Article Title:

Age-specific Regulation of Drug-processing Genes in Mouse Liver by Ligands of Xenobiotic-sensing Transcription Factors

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Supplement Table 1. Primer sequences for RT-qPCR.

Genes	Forward Primer	Reverse primer
β-actin	GGCCAACCGTGAAAAGATGA	CAGCCTGGATGGCTACGTACA
Cyp1a2	GACATGGCCTAACGTGCAG	GGTCAGAAAGCCGTGGTTG
Cyp2b10	AAGGAGAAGTCCAACCAGCA	CTCTGCAACATGGGGGTACT
Cyp3a11	ACAAACAAGCAGGGATGGAC	GGTAGAGGAGCACCAAGCTG
Aldh1a1	GGGGACAAGGCTGATGTTGA	GCAGCCTCCTAAATCCGACA
Aldh1a7	TGCTATTTGGCTGTCCCTGT	ACCATGTTCGCCCAGTTCTC
Aldh7a1	TGAAGAAACCATCGGGAAAG	TTCCCCATCTCCAAAGACAC
Gsta1	CGCCACCAAATATGACCTCT	TTGCCCAATCATTTCAGTCA
Gsta4	TGATGATGATTGCCGTGGCT	ACGAGAAAAGCCTCTCCGTG
Gstm1	CTCCCGACTTTGACAGAAGC	TTGCTCTGGGTGATCTTGTG
Gstm2	ATGGTTTGCAGGGAACAAGGT	CTTCAGGCCCTCAAAGCGAC
Gstm3	AGAGGAGGAGAGGATCCGTG	GGGACTGCAGCAGACTATCAT
Gstm4	TATGACACTGGGTTACTGGGACATC	TCCACGCGAATCTTCTCTTCC
Gstt1	CTTGCTCTACCTGGCACACA	CTTCTCCGAAGGCCCGTATG
Sult1e1	TCCGTATGGTTCCTGGTATGA	GTTGAACGATTCTGTCCACAAG
Sult5a1	ACCTCGCTCTACTATCCGCA	TGAAGAACTTGCCCTCGCTC
Papss2	ACCTTGGAGACCGAAGGTTT	TTCTTGGCAACAATGAACCA
Ugt1a1	GTCATCCAAAGACTCGGGCA	GACATTCAGGGTCACCCCAG
Ugt1a6	ATACCATGGGAGCCAGAGTG	ACCAGAACTGTGAGGGTTGG
Ugt1a9	CTGGTTCAGCCAGAGGTTTC	TTGGCGACAATTAATCCACA
Ugt2b34	AGCTGCCAAAGCAGTCATTT	GCCAGGATCACATCAAACCT
Ugt2b35	TGGGAAGGTGTTAGTGTGGC	AAACTTAAGGCCCGGCGAAT
Ugt2b36	TGTGGGAAGGTGTTGGTATGG	TCCACAGCCTTTGCAAAAATAA
Mrp2	TCCTAGACAGCGGCAAGATT	GCTAGAGCTCCGTGTGGTTC
Mrp3	TGGTCATGCTGTCAGCTTTC	AAGGACTGAGGGGAACGAAT
Mrp4	GCAAAGCCCATGTACCATCT	ACCACGGCTAACAACTCACC
Oatp1a4	GGAAGATTGGACACGCATCT	GGCATTGTGACTGAAGCAGA
AhR	ACCAGAACTGTGAGGGTTGG	CTCCCATCGTATAGGGAGCA
CAR	CTCAAGGAAAGCAGGGTCAG	AGTTCCTCGGCCCATATTCT
PXR	CCCATCAACGTAGAGGAGGA	TCTGAAAAACCCCTTGCATC

Supplement Table 2. Official Gene symbols (synonyms), full names and functions.

