19 is crucial if we are to beat this virus. By investing in a range of partners and vaccine technologies, we are giving ourselves the best chance of developing a vaccine that can stop COVID-19 in its tracks. We are calling on the international community to contribute to the fight against COVID-19 by investing in CEPI’s vaccine development programme, and help us deliver a long-term equitable solution to this unprecedented global challenge.”

Stewart Cole, President of the Institut Pasteur said:

“The expertise of the Institut Pasteur (Paris) in emerging infectious diseases is one of the priorities of our Strategic Plan 2019-2023. As part of the COVID-19 Task Force set up in January 2020, after our isolation of the coronavirus strains detected in France, the proprietary measles vector (MV) technology was chosen to develop a vaccine against SARS-CoV-2 leveraging our extensive experience with human measles vector technology and an MV-SARS-CoV-1 candidate.

“We are delighted to continue our long-lasting collaboration with Themis and CEPI that has already delivered high potential vaccine candidates for Chikungunya, nearing phase 3, and Lassa fever in phase 1, both emerging infectious diseases representing a threat to global health.”

Erich Tauber, CEO of Themis said:

“Our versatile, plug-and-play manufacturing technology affords us the advantage of accelerating the discovery and development of a vaccine candidate against the highly infectious and potentially pandemic coronavirus. We have demonstrated an excellent immunogenicity, safety and manufacturability profile of the technology in late stage clinical development already and are confident to apply this experience to our COVID-19 vaccine development. We are excited to work with our colleagues from Institut Pasteur and the University of Pittsburgh to contribute to fighting this global health situation as soon as possible.”

Paul Duprex, Director of the Center for Vaccine Research at the University of Pittsburgh said:

“The National Institute of Allergy and Infectious Diseases (NIAID) supported Regional Biocontainment Laboratories (RBL) housed at the Center for Vaccine Research is a state-of-the-art facility for research on Biosafety Level -3 (BSL-3) biodefense and emerging infectious diseases. It is our mandated role to respond rapidly to global outbreaks such as COVID-19; to develop animal models of disease; to use these to test the efficacy of candidate vaccines such as recombinant measles viruses expressing a range of SARS-CoV-2 genes. All of our efforts will be directed to address this rapidly changing public health emergency. We are delighted to be part of this multinational, world-class consortium.”

Measles vector platform

The measles vaccine is used here as a vehicle. Using the measles vaccine virus (also called MV) as a vector, recombinant vaccines can be designed to express antigens from other pathogens (Chikungunya virus, Lassa fever, MERS, HIV, dengue, West Nile, yellow fever, or other emerging diseases). The use of the modified MV as a vehicle for vaccination against these pathogens makes it possible to deliver the antigens directly in the compartments of the immune system capable of inducing a protective memory response.

With its broadly applicable technology platform licensed to Themis, the Institut Pasteur has successfully collaborated for 10 years with Themis. This approach was used to develop a vaccine candidate against SARS, and CEPI has previously partnered with Themis and Institut Pasteur to harness this technology to develop vaccine candidates against Chikungunya, MERS, and Lassa fever.

-ENDS-

Urgent call for US$2 billion to develop COVID-19 vaccine

On March 6, CEPI issued an urgent call for $2 billion of new funding to enable the organisation to expand the number of COVID-19 vaccine candidates in development and to fund the clinical trials for these candidate vaccines. Our ambition is to have at least 3 vaccine candidates, which could be submitted to regulatory authorities for licensure for general use/use in outbreaks.

To date, the Governments of Denmark, Finland, Germany, Norway, and the UK have committed over $185 million towards our COVID-19 vaccine development efforts. CEPI still urgently needs additional financial contributions to ensure that the vaccine programmes we have initiated can continue to progress at their current pace. We call on other sovereign states, private-sector partners, and philanthropies around the world to invest in CEPI's crucial push to develop a vaccine against COVID-19 virus.

Detailed information about our funding needs is available here.

