
Press Release

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Immunicum Publishes DCP-001 Mechanism of Action in the Journal *Cells*

Immunicum AB (publ; IMMU.ST), a biopharmaceutical company focused on hard-to-treat established tumors and the prevention of cancer recurrence, announced today the publication of a scientific journal article describing the mechanism of action for its cell-based cancer relapse vaccine DCP-001. The publication in the peer-reviewed journal *Cells* details the interaction between DCP-001 and antigen-presenting cells and the cellular pathways involved. The study supports a mechanism of action whereby transfer of antigenic material, including tumor-associated antigens, and activation of the patient's own antigen-presenting cells upon injection of DCP-001 in the skin leads to the induction of immune responses against tumor cells. The proposed mechanism of action supports the development of DCP-001 as an allogeneic, off-the-shelf product which activates the patient's own immune system, with an excellent safety profile and with relative ease of administration via intradermal injection, not requiring lymphodepletion or other preconditioning. Immunicum conducted the study in collaboration with leading immunology researchers at the Amsterdam University Medical Center (AUMC) and Northeastern University in Boston.

"This publication provides a detailed overview of DCP-001's mode of action and identifies pathways which could serve as the basis to develop potential novel combination therapies such as blocking of the CD47-SIRP α immune checkpoint pathway," said Alex Karlsson-Parra, M.D., Ph.D., Chief Scientific Officer at Immunicum. *"The publication also strengthens our scientific leadership in the field of allogeneic dendritic cell biology. We are grateful for the collaboration with our academic partners and will continue to leverage our combined expertise to build a pipeline of promising, off-the-shelf cell-based immunotherapies."*

The data published in *Cells* show that DCP-001 exchanges its cellular content with antigen-presenting cells via a phagocytosis process, in which phosphatidylserine plays an important role and which is further enhanced by the blocking of CD47. The study included an *ex vivo* model for intradermal injection using human skin tissue samples. Following intradermal injection, DCP-001 initiates the activation of skin-resident alloreactive T-cells, causing local inflammation and attraction of host dendritic cells (DCs). DCP-001 is digested by the attracted DCs, resulting in a transfer of tumor-associated antigens, which in turn leads to the migration of the patient's own DCs toward draining lymph nodes to initiate the tumor-specific T-cell priming process. The described mechanism of action supports the promising characteristics of DCP-001 as a cancer relapse vaccine providing active immunization and durable anti-tumor immune response aiming to reduce tumor recurrence.

"The study demonstrating activation of the patient's own antigen-presenting cells by DCP-001 is in line with the observations in our clinical trials to date. We continue to observe DCP-001's potential to induce immune responses to a broad range of tumor-associated antigens in the ADVANCE II Phase II clinical study in patients with acute myeloid leukemia," commented Jeroen Rovers, M.D., Ph.D., Chief Medical Officer at Immunicum. *"We are looking forward to presenting the clinical follow-up data that will now for the first time cover the full cohort of the ADVANCE II study at the Annual American Society of Hematology (ASH) Meeting next month."*

The full publication titled, "Transfer of Cellular Content from the Allogeneic Cell-Based Cancer Vaccine DCP-001 to Host Dendritic Cells Hinges on Phosphatidylserine and Is Enhanced by CD47 Blockade" can be accessed through the current online version of [Cells](#) as part of the Special Issue Allogeneic Cell Cancer Immunotherapies.

About DCP-001

Immunicum's clinical program DCP-001 is generated by transforming a proprietary leukemic cell, DCOne[®], into a cell-based cancer vaccine, thereby keeping the endogenous tumor antigens while

having the profile of a mature dendritic cell. Whereas the leukemic cells it used as starting material were poorly immunogenic, DCP-001 proved highly immunogenic due to its mature allogeneic dendritic cell phenotype, making it an attractive cancer vaccine candidate. Due to its unique hybrid properties, DCP-001 is able to induce active immunization that leads to durable and specific anti-tumor responses. Immunicum received Advanced Therapy Medicinal Product Classification from the EMA for DCP-001 in [June 2021](#).

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ABOUT IMMUNICUM AB (PUBL)

Immunicum is a biopharmaceutical company focused on hard-to-treat established tumors and the prevention of cancer recurrence, two key challenges in oncology. We are leveraging our unparalleled expertise in allogeneic dendritic cell biology to develop an advanced clinical pipeline of novel, off-the-shelf, cell-based therapies for solid and blood-borne tumors. Based in Sweden and the Netherlands, Immunicum is publicly traded on the Nasdaq Stockholm. www.immunicum.com