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Emergex Vaccines receives grant for universal flu vaccine programme

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Emergex's vaccine combines several proprietary technologies to create an immune response based on 'reverse engineering'

Emergex Vaccines Holding Limited ('Emergex'), a biotechnology company pioneering a new approach to vaccine development in the field of infectious diseases, announces that Innovate UK, the UK's innovation agency, has awarded the company a grant of £979,318 to progress its universal flu vaccine programme through preclinical development.

This grant will cover 70% of the cost of developing Emergex's flu vaccine programme over a period of two years.

It will be used to complete preclinical toxicology and validation studies and the manufacturing of the vaccine in accordance with current Good Manufacturing Practice (cGMP).

This will result in clinical batches of the vaccine which are ready for Phase I clinical testing in the first half of 2020.

Emergex's universal flu vaccine is designed to target components of the influenza virus that are common to all influenza strains. As a result this vaccine will also be suitable to target the outbreak of a new flu pandemic caused by the emergence of a novel form of influenza virus at the time it moves from an animal species into humans.

The company's vaccine is 100% synthetic and delivers highly conserved immunogenic peptide fragments from the flu virus to antigen presenting cells in the skin, eliciting a strong and long-lasting T-cell immune response.

Emergex's vaccine combines several proprietary technologies to create an immune response based on 'reverse engineering'.

This involves the identification of highly conserved internal peptide fragments from the flu virus, synthesis of these peptide fragments to create a library of 100% synthetic peptide fragments and screening these against blood from flu survivors to see which of the fragments elicit the strongest T-cell immune response.

The selected peptide fragments are then combined with a gold nanotechnology carrier system to make an extremely small particle, less than 5 nanometres in diameter, which is ideal for immunization through the skin using a microneedle skin patch,

which is less invasive than traditional injection.

Professor Thomas Rademacher, co-founder, CEO and CSO at Emergex commented, “This Innovate UK grant provides endorsement of our flu vaccine programme and reinforces our belief that an innovative approach, using the very latest technologies, could help protect the public from this inevitable epidemic or pandemic health threat.”