



Biologics

The Oncode Accelerator Biologics Workstream focuses on developing antibody-based immune therapies to harness the power of the immune system to tackle cancer.

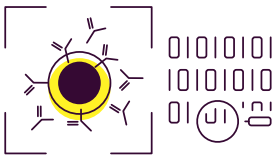
This Workstream uses a unique cellular immunization method for generation of hundreds of unique antibody sequences, including antibodies against otherwise difficult-to-target antigens. In combination with high-throughput in vitro functional characterization of candidates, this permits highly efficient early-stage antibody generation and lead discovery. The Workstream can perform in vitro characterization and lead optimization leveraging a combination of AI-driven methodologies and in vitro selection on patient material and/or organoids.

This infographic highlights the services and capabilities available to drug developers during a Demonstrator Project, which can be executed at any stage of the Workstream pipeline and incorporates at least one of the innovative Platforms: Patient Cohorts, Organoids and Artificial Intelligence.



Oncode Accelerator

Outsmarting cancer
Impacting lives



Antibody Generation and Lead Discover

Artificial Intelligence | Organoids | Patient Cohorts

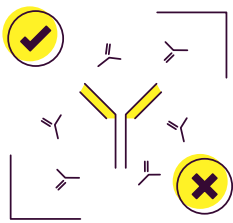
Antibody generation

Cell-based antibody generation using a proprietary in-house developed method

Antibody screening & selection

Single B-cell selection • High-throughput screening • Direct high throughput *in vitro* functional characterization of candidates • Selection of lead candidates by in vitro assays and AI

The Oncode Accelerator Project receives funding from the Dutch National Growth Fund (NGF). It is a collaboration between 6 coordinating partners: Leiden University, Leiden University Medical Center, the Netherlands Cancer Institute, Princess Máxima Center, UMC Utrecht, and the Oncode Accelerator Foundation, who lead individual consortia within the Oncode Accelerator Project.



Lead Optimization

Artificial Intelligence | Organoids | Patient Cohorts

Optimization

Expression of (engineered) antibodies of all available human isotypes • Coverage of most antibody modalities, e.g. bispecific engineering and development of ADCs • Affinity maturation, humanization, and in silico/in vitro developability optimization • Removal of sequence liabilities • *In silico* and *in vitro* developability studies (AI, Organoids) • Cell-based affinity measurements with LigandTracer • Functional characterization of leads

Validation

Robust screening on relevant material (organoids and patient-derived material from patient cohorts) • Functional *in vitro* and *ex vivo* validation of improved candidates (Organoids)

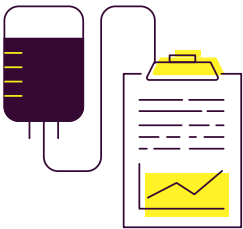


Preclinical Development and GMP Readiness

Organoids | Patient Cohorts

Process development & optimization

Cell line generation (GLP and GMP) • Upstream and Downstream Process Development • Bio-Analytical Development • Process optimization



GMP Production

Artificial Intelligence

Process development & optimization

Efficient manufacturing of small-scale batches for phase 0 and 1 • Upscaling for larger production to phase 2 and onwards

Support towards IND filing



Interested in applying for a Demonstrator Project?

Scan the QR-code to get started or go to oncodeaccelerator.nl