Partner: HCEMM

Persons involved:

- Lajos Vince Kemény, MD, PhD
- Katalin Buday, PhD
- Botond Szabolcs, MD

About the institute: The research and development at HCEMM is carried out by research groups and advanced core facilities. The research groups are supported by four ACFs (Functional Cell Biology and Immunology, Single Cell Omics, In-vivo Imaging and Scientific Computing), which work closely with EMBL. The HCEMM affiliated Translational Dermatology Research Group focuses on three different aspects of melanocyte and melanoma biology: mechanism of pigmentation, regulators of cell death in melanoma and overcoming resistance to targeted and immunotherapies in melanoma.

Role within Consortium: The group aims to functionally investigate proposed therapeutic targets and companion biomarkers using genome editing technologies, pharmacology assays and a combination of in vitro and in vivo melanoma mocels.

Task Description:

- **WP5**:

The HCEMM group focuses on two work processes on target validation and mechanism discovery.

1. In vitro validation:
    - Gene editing of human melanoma cell lines using CRISPR-Cas9 technology for functional testing of targets.
    - Molecular profiling to evaluate the effects of targeted interventions.
2. In vivo validation:
    - Proposed pharmacologic inhibitor testing in vivo in mouse models of melanoma
    - Molecular profiling to evaluate the effects of targeted interventions in vivo.