S1 Table. Parameter estimates of the model with biological prior

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| **Parameters** | **Estimates (RSE%) [Shrinkage%]** |
| Typical value of clearance $(TVCL, L/h)$  | 6.94 (18%) |
| Typical value of central volume $(TVV\_{c}, L)$  | 88 (53%) |
| Typical value of intercompartmental clearance ($TVQ, L/h)$ | 13.7 (14%) |
| Typical value of peripheral volume ($TVV\_{p}, L$) | 344 (14%) |
| Absorption rate constant ($TVk\_{a}, 1/h$)  | 0.5 fixed |
| Exponent for body weight on clearance ($θ\_{WT,CL}$) | 0.75 fixed  |
| Exponent for body weight on central volume ($θ\_{WT,Vc}$)  | 1 fixed |
| Exponent for body weight on clearance ($θ\_{WT,Q}$) | 0.75 fixed |
| Exponent for body weight on central volume ($θ\_{WT,Vp}$)  | 1 fixed |
| Between subject variability (%CV)CLVcQVpCorrelation (CL, Vc)Correlation (CL, Q)Correlation (CL, Vp)Correlation (Vc, Q)Correlation (Vc, Vp)Correlation (Q, Vp) |  54% (25%) [10%]  237.1% (36%) [18%] 40.8% (44%) [22%]38.9% (43%) [18%]-30%70%86.3%46.7%21.5%96.4% |
| Residual error$σ\_{additive}$ in log domain | 0.198 [41.8%] |

$σ\_{additive}$ – standard deviation of the additive component of the residual error