

**TRANSLATIONAL MEDICINE
RESEARCH, DEVELOPMENT AND SERVICES**





TRANSLATIONAL MEDICINE AND PHARMACOLOGY

- Medicinal chemistry and drug design and assay development
- Drug repurposing
- Formulation of drugs/ drug candidates and nano-based pharmaceuticals
- PBPK modeling and IVIVC based on in vitro release testing
- Preclinical and clinical modeling of pharmacokinetics and pharmacodynamics
- LC-MS/MS analysis of lipids (lipidomics), pharmaceutical compounds and biomarkers
- Therapeutic monoclonal antibody selection as biomarkers or biologicals
- Cellular imaging methods (e.g. MELK)
- In vitro models for immune cell activation/differentiation, cell barriers, toxicity, second messenger release or inhibition and immunogenicity
- In vitro and in vivo pharmacology and screening for inhibitors of lipid synthesis, immunomodulators or analgesic compounds



- Animal models of neuropathic pain, acute, inflammatory and tumor pain, neurodegenerative diseases, acute and chronic inflammation, sepsis, vascular injury, autoimmune disease and tissue repair with multiple optical, symptomatic, immunological and biochemical readouts
- Pain and analgesia assessment and quantitative sensory testing in humans (healthy volunteers and patients)
- Biobanking / biosampling of clinical specimens and development of new biomarkers for inflammatory diseases
- Planning, performance and analysis of phase I-III clinical studies

Contact

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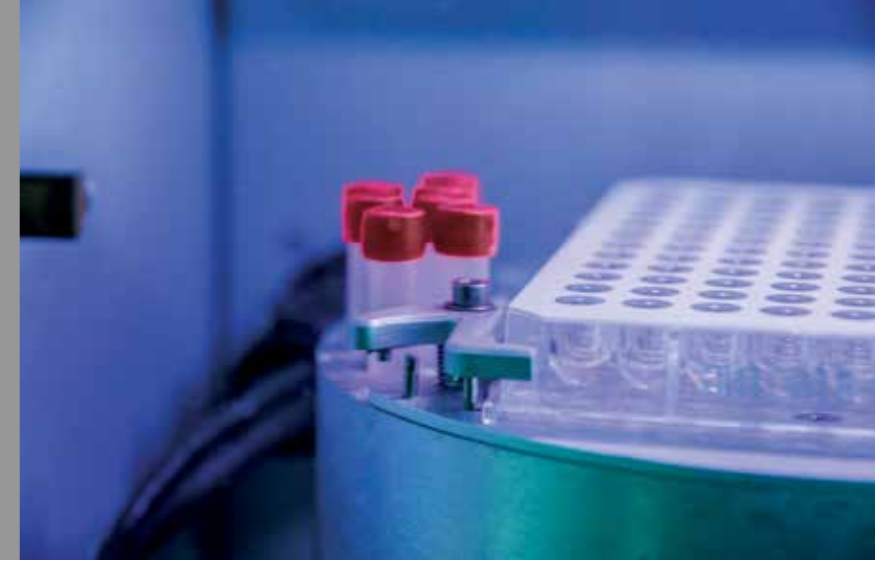
PRECLINICAL DRUG DISCOVERY – SMALL MOLECULES

- Extensive small molecule and repurposing compound libraries
- Development of cellular and biochemical assays
- Proof of concept screens and tool compound studies
- Phenotypic and target-based high-throughput screening
- Toxicity assessment
- Biomarker studies
- iPSC-derived human cell models
- Structure-based drug design, computational chemistry
- Data solutions for the life sciences
- Technology assessments
- Practical workshops and dedicated education programs, visiting scientists program

