Intravacc. Innovating vaccines

Press Release

VERSATOPE Delivering Immunity

Intravacc and Versatope sign research service agreement to develop universal influenza vaccine based on OMV technology

- Influenza vaccines were overall only 29% effective during the 2018–2019 influenza season
- High medical costs drive the need for finding a more universal influenza vaccine
- Intravacc's OMV technology platform well suited to support the development of new pandemic response vaccines

Bilthoven, The Netherlands, and Lowell Mass, USA, June 8 2020 – Intravacc, one of the leading translational research and development vaccine institutes with an extensive track record in developing viral and bacterial vaccines and Versatope, a U.S. biotechnology company developing vaccines and therapeutics, today announced that they have signed a research service agreement to further develop a universal vaccine against influenza based on Intravacc's innovative Outer Membrane Vesicles (OMV) technology. Both parties will collaborate to further advance the candidate vaccine through clinical development.

According to Centers for Disease Control and Prevention (CDC), influenza vaccines were overall 29% effective during the 2018–2019 influenza season due to the emergence of new, late season viral strains, resulting in 42.9 million illnesses, more than 16.5 million medical visits, 647,000 hospitalizations, and 61,200 deaths in the United States. Therefore, globally there is a high medical and cost saving need for finding a more universal influenza vaccine.

Intravacc's unique expertise in OMV vaccine technology, which is proven to be safe in humans, will push the project forward to achieve this goal of finding the world's first universal flu vaccine.

Dr. Jan Groen, CEO of Intravacc, said:

> *"We are very happy to partner with Versatope and to be able to further expand the global reach of our OMV technology. This partnership is dedicated to finding in a much needed universal flu vaccine."*

Under the agreement, Intravacc will provide its services to Versatope in bringing their universal influenza vaccine candidate, VT-105, towards their first clinical trials. Versatope's approach combines diverse genetic variants of influenza strains on a single nano-sized OMV that may provide better cross-strain protection than influenza vaccines comprised of individual strains.

Dr. Christopher Locher, CEO of Versatope, stated:

> *"The alliance between Versatope and Intravacc will advance the VT-105 universal influenza vaccine candidate to the clinic in a rigorous and regulatory-compliant manner and help mitigate the risks associated with the chemistry, manufacturing and control process".*

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About Intravacc's OMV platform technology

For vaccine development, Intravacc has designed a vaccine delivery platform based on outer membrane vesicles (OMVs) - spherical vesicles with strong immunogenic properties. These vesicles are naturally secreted by so-called gram-negative bacteria and contain proteins that play a role in the survival of bacteria in the body. Due to their immunogenic properties, they are also very suitable for use as a vaccine.
OMVs can be rigged with immunogenic proteins and peptides from other pathogens. This can be done by allowing the OMV-producing bacteria to produce these proteins or by chemically linking them to OMVs.
Heterologous OMV vaccines make manipulation with the pathogen from which the vaccine is produced unnecessary. This is a great advantage if there are strict isolation measures or if the pathogen is difficult to cultivate.
Intravacc has also developed genetic tools to increase the yield of OMVs, reduce toxicity and achieve the desired antigenic composition. Intravacc's OMV platform is fully scalable.

About Intravacc

The Bilthoven, the Netherlands, based Intravacc is one of the world's leading institutes for translational vaccinology. As an established independent R&D organization with over 100 years' experience in the development and optimization of vaccines and vaccine technologies, Intravacc has transferred its technology all over the globe, including oral polio vaccines, measles vaccines, and DPT, Hib and influenza vaccines. Intravacc offers a wide range of expertise to independently develop vaccines from lead concept to clinical phase I/II studies for partners worldwide such as academia, public health organizations (WHO, BMGF), and biotech and pharmaceutical companies.
Intravacc also has its own proprietary vaccine platform, and established state-of-the-art research and production (GMP) facilities. Its aim is to substantially reduce development risks and costs of new vaccines in order to contribute to global health and equity in access to vaccines worldwide.
For more information, see www.intravacc.nl

About Versatope Therapeutics

Versatope Therapeutics, Inc., is a start-up biotechnology company located in Lowell, Mass. at the University of Massachusetts' M2D2 biotech incubator. This project has been funded in whole or in part with Federal funds from the National Institute of Allergy and Infectious Diseases, National Institutes of Health, Department of Health and Human Services, under Contract No. 75N93019C00060.

Contact info

Intravacc
Dr. Jan Groen, CEO
P: +31 30 7920 454

Mirjam Hartman, Media relations
P: +31 6 115 969 94
E: press.office@intravacc.nl

Versatope, Inc.
Dr Christopher Locher, CEO
T: +1 781-879-3119
E: Christopher.locher@versatope.com

LifeSpring Life Sciences Communication, Amsterdam
Leon Melens
P: +31 6 538 16427
E: lmelens@lifespring.nl