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Analysis of differential expression of glycosyltransferase in mouse liver

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Glycosylation is a major post-translational gene regulation and is involved in many aspects of cellular processes. It plays pivotal functional roles in immune surveillance, inflammation and drug responses among many other biological processes. Establishment of a mouse model which mimics a human glycosylation profiling is urgent and is instrumental to accelerate the non-clinical tests prior to the human clinical trials for a potential novel drug candidate. To this end, we set out to identify the glycosylation-regulating genes (GRGs) which were differentially regulated in human liver compared to the mouse counterpart. Among major organs, we chose a liver due to its critical roles in metabolism. To facilitate the screening of differentially expressed GRGs, Glycosylation Profiler PCR array expression panel was utilized as an initial screening approach with the total RNAs derived from commercially available normal human liver tissues and B6 mouse liver tissues. Candidate GRGs were further confirmed by RT-PCR analysis with individually designed specific primer sets. Our findings would provide crucial information for construction of a non-clinical mouse model with humanized glycosylation profiling, which is critical for cell-cell interaction and signaling in immune responses and drug responses.

Biography

Kyoungsook Park has completed her PhD at the University of Pennsylvania, Philadelphia, USA. She is a Research Professor at Sungkyunkwan University in Republic of Korea and she has published many papers in reputed journals and has been serving as an active Member of AACR and a representative Committee Member of KSBMB.

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