CEPI's commitment to access

As COVID-19 demonstrates, infectious diseases utterly ignore political borders. We cannot prevent or stop a global infectious disease threat without equitable access to globally fair allocation of vaccines. CEPI is wholly committed to equitable access. This commitment drives every aspect of our work and the way we are approaching COVID-19 vaccine development. CEPI's support for equitable access is key to our success as a global health organisation. Equitable access to epidemic vaccines—in the context of an outbreak—means that appropriate vaccines are first available to populations when and where they are needed to end an outbreak or curtail an epidemic, regardless of ability to pay. The COVID-19 vaccines that we are developing will exist for the benefit of all humanity, in rich, middle income, and poor countries alike.

About CEPI

CEPI is an innovative partnership between public, private, philanthropic, and civil organisations, launched at Davos in 2017, to develop vaccines to stop future epidemics. CEPI has reached over US$750 million of its $1 billion funding target. CEPI's priority diseases include Ebola virus, Lassa virus, Middle East Respiratory Syndrome coronavirus, Nipah virus, Rift Valley Fever and Chikungunya virus. CEPI also invests in platform technologies that can be used for rapid vaccine and immunoprophylactic

development against unknown pathogens (ie, Disease X). To date, CEPI has committed to investing over $480 million in vaccine and platform development.

Learn more at http://www.cepi.net. Follow us at @CEPIvaccines.

CEPI's work on COVID-19

The rapid global spread and unique epidemiological characteristics of the novel coronavirus are deeply concerning. CEPI has moved with great urgency and in coordination with WHO, who is leading the development of a coordinated international response. So far, we have initiated 8 partnerships to improve our understanding and to develop vaccines against the novel coronavirus. The programmes will leverage rapid response platforms already supported by CEPI as well as new partnerships. The aim is to advance COVID-19 vaccine candidates into clinical testing as quickly as possible.

Follow our news page for the latest updates.

About the Institut Pasteur and the Institut Pasteur International Network

The Institut Pasteur, a non-profit foundation with recognized charitable status established by Louis Pasteur in 1887, is today an internationally renowned center for biomedical research with a network of 32 institutes worldwide. In the pursuit of its mission to prevent and control diseases in France and throughout the world, the Institut Pasteur operates in four main areas: research, public health, education and training, and development of research applications.

A globally recognized leader in infectious diseases, microbiology, and immunology, the institute also investigates cancer, genetic and neurodegenerative diseases, genomics and developmental biology. Its research aims to expand knowledge of the living world in a bid to lay the foundations for new prevention strategies and novel therapeutics. Since its inception, ten Institut Pasteur scientists have been awarded the Nobel Prize for Medicine, including two in 2008 for the 1983 discovery of the human immunodeficiency virus (HIV) that causes AIDS.

About Themis

Themis is developing immunomodulation therapies for infectious diseases and cancer. Through advanced understanding of immune system mechanisms, the Company has built a sophisticated and versatile technology platform for the discovery, development and production of vaccines as well as other immune system activation approaches. Initially focused on preventing infectious diseases, Themis has demonstrated the potential of its versatile platform through the rapid and successful completion of Phase 2 and near-term entry into Phase 3 clinical development for a vaccine against Chikungunya, a debilitating disease with global outbreak potential. Funded to date by leading venture capital firms, Themis has also gained prestigious non-dilutive funding for emerging infectious disease indications. The Company will apply its platform and commercial manufacturing capabilities to diseases with high market potential both alone and for its partners. For more information, visit http://www.themisbio.com.

About University of Pittsburgh School of Medicine

As one of the nation's leading academic centers for biomedical research, the University of Pittsburgh School of Medicine integrates advanced technology with basic science across a broad range of disciplines in a continuous quest to harness the power of new knowledge and improve the human condition. Driven mainly by the School of Medicine and its affiliates, Pitt has ranked among the top 10

recipients of funding from the National Institutes of Health since 1998. In rankings recently released by the National Science Foundation, Pitt ranked fifth among all American universities in total federal science and engineering research and development support.

Likewise, the School of Medicine is equally committed to advancing the quality and strength of its medical and graduate education programs, for which it is recognized as an innovative leader, and to training highly skilled, compassionate clinicians and creative scientists well-equipped to engage in world-class research. The School of Medicine is the academic partner of UPMC, which has collaborated with the University to raise the standard of medical excellence in Pittsburgh and to position health care as a driving force behind the region's economy. For more information about the School of Medicine, see www.medschool.pitt.edu.

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