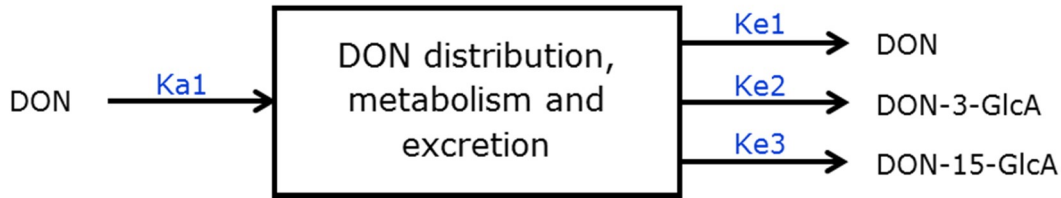
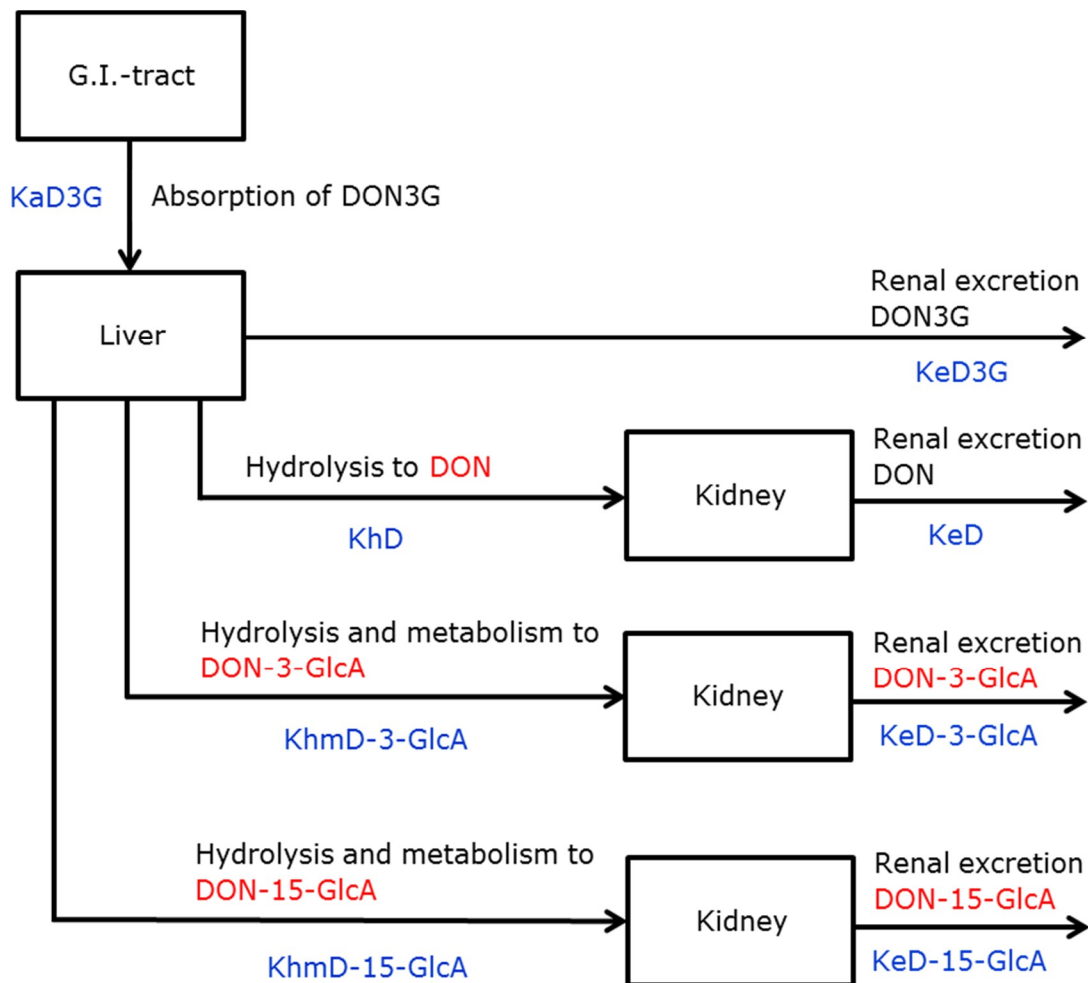


