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Supplemental Material

Transfer and Metabolism of the Xenoestrogen Zearalenone in Human Perfused Placenta

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Figure S2. Perfusion profiles and fetal-maternal ratios (FM ratio) of β -zearalenol (β -ZEL) and zearalanone (ZAN). β -ZEL and ZAN, present as contaminants in ZEN (around 1%; 3 $\mu\text{g/L}$), were measured from the maternal and fetal perfusates by UPLC-MS/MS at several time points during 6 h of perfusion with 318 $\mu\text{g/L}$ ZEN. FM ratios were calculated for each time point and FM ratios of antipyrine and creatinine were added for comparison. Data represent mean \pm SD of three independent placentae perfused with medium containing ZEN. $p < 0.05$ is considered statistically significant (* denotes differences between maternal and fetal concentrations in β -ZEL or ZAN perfusions; # and \$ denote differences in the FM ratio between metabolites and antipyrine or metabolites and creatinine, respectively). Perfusion data comparing maternal and fetal concentrations were analyzed by unpaired Student's t-test.

Excel Table S1. Concentrations of measured analytes in perfusion medium [$\mu\text{g/L}$].

Perfusions without ZEN (C1-3), perfusions with addition of ZEN (ZEN1-3).

Additional File- SupplementalMaterial_Data.zip

Table S1 calculated recoveries \pm standard deviation [%] in the three investigated matrices obtained from spiking experiments

	placental tissue	fetal plasma	perfusion medium
α -ZAL	95 \pm 8	98 \pm 7	91 \pm 15
α -ZEL	84 \pm 12	91 \pm 3	94 \pm 10
α -ZEL-14-GlcA	91 \pm 5	96 \pm 3	108 \pm 7
β -ZAL	95 \pm 6	95 \pm 8	77 \pm 26
β -ZEL	93 \pm 11	99 \pm 15	74 \pm 22
β -ZEL-14-GlcA	97 \pm 1	88 \pm 11	112 \pm 12
ZAN	84 \pm 11	95 \pm 2	87 \pm 4
ZEN	88 \pm 2	89 \pm 11	100 \pm 13
ZEN-14-GlcA	92 \pm 10	82 \pm 4	96 \pm 12
ZEN-14-Sulf	89 \pm 2	90 \pm 1	97 \pm 3

α -zearalanol (α -ZAL); α -zearalenol (α -ZEL); α -zearalenol-14-glucuronide (α -ZEL-14-GlcA); β -zearalanol (β -ZAL); β -zearalenol (β -ZEL); β -zearalenol-14-glucuronide (β -ZEL-14-GlcA); zearalanone (ZAN); zearalenone (ZEN); zearalenone-14-glucuronide (ZEN-14-GlcA); zearalenone-14-sulfate (ZEN-14-Sulf)

Table S2 Impurities of added ZEN (experiment 1-3)

	β -ZEL [%]	ZAN [%]
ZEN1	1.40	1.05
ZEN2	1.09	1.04
ZEN3	1.48	0.95
Mean \pm SD	1.32 \pm 0.2	1.01 \pm 0.05

β -zearalenol (β -ZEL); zearalanone (ZAN)

