Physiologically Based Pharmacokinetic (PBPK)

Optimize Decision Making Throughout R&D with PBPK Predictions

When it comes to drug development, no one likes surprises. You want to have the right data and insights at your fingertips to make informed decisions throughout the R&D process. Physiologically based pharmacokinetic (PBPK) modeling and simulation can help you anticipate likely outcomes for different scenarios, optimize your drug for the results you want, potentially waive expensive studies, and more.

The GastroPlus® Platform Allows You to Model Your Drug's Behavior…

- Across a range of animal and human populations
- In a variety of disease states
- Via different administration routes
- In combination with other therapies
- + more

Our Experts Can Support You With…

- Clinical trial simulations to optimize efficacy outcomes and patient safety
- Using preclinical data to define dosing strategies for first in human (FIH) studies
- In silico screening of compound libraries based on PK endpoints
- Extrapolation of in vitro metabolism and transport data to in vivo values
- Generation of mechanistic in vitro-in vivo correlations for new formulation development
- Preclinical formulation assessment
- Population predictions for different disease states and age groups
- Virtual bioequivalence (BE) trials to optimize study design
- Prediction of food effects
- Prediction of drug-drug interactions (DDI)
- Performance of nonlinear kinetic modeling for metabolism and carrier-mediated transport
- Prediction of tissue concentrations at the proposed site of action of a new drug
- Optimization of generic formulation designs
- + more