

LUMICKS enters collaboration with Glycostem to enhance NK cell-mediated immunotherapy

Amsterdam, the Netherlands, Oss, the Netherlands — July 30, 2020 — LUMICKS has entered into a collaboration with Glycostem Therapeutics, the Netherlands, to improve immunotherapeutic drug development. By quantifying binding strength between immune and cancer cells using the unique z-Movi® Cell Avidity Analyzer, Glycostem exploits the predictiveness of avidity in finding the best NK-cell population for cellular therapy.

Glycostem is a leading NK-cell manufacturer that has developed stem cell-derived therapeutic strategies, such as oNKord® and CAR-NK cells. In this collaboration, Glycostem will assess their NK cells using LUMICKS' z-Movi to gain new insights into the cell avidity and functional properties of their cells. Avidity is a new parameter that is crucial to understand immune cells better and choose the most potent ones for immunotherapy.

“Adding the z-Movi to our repertoire will improve the development of our NK cell-based therapy platforms using oNKord® and genetically modified NK cells,” said Jan Spanholtz, CSO at Glycostem, “We are thrilled to implement single-cell avidity analyses to our workflow as it is an invaluable and efficient predictor of our product’s immune-cell functionality and mechanism of action.”

LUMICKS is looking forward to this collaboration as future findings at Glycostem will validate the workflow of the z-Movi, the only available cell avidity analyzer. The partnership enables LUMICKS to expand on the implementation of the z-Movi to new immunotherapeutic settings, confirming its great value to different fields.

“We are excited to work together with Glycostem and show the value of avidity analyses as a critical parameter to evaluate the potential of clinical leads for immuno-oncology therapy.” said Olivier Heyning, CEO at LUMICKS, “The collaboration will validate the use of the z-Movi for studying NK cells, a promising off-the-shelf alternative to autologous CAR T-cell therapy.”

With their quick cell-killing properties, NK cells have become a go-to approach in immuno-oncology. Genetically engineered CAR-NK cells are highly attractive candidates for immunotherapies as they show improved tumor targeting and reduced side effects compared with commonly used CAR T-cell therapies.

About LUMICKS

LUMICKS is a leading life sciences company that develops equipment for dynamic single-molecule and cell avidity analysis, two emerging areas in biology research and immuno-oncology (IO). Built upon innovative technologies, such as optical tweezers (Nobel Prize for Physics 2018), STED super-resolution (Nobel Prize for Chemistry 2014), and acoustic force spectroscopy, LUMICKS tools facilitate the understanding of life to the smallest detail. Applying and measuring forces in biology enables real-time analysis of true biological mechanisms. This creates the crucial and yet unexplored bridge between structure and function at the molecular and cellular level. The latest technology in the company’s arsenal, the z-Movi® Cell Avidity Analyzer, enables the measurement and selection of immune cells based on their interactions with cancer cells. This technology is game-changing for the development and application of IO therapies for the treatment of cancer.

About Glycostem

Netherlands-based Glycostem Therapeutics BV, a clinical stage biotech company, develops allogeneic cellular immunotherapy to treat several types of cancer. By harnessing the power of stem



cell-derived Natural Killer (NK) cells, Glycostem's products are a safe alternative to CAR-T-cells. Glycostem's lead product, oNKord®, is manufactured from allogeneic raw material and is available off-the-shelf. Thanks to its nine patent families, longstanding technical expertise and resources, as well as Orphan Drug Designation, Glycostem has secured a leadership position in the global NK-cell market. oNKord® is produced in a closed system in Glycostem's state-of-the-art and GMP (Good Manufacturing Practice) licensed production facility in the Netherlands, from which it can be distributed globally. The production technology includes ex vivo generation of high numbers of NK-cells with a high degree of purity for clinical applications. oNKord® successfully passed phase I clinical trial (elderly and frail AML - Acute Myeloid Leukemia - patients), providing solid safety data and strong indication of clinical activity, including response on MRD (Minimal Residual Disease). Results indicate that oNKord® may be safely infused in AML patients. Glycostem is furthermore developing a range of CAR-NK/TCR-NK products in-house and in cooperation with amongst other global partners.

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