Contact

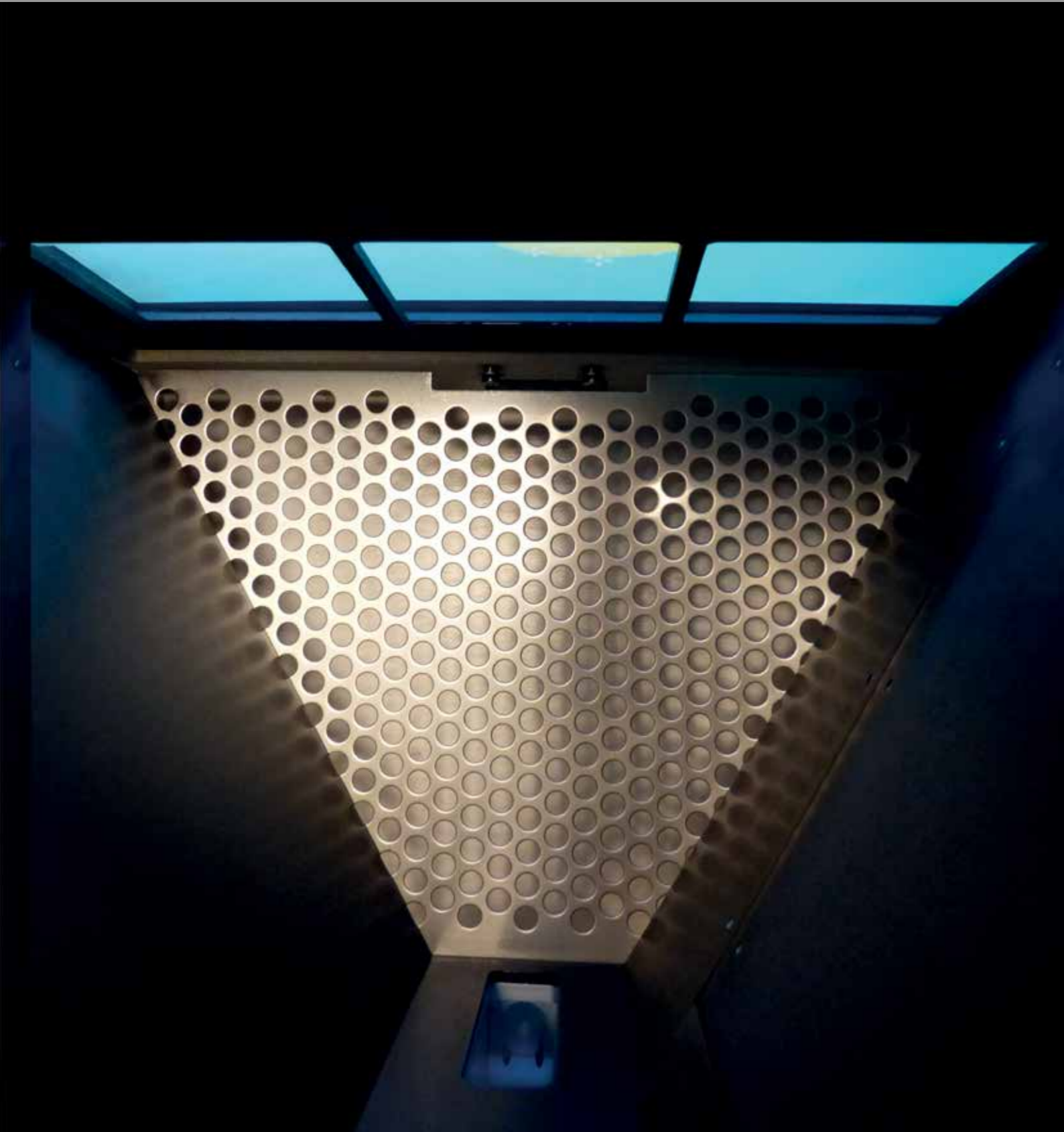
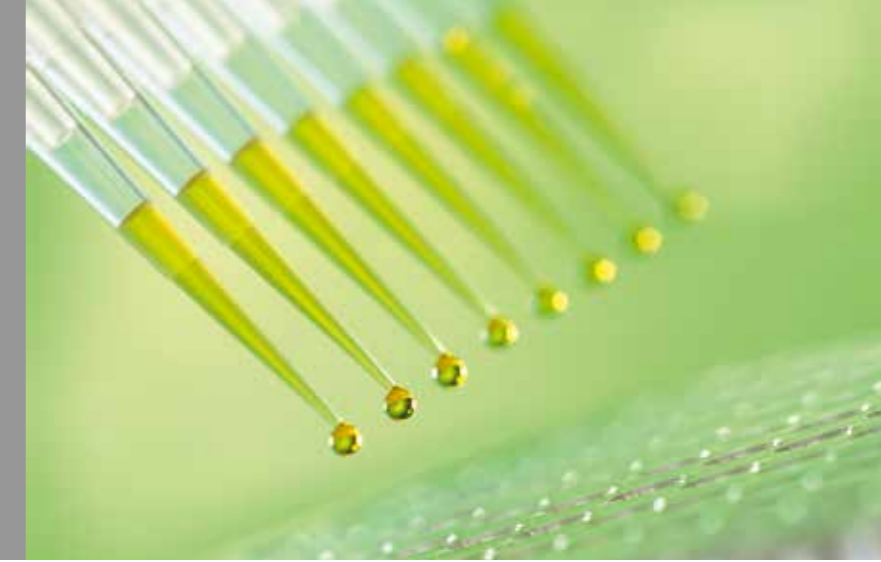
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CONTRACT SERVICES

