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### **Supplemental Material**

#### **Oral Systemic Bioavailability of Bisphenol A and Bisphenol S in Pigs**

Véronique Gayraud, Marlène Z. Lacroix, Flore C. Grandin, Séverine H. Collet, Hanna Mila, Catherine Viguié, Clémence A. Gély, Blandine Rabozzi, Michèle Bouchard, Roger Léandri, Pierre-Louis Toutain, and Nicole Picard-Hagen

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**Figure S2. Diagnostic plots of the population and individual model predicted vs observed BPS and BPSG plasma concentrations.** A1 and B1: Population predicted vs. observed BPS plasma concentrations ( $\mu\text{M}$ ) after respective BPS IV (A1) and oral administrations (B1); C1 and D1: Population predicted vs. observed BPSG plasma concentrations ( $\mu\text{M}$ ) after respective IV administrations of BPS (C1) and BPSG (D1); A2 and B2: Individual predicted vs. observed BPS plasma concentrations ( $\mu\text{M}$ ) after respective BPS IV (A2) and oral administrations (B2); C2 and D2: Individual predicted vs. observed BPSG plasma concentrations ( $\mu\text{M}$ ) after respective IV administrations of BPS (C2) and BPSG (D2).

**Figure S3. Diagnostic plots of the population and individual model predicted vs observed cumulative amounts of BPA and BPAG excreted in urine.** A1 and B1: Population predicted vs. observed cumulative amounts ( $\mu\text{moles/kg}$ ) of BPA (A1) and BPAG (B1) excreted in urine after BPA IV administration; C1: Population predicted vs. observed cumulative amounts of BPAG excreted in urine after BPA oral administration; A2 and B2: Individual predicted vs. observed cumulative amounts of BPA (A2) and BPAG (B2) excreted in urine after BPA IV administration; C2: Individual predicted vs. observed cumulative amounts of BPAG excreted in urine after BPA oral administration.

**Figure S4. Diagnostic plots of the population and individual model predicted vs observed cumulative amounts of BPS and BPSG excreted in urine after IV dosing.** A1 and B1: Population predicted vs. observed cumulative amounts ( $\mu\text{moles/kg}$ ) of BPS (A1) and BPSG (B1) excreted in urine after BPS IV administration; C1: Population predicted vs. observed cumulative amounts ( $\mu\text{moles/kg}$ ) of BPSG excreted in urine after BPSG IV administration; A2 and B2: Individual predicted vs. observed cumulative amounts ( $\mu\text{moles/kg}$ ) of BPS (A2) and BPSG (B2) excreted in urine after BPS IV administration; C2: Individual predicted vs. observed cumulative amounts ( $\mu\text{moles/kg}$ ) of BPSG excreted in urine after IV BPSG administration.

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**Figure S6. Visual Predictive Check (VPC) of plasma BPA and BPAG concentrations obtained with 200 replicates of each animal.** A and B: Plasma BPA concentrations ( $\mu\text{M}$ ) after respective BPA IV (A) and oral administrations. C and D: Plasma BPAG concentrations ( $\mu\text{M}$ ) after respective BPA IV (C) and oral administrations (D) Red lines: observed quantiles (20, 50 and 80%); Black lines: predicted quantiles by Monte Carlo Simulation (20, 50 and 80%); Black symbols: observed data. When the model ideally predicts the data, the observed and predicted quantiles are expected to be superimposed.

**Figure S7. Visual Predictive Check (VPC) of the amounts of BPA and BPAG excreted in urine obtained with 200 replicates of each animal.** A: Amounts of BPA excreted in urine ( $\mu\text{M}$ ) after BPA IV administration; B and C: Amounts of BPAG excreted in urine ( $\mu\text{M}$ ) after respective BPA IV and oral administrations. Red lines: observed quantiles (20, 50 and 80%); Black lines: predicted quantiles by Monte Carlo Simulation (20, 50 and 80%); Black symbols: observed data. When the model ideally predicts the data, the observed and predicted quantiles are expected to be superimposed.

**Figure S8. Visual Predictive Check (VPC) of plasma BPS and BPSG concentrations obtained with 1000 replicates of each animal.** A and B: Plasma BPS concentrations ( $\mu\text{M}$ ) after respective BPS IV (A) and oral administrations. C and D: Plasma BPSG concentrations ( $\mu\text{M}$ ) after respective IV BPSG (C) and BPS administrations (D). Red lines: observed quantiles (20, 50 and 80%); Black lines: predicted quantiles by Monte Carlo Simulation (20, 50 and 80%); Black symbols: observed data. When the model ideally predicts the data, the observed and predicted quantiles are expected to be superimposed.

**Figure S9. Visual Predictive Check (VPC) of the amounts of BPS and BPSG excreted in urine obtained with 1000 replicates of each animal.** A and B: Amounts of BPS excreted in urine ( $\mu\text{M}$ ) after respective BPS IV (A) and oral (B) administrations; C and D: Amounts of BPSG excreted in urine ( $\mu\text{M}$ ) after respective BPS IV (C) and oral (D) administrations. E: Amounts of BPSG excreted in urine ( $\mu\text{M}$ ) after BPSG IV administration. Red lines: observed quantiles (20, 50 and 80%); Black lines: predicted quantiles by Monte Carlo Simulation (20, 50 and 80%); Black symbols: observed data. When the model ideally predicts the data, the observed and predicted quantiles are expected to be superimposed.