

Pave the Way for Safer, More Effective Treatments for Children

Developing safe and effective drugs for children is challenging. Plus, dosing must cater to a wide range of ages and sizes. Thanks to advancements in pharmacokinetic (PK) and pharmacodynamic (PD) modeling and simulation, pediatric drug development is seeing an important transformation.

Leverage Adult Clinical Trial Datas

Build your pediatric model leveraging adult clinical trial data to predict appropriate and optimal dosing using population PK/PD modeling.

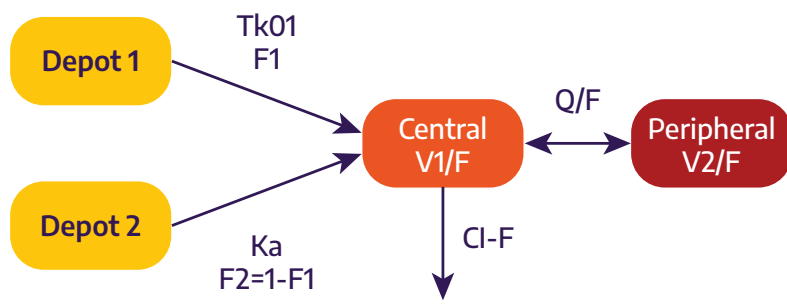
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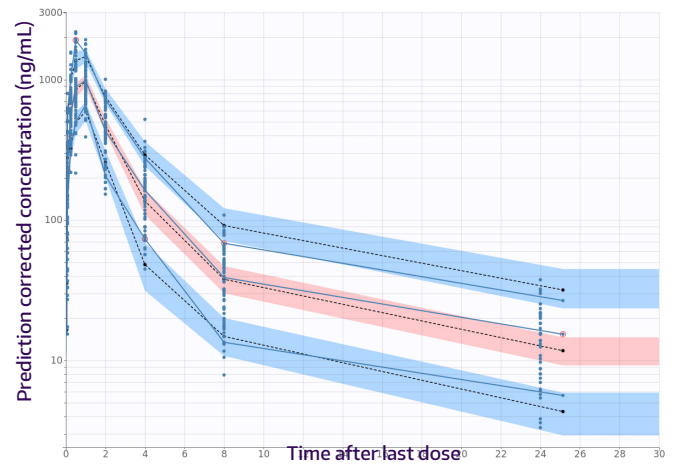
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Model and Simulate Adult Data and Extrapolate to Pediatric Subjects

Simulate the experimental dosing for pediatric populations from a validated population PK model.



Empirical population PK model framework



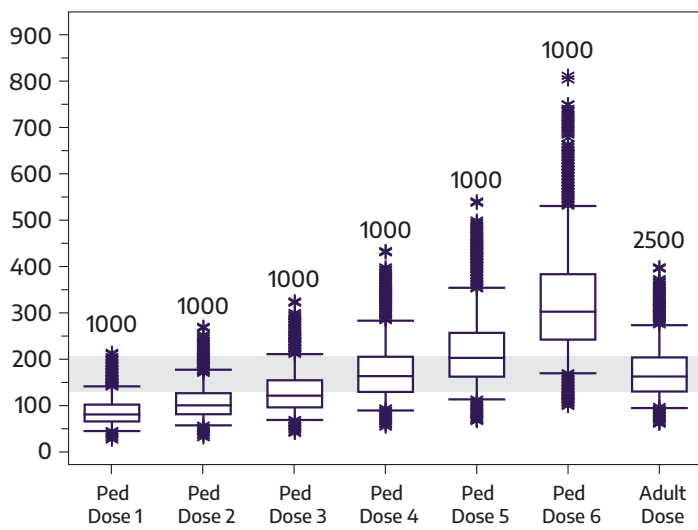
Plot 1: pcVPC of Population PK model where the 95th percentile is in upper blue, 50th percentile is in pink, and 5th percentile is in lower blue.

3

Predict Successful Dose In Pediatric Patients

Accelerate availability of life-changing medications while safeguarding pediatric patients from unnecessary exposure to experimental treatments

Simulated Pediatric Patients versus Observed Adult Patient AUC_{tau,ss}



Assess pediatric patients across several doses to match adult efficacious exposure, ensuring an optimized trial design

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Our Expertise

Allucent's extensive experience in pediatric populations and modeling and simulation informs what to test, delivers an optimized study, and ensures an efficient and cost-effective pediatric trial.

- PopPK/PD modeling
- Clinical trial simulations
- PK/PD extrapolation and allometric scaling
- PBPK to address enzyme maturation
- Pediatric Study/ Investigation Plans

Learn more about our expertise in PK/PD modeling and simulation for pediatric populations:

[Leveraging PK and PD Modeling in Drug Development to Improve Care for Children](#)

[Enabling Patient-Centric Drug Development: Opportunity for Clinical Pharmacology to Leverage Innovation and Advance Diversity and Inclusion in Clinical Trials](#)

[Fast-Tracking Drug Development: Role of Mechanistic PK/PD Modeling](#)

