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### **Supplemental Material**

#### **Transfer and Metabolism of the Xenoestrogen Zearalenone in Human Perfused Placenta**

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**Table S1.** Calculated recoveries  $\pm$  standard deviation [%] in the three investigated matrices obtained from spiking experiments.

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

**Figure S1.** MRM (multiple reaction monitoring) chromatograms of reference standards spiked into blank medium and a fetal medium sample after 360 minutes; quantifier transitions in blue: zearalenone-14-sulfate (ZEN-14-Sulf)  $m/z$  397.1  $\rightarrow$  317.2;  $\alpha$ -zearalenol ( $\alpha$ -ZEL)  $m/z$  319.2  $\rightarrow$  275.2; zearalenone (ZEN)  $m/z$  317  $\rightarrow$  175; qualifier transition in green: ZEN-14-Sulf  $m/z$  397.1  $\rightarrow$  175.1;  $\alpha$ -ZEL  $m/z$  319.2  $\rightarrow$  160.1; ZEN  $m/z$  317  $\rightarrow$  131.

**Figure S2.** Perfusion profiles and fetal-maternal ratios (FM ratio) of  $\beta$ -zearalenol ( $\beta$ -ZEL) and zearalanone (ZAN).  $\beta$ -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  $\beta$ -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