# Supplementary Materials: Biomonitoring of Deoxynivalenol and Deoxynivalenol-3-glucoside in Human Volunteers: Renal Excretion Profiles

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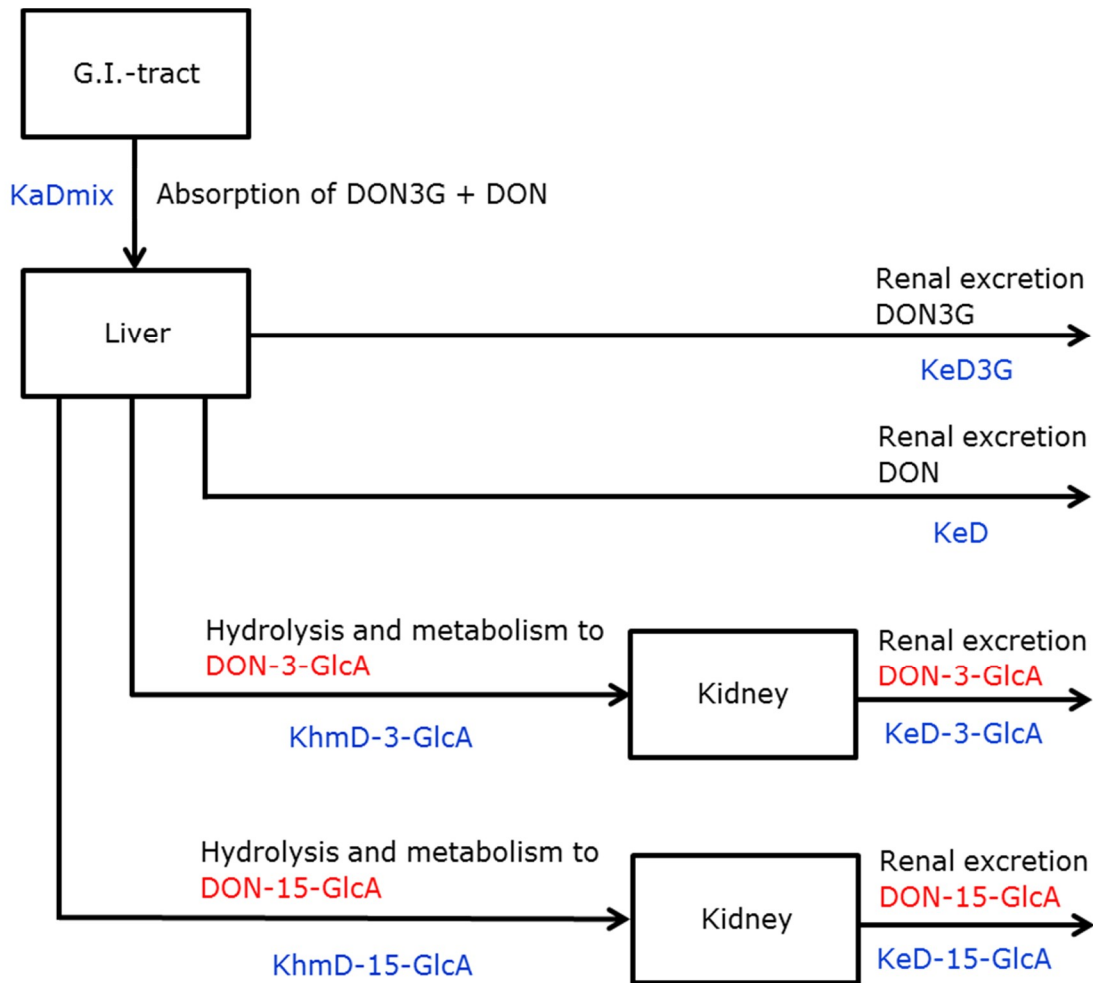


**Figure S1.** Model A: one-compartment model for the excretion of DON and two glucuronides. DON = deoxynivalenol, DON-GlcA= DON-Glucuronide,  $K_{a1}$  = absorption rate constant of DON,  $K_{e1}$  = elimination rate constant of DON,  $K_{e2}$  = elimination rate constant of DON-3-GlcA,  $K_{e3}$  = elimination rate constant of DON-15-GlcA. The elimination rate constants of the glucuronides are lumped parameters for the processes of metabolism and excretion.

