

Valo Therapeutics and ImmunoScape Collaboration Identifies Immunogenic Peptides to Develop Pan Coronavirus vaccine

Helsinki, Finland, 9 March 2021: Valo Therapeutics Limited (Valo Tx), the developer of novel and adaptable immunotherapy platforms for cancer and infectious diseases, today announced the completion of a successful collaboration with the biotechnology company ImmunoScape (Singapore and San Diego) to identify immunogenic peptides for the development of a pan Coronavirus vaccine.

ImmunoScape has an immunomics-based technology platform that provides unprecedented insights into the human immune system. ImmunoScape's Deep Immunomics platform enables the characterization of a patient's immunome at ultra-high resolution. This technology shows the immune system in action by directly observing the modulation of phenotype, function, and specificity of individual immune cells, at scale and over time.

The analysis has been performed directly on blood cells from COVID-19 convalescent patients with different clinical outcomes and has allowed the identification of specific CD8+ T-cell responses relevant to Sars-CoV-2. In follow up, Valo Tx, will use its proprietary PeptiVAX technology to coat a spike-expressing adenoviral vector vaccine with HLA-restricted peptides identified by Valo working with the University of Helsinki ImmunoViroTherapy Lab (IVTLab), led by Professor Vincenzo Cerullo. The study indicated that these peptides may be associated with a clinically beneficial T cell immune responses to Sars-CoV-2's highly conserved genes.

When these peptides are applied to adenovectors using PeptiVAX, they are expected to generate strong T-cell responses against the selected antigens. The research focuses on peptide sequences related to conserved antigens across the Coronavirus family with the aim to develop a pan Coronavirus vaccine that will also deliver protection against emerging Sars-CoV-2 variants.

Three of the COVID-19 vaccines currently approved by regulators for many geographies across the globe utilise an adenovirus vector encoding spike protein and have demonstrated clinical safety and efficacy. Through the collaboration between Valo Tx and ImmunoScape, it has been possible to identify conserved peptide sequences that will be applied to adenoviruses to address the efficacy issues of current vaccines against new COVID-19 variants. The PeptiVAX platform provides a more flexible and faster approach to addressing new variants by coating the adenovirus with the associated clinical grade target peptides rather than re-engineering and manufacturing a completely new viral vector.

Paul Higham, CEO of Valo Tx, commented, "There is a pressing need for a pan Coronavirus vaccine to address potential future pandemics. Our PeptiVAX technology is rapidly adaptable to the emergence of new strains or even an entirely new Coronavirus. By leveraging our innovative PeptiVAX technology platform with partners to identify novel peptides from conserved proteins, beyond the currently identified spike proteins, our goal is to create a new vaccine that will not only protect against the current COVID-19 variants, but also provide optimal resilience against potential future Coronavirus pandemics."

Choon-Peng Ng, CEO at ImmunoScape, said, "The future of immunotherapy development depends upon an enhanced ability to observe and analyse the complex immune responses at high resolution. At ImmunoScape, we focus on illuminating the immune landscape. Our collaboration with Valo Tx gives us a powerful spotlight to find innovative ways to protect people from COVID-19 variants that may be resistant to current vaccines."

By coating the adenovirus with peptides specifically selected for driving CD8+ T-cells (through MHC class 1 presentation) the collaboration expects to further enhance the cell mediated immune response by broadening the targets presented to the immune system. Boosting the T cell-mediated immune response in addition to antibody production should enhance protection in those who are at most at risk from COVID-19 and provide longer term immunity.

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About Valo Tx

Valo Therapeutics (Helsinki) is an immunotherapy company that is developing antigen-coated oncolytic viruses and vaccine vectors as therapeutic vaccines against cancer and infectious disease. The Valo Tx lead platform, PeptiCRAd (Peptide-coated Conditionally Replicating Adenovirus), was developed out of the laboratory of Professor Vincenzo Cerullo at the University of Helsinki. It turns oncolytic adenoviruses into targeted tissue specific cancer vaccines without the need to generate and manufacture multiple genetically modified viruses. The company is also developing PeptiENV and PeptiVAX, among other neoantigen strategies, in collaboration with Professor Cerullo. PeptiENV is expected to improve the therapeutic response to enveloped oncolytic viruses in the treatment of multiple forms of cancer, while PeptiVAX is a program to develop a novel, adaptable anti-infectives vaccination platform. A film explaining the PeptiCRAd technology can be found [here](#).

About ImmunoScape

ImmunoScape is an immunomics-focused company with a technology platform that allows for immune profiling and characterization of the human immune response at extremely high resolution. The Company's Deep Immunomics platform combines mass cytometry, single cell sequencing, and proprietary computational bioinformatics, data analysis, and visualization tools to provide novel, reproducible immune profiling information. This technology has been utilized across multiple therapeutic areas, especially in oncology and infectious disease, both to better understand immunotherapy safety and efficacy and to identify drug targets. For more information, please visit <https://immunoscape.com/>.

Contacts

Valo Therapeutics

Matthew Vaughan

Email: matthew.vaughan@valotx.com

Immunoscape

Kalyn Schieffer

Email: kos@anzupartner.com

Scius Communications (for Valo)

Katja Stout

Phone: +44(0)7789435990

Email: katja@sciuscommunications.com