

ConserV Bioscience pan-coronavirus project has been awarded UK Aid funding by the UK Vaccine Network by Innovate UK

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LONDON, UNITED KINGDOM, January 16, 2024 /EINPresswire.com/ -- <u>ConserV</u> <u>Bioscience</u> Limited ("ConserV"), a clinical-stage biotechnology company focused on developing vaccines that protect against endemic and emergent infectious diseases, has been awarded UK Aid funding to advance development of its pan-coronavirus vaccine candidate, UNICOR-v.

The project (10086291) was selected by the UK Vaccine Network (UKVN) for the

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award under the competition "SBRI: Vaccine development for potential endemic diseases state 1". This research was funded by the Department of Health and Social Care as part of the UK Vaccine Network (UKVN), a UK Aid programme to develop vaccines for diseases with epidemic potential in low and middle-income countries (LMICs). ConserV was also awarded a second contract to advance pre-clinical development of a novel vaccine with a two-prong defence against mosquito-borne arborviruses (10083718), under the competition in which a total of 16 out of 59 applications were funded.

ConserV specialises in identifying broadly protective antigens for highly mutable viruses. The grant will fund the evaluation of UNICOR-v, which consists of 12 antigens from conserved regions of internal viral proteins that include clusters of reactive T-cell epitopes for multiple human leukocyte antigens (HLAs). The project will compare vaccine candidates that deliver the antigens as synthetic peptides and that deliver the antigens encoded in mRNA. Preclinical immunogenicity and efficacy of the candidate vaccines will be evaluated providing necessary evidence to enter clinical trials. In this project, ConserV is collaborating with Maryland University (Baltimore, US) who will conduct the efficacy studies in animal models for MERS-CoV, SARS-CoV-1 and SARS-CoV-

2 infection.

UNICOR-v aims to protect against all coronaviruses including those from alpha, beta, delta and gamma genera. The betacoronavirus genus includes SARS-Cov-1, responsible for the SARS outbreak in 2003, MERS, responsible for the outbreak in 2012-13 and SARS-Cov-2, responsible for the Covid-19 pandemic, all of which originated from viruses jumping from animal hosts to humans. Alphacoronaviruses include strains responsible for the common cold in humans, amongst other viruses that infect other mammals. Gamma coronaviruses are mainly isolated in birds, whereas delta coronaviruses infect mammals and birds. UNICORv has the potential to protect against future epidemics caused by a coronavirus jumping from animals to humans, but also against new variants emerging from SARS-Cov-2, avoiding the need for frequent booster vaccinations and changes to the vaccine composition in response to variants that escape vaccine-induced immune responses.

Scientists predict that the frequency and severity of epidemics are increasing, driven by human activities and their impact on the environment. Designing a vaccine as an emergency response to an emergent virus takes time during which millions of lives are at risk and considerable economic damage can be done, as demonstrated in the Covid-19 pandemic. Pre-pandemic vaccines are necessary to protect against viruses which have not yet emerged in humans.

Kimbell Duncan, CEO of ConserV Bioscience, commented: "We aim to develop safe and effective vaccines which offer broad protection against infections from viruses that mutate frequently. We are grateful to the UKVN and Innovate UK for being selected for this award which will help us advance UNICOR-v into clinical trials."

Dr. Olga Pleguezuelos, Chief Science Officer of ConserV, commented: "We are very excited to advance the development of UNICOR-v with UKVN and Innovate UK's support. ConserV Bioscience is committed to creating a vaccine that provides readiness against future coronaviruses."

Dr. Matthew Frieman, Alicia and Yaya Professor of Viral Pathogen Research in the Department of Microbiology and Immunology at the University of Maryland School of Medicine, commented: "The COVID19 pandemic has demonstrated that continued emergence of coronaviruses in the future is a major public health concern. We are excited by the opportunity to work with ConserV in developing nextgeneration vaccines that protect us from current and future coronavirus pandemics."

Ends

Kimbell Duncan ConserV Bioscience +41 79 883 78 90 email us here This press release can be viewed online at: https://www.einpresswire.com/article/681623050

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