Population Pharmacokinetic Modeling of Fosamprenavir in Pediatric HIV-Infected Patients

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ABSTRACT
Fosamprenavir (FPV) is an oral prodrug of amprenavir with demonstrated efficacy and safety in adults. A 48 Week Phase II, Open-label, 2-cohort, Multi-center Study to Evaluate the PK, Safety, Tolerability, PK and Antiviral Activity of FPV/RTV QD and FPV/RTV BID when Administered to HIV-1 infected children 2 to 18 years of age was conducted. Disease characteristics were applicable across the entire age range for both boosted and unboosted FPV doses.

RESULTS
The datasets included 137 patients and 1322 plasma APV concentrations. The plasma elimination half-life of APV is approximately 7.7 hours; co-administration of CYP3A4 inhibitors and inducers can alter this value. Theophylline is a CYP3A4 substrate and may increase the bioavailability of APV.

Dosing Regimen Targeting Mean Adult AUC(0-24h) for FPV/RTV QD:

- Age <2: 72mg/kg;
- Age 2-6: 44mg/kg;
- Age >6: 17mg/kg;
- Max 700mg QD RTV+; Age <2: 72mg/kg; Age 2-6: 44mg/kg; Age >6: 17mg/kg; Max 700mg

Figure 4: Dosing Regimen Targeting Mean Adult AUC(0-24h) for FPV/RTV BID:

- Age <2: 36mg/kg;
- Age 2-6: 23mg/kg;
- Age >6: 18mg/kg;
- Max 700mg

Figure 5: Dosing Regimen Targeting Mean Adult AUC(0-24h) for FPV BID:

- Age <2: 45mg/kg;
- Age 2-6: 30mg/kg;
- Age >6: 22.5mg/kg; Max 700mg

Figure 6: Dosing Regimen Targeting Mean Adult AUC(0-24h) for FPV/RTV QD:

- Age <2: 72mg/kg;
- Age 2-6: 44mg/kg;
- Age >6: 17mg/kg;
- Max 700mg

Figure 7: Dosing Regimen Targeting Mean Adult AUC(0-24h) for FPV BID:

- Age <2: 45mg/kg;
- Age 2-6: 30mg/kg;
- Age >6: 22.5mg/kg; Max 700mg

REFERENCES
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