PRESS RELEASE

Emergex Signs Agreement with ATCC to Advance Studies of its Yellow Fever Booster Vaccine Candidate

Abingdon, Oxon, UK, 7 April 2022 – Emergex Vaccines Holding Limited ('Emergex', or the 'Company'), a company addressing major global infectious disease threats through the development of fully synthetic CD8+ T-Cell Adaptive Vaccines, today announces that it has entered into an agreement with ATCC to progress preclinical development of its Yellow Fever booster vaccine program. ATCC is a non-profit organization that collects, stores, and distributes standard reference microorganisms, cell lines and other materials for research and development.

In August 2020, researchers at Emergex reported the first analysis of T-Cell epitopes produced by an existing live attenuated commercial Yellow Fever 17D (YF17D) vaccine. Emergex now plans to perform a comparative study using the wildtype Yellow Fever virus: these comparison studies of the Class I CD8+ T-Cell epitopes derived from both live attenuated and wildtype viruses will further support the development of Emergex's T-Cell Yellow Fever booster vaccine candidate.

The agreement with ATCC is expected to enable Emergex to perform safely its studies with the wildtype Yellow Fever virus, classified as a BioSafety level 3 pathogen [BS3], to advance development of its T-Cell booster vaccine candidate. ATCC will oversee and perform viral infection models – infecting human cell lines with wild-type Yellow Fever virus. Emergex will then conduct immunoproteomics analyses of the MHC Class I-presented viral peptides on infected cell surfaces to confirm the expression library of viral epitope peptides presented to CD8+ T-Cells. The anticipated results, together with earlier data derived from the live attenuated virus, are expected to allow for the development of an effective next-generation Yellow Fever vaccine capable of meeting an increasing global vaccine demand.

Professor Thomas Rademacher, co-founder and Chief Executive Officer of Emergex Vaccines commented: *"Emergex is making progress in advancing a T-Cell Adaptive booster vaccine candidate through its confirmatory ligandome studies using wildtype Yellow Fever virus may be a promising solution for ongoing protection as this infectious disease continues to re-emerge and spread worldwide. While the current YF17D vaccine is considered effective, reliance on immunisation as primary protection against the disease on its own is potentially unsustainable in the long-term. This conclusion is important because many individuals in endemic regions with primary Yellow Fever immunisation may require a booster to ensure continued protection, thus exacerbating existing vaccine shortages. Investment in next-generation Yellow Fever primary vaccines and boosters is therefore critical to providing additional supply of treatments in order to meet the increasing global demand and to minimize the side effects of YF17D."*

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About Emergex

Emergex, a clinical-stage, privately-held biotechnology company headquartered in Abingdon, UK, with an operating subsidiary in Doylestown, Pennsylvania, USA, is pioneering the development of 100% synthetic T-Cell Adaptive Vaccines that harness the body's natural T-Cell immune response to destroy pathogen-infected cells for protection against some of the world's most pressing health threats.

Emergex has a growing pipeline of innovative CD8+ T-Cell Adaptive Vaccine and booster vaccine candidates that have the potential to deliver rapid, broad (mutation-agnostic) and long-lasting immunity to reduce serious illness associated with infectious disease. Emergex has a number of Phase I clinical trials underway, of which the most advanced programmes in development are Dengue fever (which may also be disease-modifying for other members of the *Flaviviridae* virus family, such as Zika and Yellow Fever), as well as coronavirus. Other programmes in development include vaccine candidates for universal (pandemic) Influenza, Chikungunya, and a booster vaccine for Yellow Fever.

Emergex's T-Cell Adaptive Vaccines candidates combine two proprietary technologies, [i] an empirically determined library of pathogen-derived protein fragments expressed on the surface of pathogen-infected cells (forming the MHC Class I expression "ligandome" library), and [ii] a passivated gold nanoparticle carrier system designed to deliver the synthetic peptides to the skin-resident immune system (in combination with nociception) via micro-needles to elicit a robust adaptive resident CD8 T-Cell response. With potential stability at ambient temperatures, the vaccine candidates as intended reduce the burden and logistics of vaccine administration.

Find out more online at www.emergexvaccines.com.
Visit our LinkedIn page or Twitter account for live updates.

About ATCC

ATCC is a premier global biological materials and information resource and standards organization and the leading developer and supplier of authenticated cell lines and microorganisms. With a history of scientific advancements spanning nearly a century, ATCC offers an unmatched combination of being the world's largest and most diverse collection of biological research solutions and a mission-driven, trusted partner that supports and encourages scientific collaboration. ATCC products, services and people provide the scientific community with credible biological products and advanced model systems that support complex research in a variety of innovative applications resulting in incredible achievements in basic science, drug discovery, translational medicine and public health. ATCC is a nonprofit organization with headquarters in Manassas, Virginia, and a research and development innovation center in Gaithersburg, Maryland. To learn more, visit atcc.org.

About Yellow Fever:

Yellow Fever is a severe, potentially fatal, mosquito-borne disease endemic to tropical and subtropical regions of Africa, Central and South America. There are 47 at-risk countries in these regions and a growing prevalence of cases being reported in countries once considered non-endemic, causing concern for future outbreaks.[1] Despite the availability of an approved vaccine in use since the 1930's, Yellow Fever continues to be a significant threat to public health and necessitates preparedness for future outbreaks and international spread as global travel accelerates and global warming intensifies the habitat of the pathogen-bearing mosquitos.

Recent outbreaks in major metropolises have led to fractional dosing initiatives in attempts to stretch vaccine access and vaccine supplies as mass vaccination campaigns are needed.[2] The need to address the increased threat of Yellow Fever outbreaks with global spread has been recognised by the WHO in its establishment of the Eliminate Yellow Fever Epidemics ("EYE") initiative.[3]

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[1] https://www.who.int/news-room/fact-sheets/detail/yellow-fever
[2] https://www.mdpi.com/1424-8247/14/9/891/htm
[3] https://www.who.int/initiatives/eye-strategy

The live attenuated YF17D vaccine is produced exclusively via embryonic chicken eggs with safety testing in non-human primates, per WHO safety requirements, contributing to limited global YF17D vaccine production (thus produced by only 4 certified manufacturers).

Furthermore, YF17D comes with the additional challenge of rare, yet serious, adverse events, including Yellow Fever vaccine-associated neurotropic disease (YEL-AND) and -associated viscerotropic disease (YEL-AVD) among certain susceptible populations.[4] The vaccine is contraindicated in at-risk populations due to its live-attenuated nature.

[4] https://academic.oup.com/jtm/article/27/7/taaa172/5910428?login=true