Universität Basel

Research Project

Functional evaluation of genetic variants located in the gene SLCO1B7

Project funded by own resources

Project title Functional evaluation of genetic variants located in the gene SLCO1B7
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Organisation / Research unit
Departement Pharmazeutische Wissenschaften / Biopharmacy (Meyer zu Schwabedissen)
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It is widely accepted, that membrane proteins facilitating cellular entry or efflux significantly influence pharmacokinetics of their substrates. The Organic Anion Transporting Polypeptides are one protein family investigated for the contribution to cellular uptake of xenobiotics. In this family of membrane proteins, the OATP1B-subfamily has been focus of various studies in pharmacology. Currently, the OATP1B-family summarizes two members OATP1B1 and OATP1B3. Both are highly expressed in liver and are localized in the sinusoidal membrane of hepatocytes, where it is assumed to govern hepatocellular entry of a variety of compounds in clinical use. We have recently reported on the function and expression of LST-3TM12. Based on our findings this novel member of the OATP1B-family represents a spliced mRNA encoded by SLCO1B3 and SLCO1B7. However, during cloning of the transporter ORF we observed two genetic variants namely rs12321909 and res 73241802, which are both non-synonymous. It is aim of this project to investigate the influence of those two polymorphisms and additional previously reported SNPs on transport function.

Keywords LST-3TM12, drug transporter, pharmacogenetics
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Published results

4605311, Meyer zu Schwabedissen, Henriette E; Seibert, Isabell; Grube, Markus; Alter, Claudio L; Siegmund, Werner; Hussner, Janine, Genetic variants of SLCO1B7 are of relevance for the transport function of OATP1B3-1B7., 1096-1186, Pharmacological research, Publication: JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)

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