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Table S1. The MRM parameters for LC/MS/MS

Name		Ionization mode	Precursor product (m/z)	Product (m/z)	Dwell time(ms)	Q1 pre bias (V)	CE	Q3 pre bias (V)
Acetaminophen glucuroninde	1	+	345	152	100	-18	-16	-23
	2	+	327.9	152.1	100	-17	-10	-13
	3	+	350	174.05	100	-18	-17	-15
Estradiol glucuronide		-	447.2	270.9	100	22	38	26

Table S2. Details of oligonucleotide primers used for cloning

Primer name	Sequence (5'→3')
UGT1A6_F (exon1)	TAGGTGACARGCTGCTGGTGGTCC
UGT1A6_R (exon1)	TCAAACACAAAGTCGTATYKTTAACAGCCA
UGT1A1_F (UTR+CDS)	TAGCAAAGRCARGRGMACCATGGC
UGT1A1_R_SSL_NFS (UTR)	TGGTTGCMACTTTGGGTCAYCTC
UGT1A1_R_CS (CDS)	TCAGTGTGCCTTGGATTTGTGAGRTTTC
UGT1A3_F (UTR)	GCTGCTTTGRGCTTCTAYRGAC
UGT1A3_R_SSL_NFS (CDS)	TCAGTGTGCCTTGGATTTGTGAGRTTTC
UGT1A3_R_CS (UTR)	GGTTGCMACTTTGGGTCAYCTC

SSL: Steller sea lion, NFS: Northern fur seal, CS: Caspian seal

Nucleotide nomenclatures follow the IUPAC nucleotide code.

Table S3. Accession number for UGT1A genes

Accession number	Species	Gene	Length (bp)	
LC015146	Steller sea lion	UGT1A1	1613	
LC015147	Northen fur seal	UGT1A1	1613	
LC015148	Caspian seal	UGT1A1	1569	
LC015149	Steller sea lion	UGT1A02	1574	
LC015150	Northen fur seal	UGT1A02	1574	
LC015151	Caspian seal	UGT1A02	1602	full-length sequence
LC015152	Steller sea lion	UGT1A6P	662	pseudogene
LC015153	Northen fur seal	UGT1A6P	662	pseudogene
LC015154	Caspian seal	UGT1A6	659	

Table S4. UGT1A genes used in phylogenetic analysis

Species	Scientific name	Gene name	Accession number
marbled flounder	*Pleuronectes yokohamae*	UGT1B1	AJ249081
		UGT1B2	AB120133
human	*Homo sapiens*	UGT1A1	NM000463
		UGT1A3	NM019093
		UGT1A4	NM007120
		UGT1A5	NM019078
		UGT1A6	AY435141
		UGT1A7	NM019077
		UGT1A8	NM019076
		UGT1A9	NM021027
		UGT1A10	NM019075
		UGT2A1	NM006798
		UGT2B4	NM021139
rat	*Rattus norvegicus*	Ugt1a1	NM012683
		Ugt1a2	NM201423
		Ugt1a3	NM201424
		Ugt1a5	NM001039549
		Ugt1a6	NM001039691
		UGT1A7	U75903
		Ugt1a8	NM175846
		Ugt1a9	NM201425
dog	*Canis lupus familiaris*	UGT1A6	NM001003078
		UGT1A6 transcript variant X1	XM005635599
		UGT1A6 transcript variant X2	XM 005635600
		UGT1-8-like (LOC100688543)	XM003433328
		UGT1-9-like (LOC100688622)	XM005635896
		UGT1-9-like (LOC100688763)	XM003433330
cat	*Felis catus*	UGT1A1	NM001009359
		UGT1A02	AF039138
ferret	*Mustela putorius furo*	UGT1A1	XM004812194
		UGT1A3	XM004812192
		UGT1A3 transcript variant X2	XM004812195
		UGT1A8	XM004828388
Pacific walrus	*Odobenus rosmarus divergens*	UGT1A3 transcript variant 1	XM004396069
		UGT1A3 transcript variant 2	XM004396070
		UGT1A10	XM004417828