Gene Symbol	Full Name	Function
Actb (β-actin)	actin, beta	Housekeeping gene
Cyp1a2	cytochrome P450, family 1, subfamily a, polypeptide 2	Phase I
Cyp2b10	cytochrome P450, family 2, subfamily b, polypeptide 10	Phase I
Cyp3a11	cytochrome P450, family 3, subfamily a, polypeptide 11	Phase I
Aldh1a1	aldehyde dehydrogenase family 1, subfamily a1	Phase I
Aldh1a7	aldehyde dehydrogenase family 1, subfamily a7	Phase I
Aldh7a1	aldehyde dehydrogenase family 7, member a1	Phase I
Gsta1	glutathione *S*-transferase, alpha 1	Phase II
Gsta4	glutathione *S*-transferase, alpha 4	Phase II
Gstm1	glutathione *S*-transferase, mu 1	Phase II
Gstm2	glutathione *S*-transferase, mu 2	Phase II
Gstm3	glutathione *S*-transferase, mu 3	Phase II
Gstm4	glutathione *S*-transferase, mu 4	Phase II
Gstt1	glutathione *S*-transferase, theta 1	Phase II
Sult1e1	sulfotransferase family 1E, member 1	Phase II
Sult5a1	sulfotransferase family 5A, member 1	Phase II
Papss2	3'-phosphoadenosine 5'-phosphosulfate synthase 2	Phase II
Ugt1a1	UDP glucuronosyltransferase 1 family, polypeptide a1	Phase II
Ugt1a6	UDP glucuronosyltransferase 1 family, polypeptide a6	Phase II
Ugt1a9	UDP glucuronosyltransferase 1 family, polypeptide a9	Phase II
Ugt2b34	UDP glucuronosyltransferase 2 family, polypeptide b34	Phase II
Ugt2b35	UDP glucuronosyltransferase 2 family, polypeptide b35	Phase II
Ugt2b36	UDP glucuronosyltransferase 2 family, polypeptide b36	Phase II
Slco1a4 (Oatp1a4)	solute carrier organic anion transporter family, member 1a4	Transporter
Abcc2 (Mrp2)	ATP-binding cassette, sub-family C, member 2	Transporter
Abcc3 (Mrp3)	ATP-binding cassette, sub-family C, member 3	Transporter
Abcc4 (Mrp4)	ATP-binding cassette, sub-family C, member 4	Transporter
AhR	aryl-hydrocarbon receptor	Xenobiotic-sensing transcription factor
Nr1i3 (CAR)	nuclear receptor subfamily 1, group I, member 3	Xenobiotic-sensing transcription factor
Nr1i2 (PXR)	nuclear receptor subfamily 1, group I, member 2	Xenobiotic-sensing transcription factor

Supplement Table 3. Between-subjects test with significant values for age, chemical and the interaction between age and chemicals, using generalized linear model ($p<0.05$).

Genes	Age	Chemical	Age * Chemical
Cyp1a2	0.0000	0.0000	**0.0000**
Cyp2b10	0.0000	0.0000	**0.0000**
Cyp3a11	0.0000	0.0000	**0.0000**
Aldh1a1	0.0000	0.0000	**0.0000**
Aldh1a7	0.0000	0.0000	**0.0000**
Aldh7a1	0.0000	0.3750	0.8410
Gsta1	0.0000	0.1040	**0.0000**
Gsta4	0.0000	0.0630	**0.0280**
Gstm1	0.0000	0.1680	**0.0270**
Gstm2	0.0000	0.2020	0.7300
Gstm3	0.0000	0.0000	**0.0050**
Gstm4	0.0000	0.2830	0.1370
Gstt1	0.0000	0.0040	0.2070
Sult1e1	0.0030	0.0010	**0.0000**
Sult5a1	0.0000	0.0030	**0.0010**
Papss2	0.0000	0.0000	**0.0000**
Ugt1a1	0.0000	0.0640	**0.0010**
Ugt1a6	0.0000	0.0000	**0.0000**
Ugt1a9	0.0000	0.0020	**0.0060**
Ugt2b34	0.0000	0.0000	**0.0040**
Ugt2b35	0.0000	0.0080	**0.0060**
Ugt2b36	0.0000	0.0160	**0.0050**
Oatp1a4	0.0000	0.0000	**0.0000**
Mrp2	0.0000	0.0000	0.1310
Mrp3	0.0000	0.4070	**0.0020**
Mrp4	0.0020	0.0000	**0.0000**
AhR	0.0000	0.0000	**0.0000**
CAR	0.0000	0.0000	**0.0000**
PXR	0.0000	0.0000	**0.0000**