

Institute of functional genomics

Fields of research

Systems biology of malignant and non-malignant diseases; Development of analytical tools for the high-throughput systematic characterization of genomes, transcriptomes, proteomes and metabolomes of cells, tissues and biofluids; Structural, functional and comparative genomics

Research projects

- Tumor metabolism and immune escape
- Graft-versus-host disease in stem cell transplantation – identification of predictive/prognostic biomarkers and deep sequencing of 16S rDNA isolated from stool specimens
- Novel strategies for the treatment of acute childhood lymphoblastic leukemia
- Role of mutated Fanconi-associated protein (FAP) in hereditary renal tubulopathy
- Proteomics and metabolomics of non-alcoholic steatohepatitis
- NMR and GC(xGC)-TOFMS based metabolite fingerprinting
- Metabolite Fingerprinting in dairy cows; Bioinformatics of high-content data
- Autosomal dominant polycystic kidney disease (ADPKD)
- Urine and serum metabolite and protein fingerprinting in chronic renal disease
- Hyphenated mass spectrometry of amino acid enantiomers

Co-operations

- Bruker BioSpin GmbH, Rheinstetten, Germany
- LECO Instrumente GmbH, Mönchengladbach, Germany
- Georgia Chenevix-Trench, The Queensland Institute of Medical Research, Brisbane, Australia
- Christian Singer, Medical University, Vienna, Austria
- Reinhard Kofler, Medical University Innsbruck, Austria
- Kai-Uwe Eckardt, University Clinic Erlangen, Germany
- Ruedi Fries and Heinrich Meyer, Technical University Munich, Freising-Weihenstephan, Germany