

# **ONCOLOGY DRUG DISCOVERY**

- > Leading expertise in tumour immuno-environment, metabolism, DNA repair and epigenetics
- ▶ Critical mass of >100 scientists focussing on oncology research
- > Established network of clinicians and pathologists for access to patient material
- CRISPR platform for target discovery and validation
- ▶ Rational design of novel targeted therapies



Evotec provides its partners with a full range of drug discovery & development services and also invests in proprietary early stage discovery programmes (including in DNA damage response) for strategic partnering with pharma and biotech companies.



## IN VITRO BIOLOGY

- Extensive portfolio of assay for oncology targets including metabolic enzymes, kinases, PPIs and immune receptors supporting drug discovery integrated projects
- Customised high-content imaging assays for phenotypic screening and lead optimisation support, & target ID approaches via small molecules, RNAi or CRISPR screens
- Specific assays to study drug resistance, cancer metabolism or tumour microenvironment (immune cells, fibroblasts, adipocytes, endothelial cells etc.)
- ► All oncology assays (imaging, invasion, proliferation, cancer/immune cell co-culture) are compatible with our versatile CRISPR screening platform

#### IN VIVO PHARMACOLOGY

- ▶ Establishment of PK/PD relationships using target engagement or surrogate markers
- Syngeneic, orthotopic tumour xenografts to track anti-tumour and microenvironment effects, including Immuno-profiling for Drug MoA & humanised mouse model system for evaluation of immune modulation agents
- Discovery toxicology platform incorporating histology, blood biochemistry, haematology and safety biomarkers

#### **BIOMARKERS**

- TLDA-based/RNA-Seq gene signature analysis supported by bioinformatics tools for data mining and pathway analysis
- Leading MS-based proteomics, metabolomics and lipidomics for target deconvolution, MoA studies and biomarker discovery
- Establishment of protocols for transfer to clinic, including Ventana IHC platform, flow cytometry and ELISA with access to patient material for biomarker validation and *ex vivo* studies

### HYPOTHESIS-DRIVEN DRUG DESIGN-DRIVEN MEDICINAL CHEMISTRY

Experienced structural biology, computational, DMPK & medicinal chemistry teams working in synergy to optimise phenotypic and biochemical screening hits through rapid iterative cycles



High Content imaging



IHC of hypoxia



T cell proliferation