

Center for Oncological Research (CORE) Antwerp

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University of Antwerp

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The **Center for Oncological Research (CORE)** is a joint oncology research platform of the University of Antwerp, with multiple expertises in the field of **fundamental, translational and clinical cancer research**.

The CORE lab is operational on three sites: the Antwerp University Campus Drie Eiken, Wilrijk; the Antwerp University Hospital, Edegem; and the GZA Hospital Sint-Augustinus, Wilrijk, and has extensive experience in different research lines.

FOCUS ON BIOMARKERS, TARGETED THERAPY & THE TUMOR MICROENVIRONMENT

In CORE, we focus on the **development of new therapeutic strategies to treat cancer**, more specifically on targeted therapy, immunotherapy and combination therapies. We study the influence of hypoxia on therapeutic outcome and we put efforts in the identification of biomarkers for personalized medicine.

Therapeutic targets: EGFR, PLK1, cMET, MDM2, CD70

Tumor types: lung, pancreas, head & neck, colon, hematological tumors

Techniques: cell culture, *in vitro* assays, hypoxia cabinet, radiotherapy, immunohistochemistry, immunofluorescence, flow cytometry, Western blot, PCR-based techniques, ...

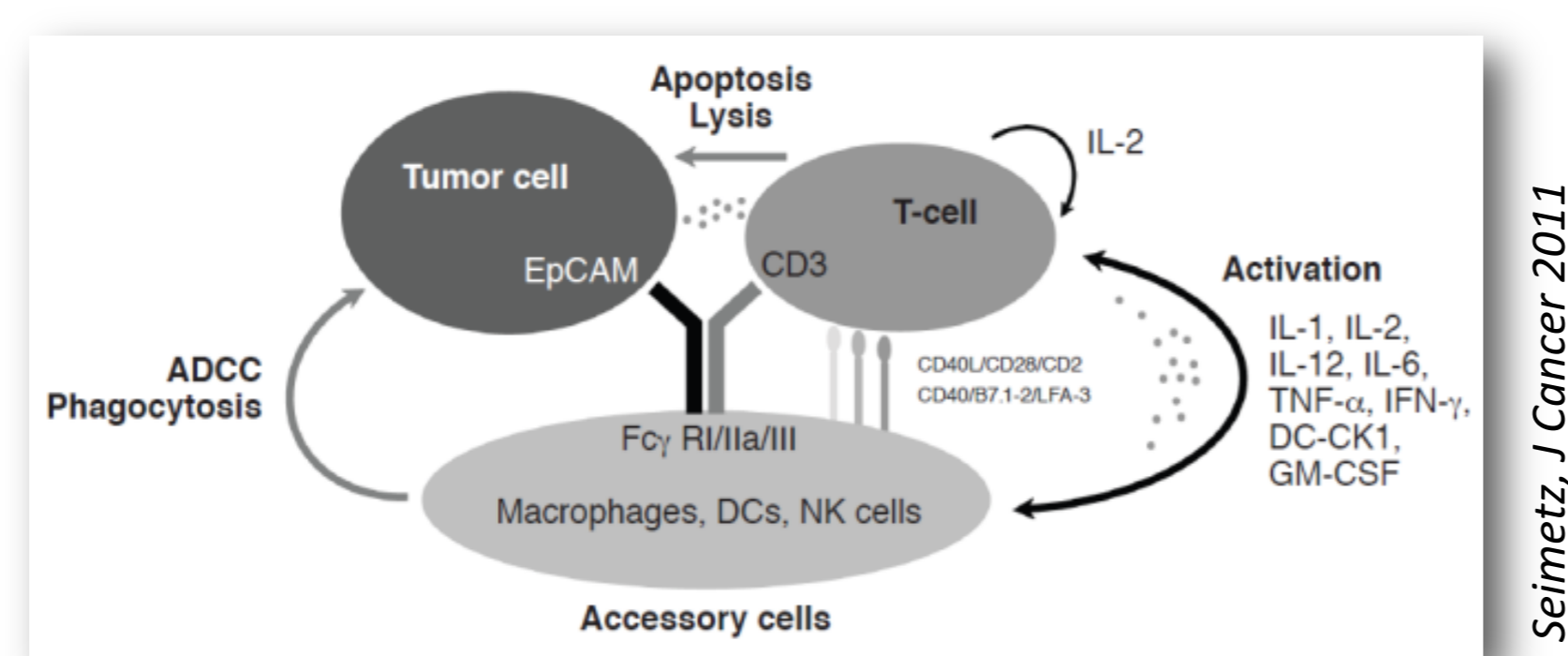


FOCUS ON IMMUNOTHERAPY

Central theme: combining immune stimulation with inhibition of immune suppression to boost innate immunity in cancer

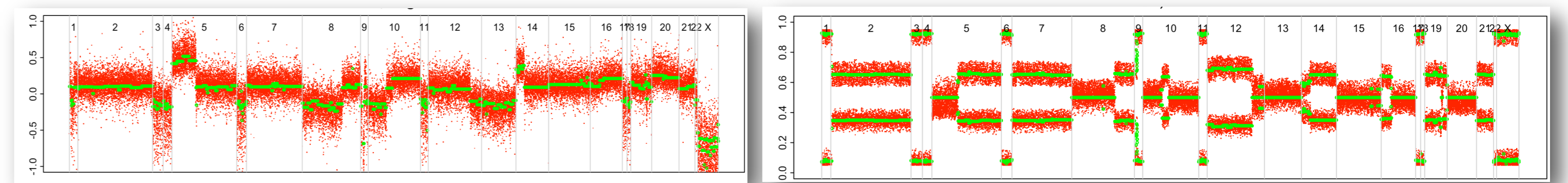
Therapeutic targets: Toll-like receptors, hypoxia, stroma, innate immune cells

Tumor types: glioblastoma, mesothelioma, pancreatic cancer



FOCUS ON ONCOGENETICS

The research on oncogenetics focuses on the identification of genetic susceptibility factors contributing to tumor initiation. A common central theme is the study and identification of biomarkers leading to therapeutic resistance.



Techniques: Cell culture, next generation sequencing, real time PCR, western blotting, methylation analysis, microarray technology, ...

FOCUS ON BREAST CANCER METASTASIS

The **focus** on breast cancer metastasis relates to three topics, more specifically the study of:

- A. **inflammatory breast cancer**, a highly metastatic form of locally advanced breast cancer
- B. **circulating tumor cells (CTCs)**, which are tumor cells that are present in the bloodstream and thus actively metastasizing
- C. **liver metastases** with particular focus on growth patterns

Techniques: CellSearch for CTC detection, DEPArray for single cell isolation, whole genome amplification, next-generation sequencing (Illumina and 454), PCR-based techniques, cell culture, flow cytometry, xCELLigence migration and proliferation assays

RESEARCH STAFF



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