- Assay development for high-throughput screening
- Gene isolation / characterization
- Mass spectrometry
- Protein crystallization and structural determination
- Protein localization
- In vitro and in vivo characterization of proteins
- Cell sorting
- Immunogenicity studies
- Toxicity studies
- Cell barrier studies
- Off-target effect studies



CONTRACT SERVICES

- Analysis of compound induced effects on the immune system
- Biorelevant dissolution
- Formulation development
- Antibody production and modification
- Recombinant immunodiagnostics and immunotherapeutics
- Animal models / in vivo imaging
- Metabolomics
- Interaction analysis (surface plasmon resonance)
- LC-MS/MS drug analysis and biomarker discovery
- Clinical trials



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In vitro test systems (e.g. flow cytometry)

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High-content imaging and cell-based assays

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Animal models / in vivo imaging

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Medicinal chemistry and drug design

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In vitro tests / compound screening

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LC-MS/MS drug analysis and biomarker discovery

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Lipidomic analysis

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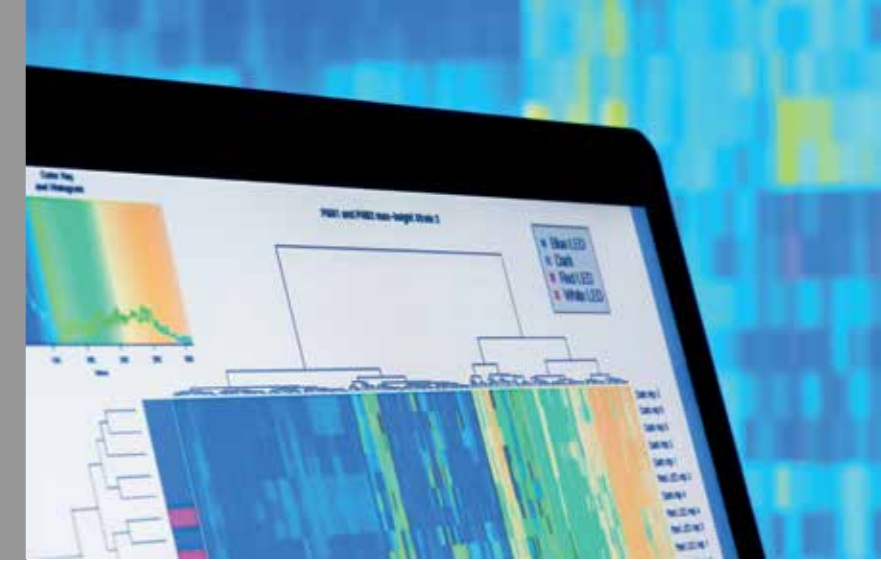
Clinical research

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Assay development and screening (small molecules)

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IMPRINT

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