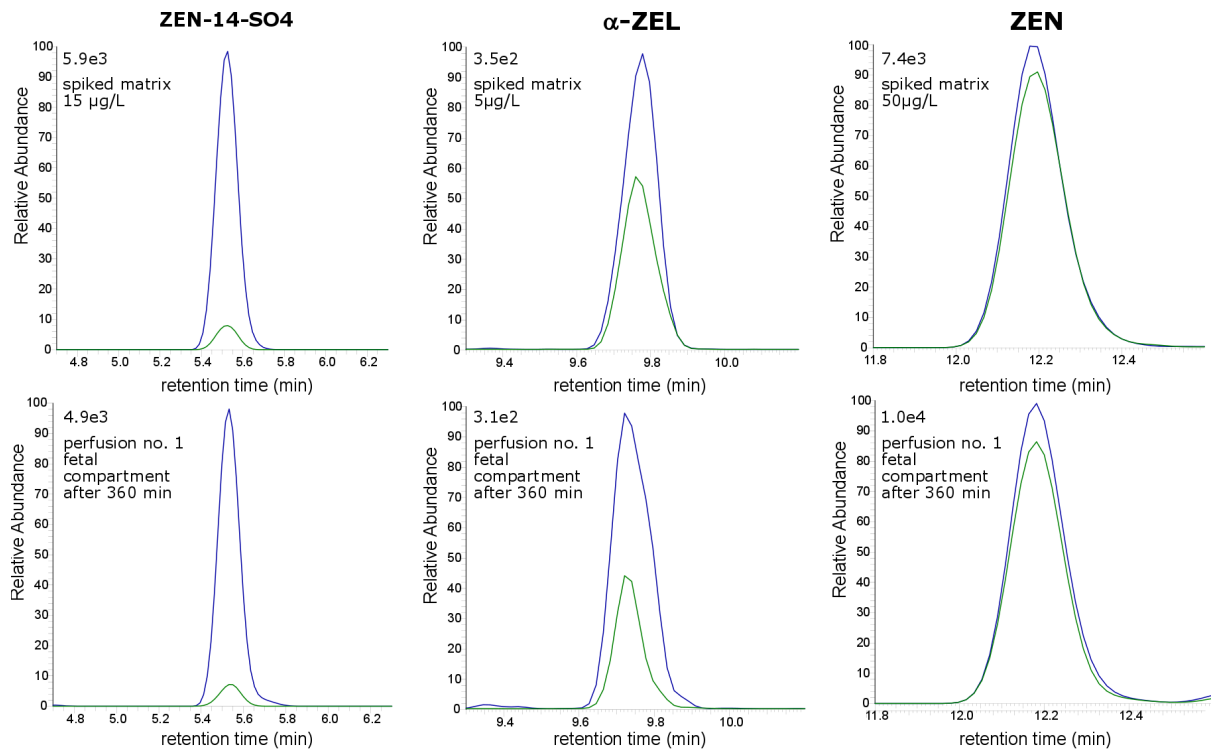


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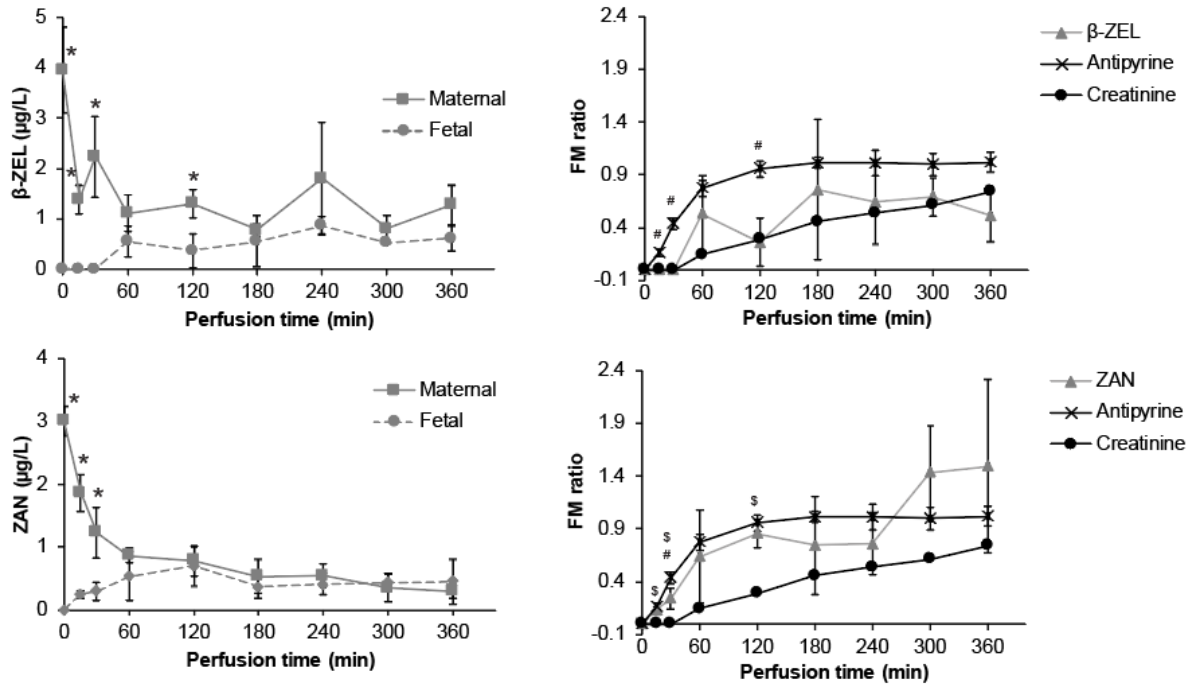


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