2020-2021 témahirdetés Biotecnhologiai MSc képzésre:

Project title: Assay development to assess the involvement of OAT2 in hepatic uptake of test compounds using primary human hepatocytes

 Project leader: Katalin Jemnitz, PhD

Project abstract: Prediction of pharmacokinetic properties of new drug candidates is one of the very early steps in drug development. Metabolic enzymes and transporters of the liver play essential role in absorption, distribution, metabolism, and elimination (ADME) of drugs. Most compounds enter the liver by uptake transporters, which are located on the basolateral membrane of hepatocytes. If a compound is a substrate for one or more uptake transporters, the uptake transport partially or completely determines the total hepatic clearance. Organic anion transporter (OAT2), one of the liver specific uptake transporters, transports small, anionic compounds into the hepatocytes. The aim of the project is to develop hepatocyte uptake assays to determine whether OAT2 transporter is involved in the uptake of test compounds in primary human hepatocytes.

Project title: Development of cell-line based assays to assess interaction of test compounds with amino acid transporters

Project leader: Péter Tátrai, PhD

Project abstract: Amino acid transporters are expressed in all mammalian nucleated cells and play essential roles in maintaining nutrient and energy homeostasis. Some amino acid transporters are dysregulated in cancer and contribute to tumour growth. Chemicals that interact with cellular amino acid transport may, on one hand, disrupt homeostasis in normal cells, while on the other hand they may interfere with tumour cell proliferation. The aim of the project is to develop cell-based assays to detect interaction of test compounds with amino acid transporters of the SLC protein family such as LATs, ASCTs, or SNATs.