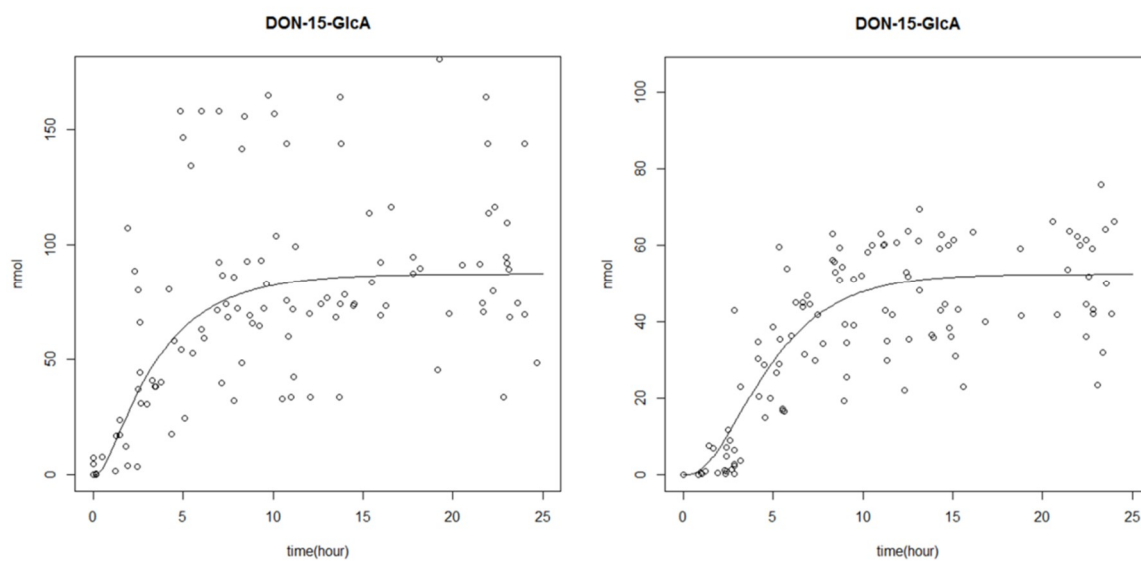


**Figure S2.** Model B: absorption of DON3G in the G.I.-tract and subsequent metabolism and excretion. DON3G = deoxynivalenol-3-glucoside, DON = deoxynivalenol, DON-GlcA= DON-Glucuronide,  $K_{aD3G}$  = absorption rate constant of DON3G,  $K_{eD3G}$  = excretion rate constant

of DON3G,  $K_hD$  = hydrolysis rate constant of DON,  $K_eD$  = excretion rate constant of DON,  $K_{hmD-3-GlcA}$  = lumped (hydrolysis & metabolism) rate constant of DON-3-GlcA,  $K_{eD-3-GlcA}$  = excretion rate constant of DON-3-GlcA,  $K_{hmD-15-GlcA}$  = lumped (hydrolysis and metabolism) rate constant of DON-15-GlcA,  $K_{eD-15-GlcA}$  = excretion rate constant of DON-15-GlcA.



**Figure S3.** Model C: absorption of a mixture of DON3G and DON in the G.I.-tract and subsequent metabolism and excretion. DON3G = deoxynivalenol-3-glucoside, DON = deoxynivalenol, DON-GlcA= DON-Glucuronide,  $K_{aDmix}$  = absorption rate constant of a mixture of DON3G and DON,  $K_{eD3G}$  = excretion rate constant of DON3G,  $K_{eD}$  = excretion rate constant of DON,  $K_{hmD-3-GlcA}$  = lumped (hydrolysis & metabolism) rate constant of DON-3-GlcA,  $K_{eD-3-GlcA}$  = excretion rate constant of DON-3-GlcA,  $K_{hmD-15-GlcA}$  = lumped (hydrolysis and metabolism) rate constant of DON-15-GlcA,  $K_{eD-15-GlcA}$  = excretion rate constant of DON-15-GlcA.



**Figure S4.** The actual cumulative amounts (in nmol) of DON-15-GlcA in all individuals and the best model fit after single, oral administration of DON (Figure S4.1, left plot) or DON3G (Figure S4.2, right plot).