Oncode Accelerator

Outsmarting cancer
Impacting lives

Accelerating the Development of Cancer Therapies

Therapeutic Vaccines

Accelerate Development of Therapeutic Vaccines to Treat Cancer

The Therapeutic Vaccines Workstream within the Oncode Accelerator Program taps into the great clinical promise of this form of immunotherapy to stimulate tumor immunity.

The Workstream provides Demonstrator Project partners with a unified pipeline where the latest innovations and high-quality technologies from different partners and top-notch cancer institutes are bundled into an open platform for vaccine development, production and clinical testing.

Identify the Best Tumor Antigens to React Against

Utilize an integrated target-finding strategy, with extensive lead validation using state-of-the-art technologies and methodologies. A full panel of sequencing techniques alongside bioinformatic and AI-enabled methodologies are available for target prediction and selection. *In vitro* screening for T cell immunogenicity complements target identification.

These technologies can be leveraged to identify and prioritize novel tumor-specific target antigens, or to further develop proprietary tumor-associated antigens from third parties.

Select the Right Patient Group and Analyze Biological Responses

Understanding a tumor's immunogenic antigen profile and microenvironment, as well as the patient's immune responses, is essential to develop an effective therapeutic vaccine. Through Oncode Accelerator's well-defined Patient Cohorts and Organoids Platforms, relevant patient data and materials can be accessed.

Qualitative and quantitative immune profiling can be performed by leveraging technologies including multispectral flow cytometry, single-cell RNA sequencing, whole-exome sequencing, as well as spatial (single-cell) transcriptomics and proteomics.

Develop Flexible Vaccine Platforms and Adjuvants

Development of vaccine platforms requires careful consideration of the required mechanism of action and the envisioned vaccine components' biochemical properties. The Therapeutic Vaccines Workstream encompasses the knowledge and tools to develop efficacious vaccines spanning peptide, RNA, and DNA antigen formats and using innovative vaccine platforms, in addition to offering a panel of proprietary and non-proprietary adjuvants and delivery systems, which can be accessed by Demonstrator Project partners.

Ensure GMP Production Capacity for Rapid Testing

To ensure successful cancer vaccine development, requirements for later-stage GMP production must be considered early-on. The Therapeutic Vaccines Workstream provides access to expertise and technologies necessary for performing process and assay development early-on, with attention to parameters critical for success in later GMP production.

Demonstrator Project Partners can produce clinical grade peptide, mRNA, DNA or dendritic cell vaccines using scalable manufacturing Therapeutic Vaccines systems and GMP compatible material for rapid testing.

Develop the Next Generation of Therapeutic Cancer Vaccines

Key to the success of the Oncode Accelerator program is the selection and execution of high-quality Demonstrator Projects which aim to validate the Oncode Accelerator infrastructure while simultaneously addressing unmet medical needs. By combining the key capabilities of our Workstreams with the innovations from our Platforms (Patient Cohorts, Organoids and Artificial Intelligence) we create a synergistic effect resulting in better therapies, tailored to individual patients or patient subgroups.

Work With Us

Through Oncode Accelerator, we provide academic researchers, biotech drug developers and industry partners with access to expertise, facilities and technologies aimed at efficient, patient-centered development of cancer therapies up to early clinical validation. We are actively seeking ideas for Demonstrator Projects, through which you can access co-funding and support.

Reach out for more information

demonstrators@oncodeaccelerator.nl

About Oncode Accelerator

Oncode Accelerator is a public-private partnership funded by the Dutch National Growth Fund (NGF), which aims to innovate and accelerate the preclinical development of new cancer therapies by placing cancer patients at the core. It is a collaboration between six coordinating partners:

Oncode Accelerator Foundation

Princess Máxima Center pediatric oncology

Netherlands Cancer Institute Antoni van Leeuwenhoek

UMC Utrecht

Leiden University Medical Center

Universiteit Leiden

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