

## SUPPORTING INFORMATION

### I. Supplementary Methods

**I3S purity assessment.** The purity of the compound was determined by HPLC using a Waters LC system with a Beckmann Ultrasphere C18 column (250mm x 4.6 mm, 5 $\mu$ m) equipped with PDA detector. The mobile phase consisted of 5 mmol of tetrabutyl ammonium phosphate in methanol/water (30/70) with flow rate of 1.0 ml/min. A UV spectrum at 279 nm was extracted from the PDA data during HPLC analysis. <sup>1</sup>H-NMR and <sup>13</sup>C-NMR spectra were measured on a Bruker Avance II 500 MHz or 600 MHz instrument at 300°K. Chemical shifts were reported in parts per million ( $\delta$ ) relative to the internal standard of tetramethylsilane (TMS). The signals observed were described as follows: s (singlet), d (doublet), t (triplet).

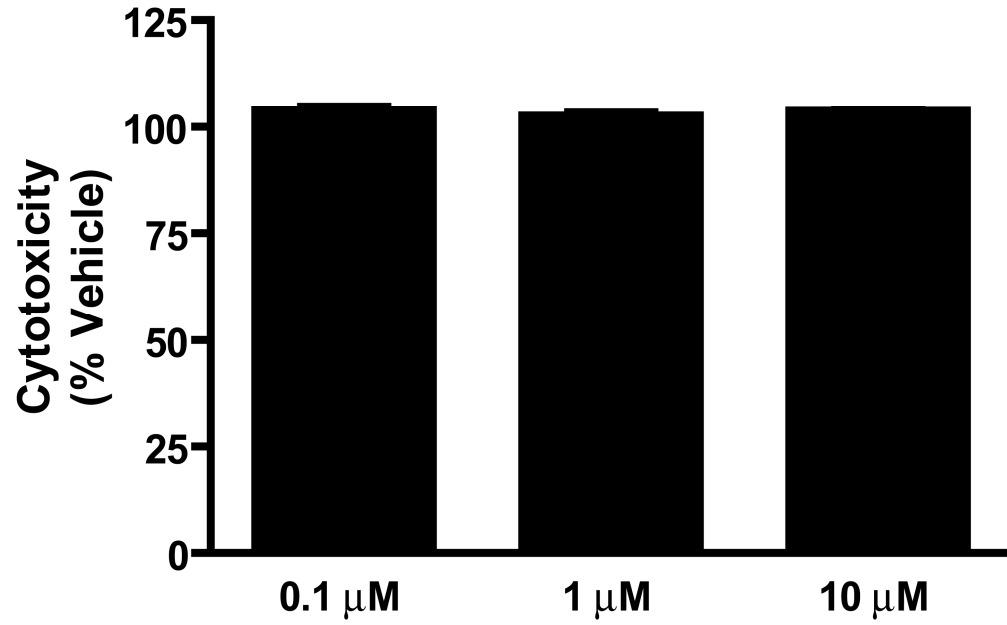
The indoxyl sulfate was determined to be pure based on the single peak observed at  $R_t=21.7$  min. by HPLC analysis. No other peaks were detected. The <sup>1</sup>H-NMR (CD<sub>3</sub>OD)  $\delta$  7.01 (t, 1H, J=7.49Hz, H<sub>5</sub>), 7.09 (t, 1H, J=7.59Hz, H<sub>6</sub>), 7.20 (s, 1H, H<sub>2</sub>), 7.30 (d, 1H, J=8.18Hz, H<sub>7</sub>), 7.67 (d, 1H, J=7.95Hz, H<sub>4</sub>). The <sup>13</sup>C-NMR (150 MHz, CD<sub>3</sub>OD)  $\delta$  110.92 (C-7), 114.23 (C-2), 117.52 (C-4), 118.50 (C-5), 121.11 (C-4a), 121.27 (C-6), 131.17 (C-3), 133.74 (C-7a). The spectra data confirm the compound as indoxyl sulfate with more than 99.9% purity.

**Cytotoxicity assays.** Huh7 cells were seeded into 96-well plates at  $2 \times 10^3$  cell/well. Following overnight culture, cells were incubated with either vehicle (DMSO) or increasing concentrations of indoxyl-3-sulphate for 48 h. Cytotoxicity was assessed using the lactate dehydrogenase-based TOX-7 kit (Promega, Madison, WI) following the manufacturer's instructions. Cytotoxicity was determined by calculating the ratio of released LDH activity/total (cellular and released) LDH activity.

## II. Supplementary Table S1

**Table S1.** Primers for Real-Time PCR

Gene	Forward (5'→3')	Reverse (5'→3')
CYP1A1	TCTTCCTTCGTCCCCTTCAC	TGGTTGATCTGCCACTGGTT
CYP1A2	GGGCACTTCGACCCTTACAA	GCACATGGCACCAATGACG
CYP1B1	TGCCTGTCACTATTCCTCATGC CA	ATCAAAGTTCTCCGGGTTAGGCCA
UGT1A1	AACTTTCTGTGCGACGTGGTT	GTCACCTCTCTCTGAAGGAATTCTG
UGT1A6	AGCCCAGACCCTGTGTCCTA	CCACTCGTTGGGAAAAAGTCA
IL-6	AAATTCGGTACATCCTCGACGG CA	AGTGCCTCTTTGCTGCTTTCACAC
SAA1	AGGCTCAGACAAATACTTCCAT GC	TCTCTGGCATCGCTGATCACTTCT
L13a	CCTGGAGGAGAAGAGGAAAGA GA	GAGGACCTCTGTGTATTTGTCAA



**Supporting Figure S1.** Indoxyl-3-sulphate is not cytotoxic to hepatoma cells. Huh7 cells were incubated for 48 h with increasing concentrations of indoxyl-3-sulphate, as indicated. Cytotoxicity was assessed by measuring LDH release. Data represents percentage cytotoxicity  $\pm$  SEM relative to vehicle-treated.