

"Towards a Generic Tool for Prediction of Meropenem Systemic and Infection-Site Exposure: A Physiologically Based Pharmacokinetic Model for Adult Patients with Pneumonia"

Journal: Drugs in R&D

Authors: Pauline Thémans, Pierre Marquet, Joseph J. Winkin, Flora T. Musuamba

Corresponding author: Flora T. Musuamba (INSERM UMR 1248, Université de Limoges, FHU support)

Email: Flora.MusuambaTshinanu@fagg-afmps.be

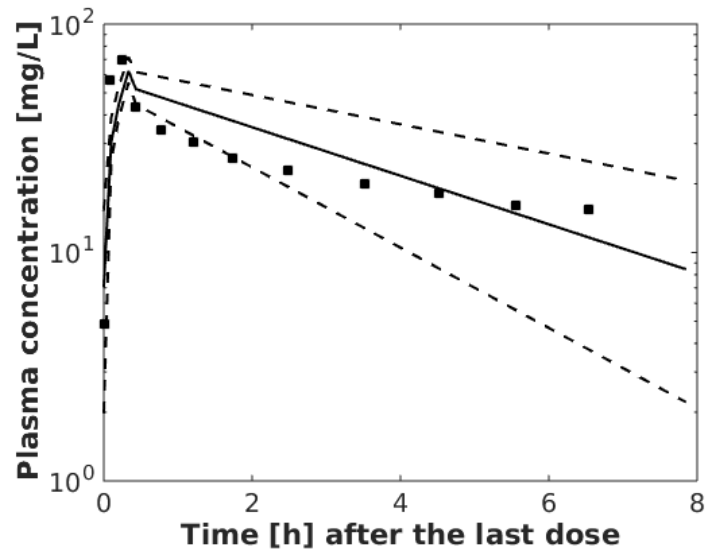


FIG. S-1 Simulated plasma PK profiles after two doses of 1 g over 20 minutes infusion every 8 hours for the patient 1 described in the Karjagin's article [11] (**WT=65 kg and $CL_{CR}=35$ mL/min**). Square points are the (digitized) observed plasma concentrations. GFR is approximated by CL_{CR} .

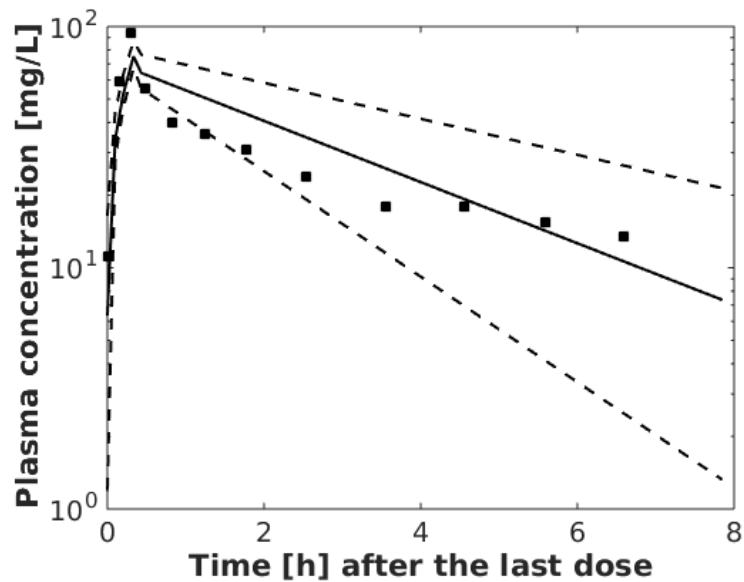


FIG. S- 2 Simulated plasma PK profiles after two doses of 1 g over 20 minutes infusion every 8 hours for the patient 2 described in the Karjagin's article [11] (**WT=50 kg and $CL_{CR}=30$ mL/min**). Square points are the (digitized) observed plasma concentrations. GFR is approximated by CL_{CR} .

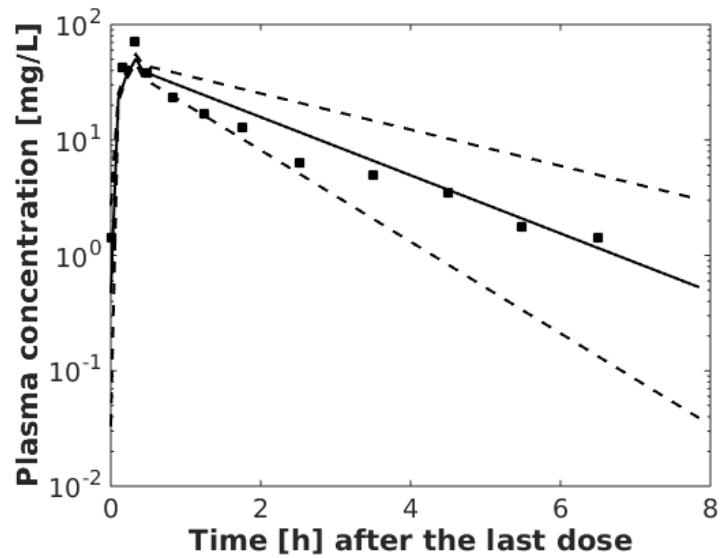


FIG. S- 3 Simulated plasma PK profiles after two doses of 1 g over 20 minutes infusion every 8 hours for the patient 5 described in the Karjagin's article [11] (**WT=67 kg and CL_{CR} =135 mL/min**). Square points are the (digitized) observed plasma concentrations. GFR is approximated by CL_{CR} .

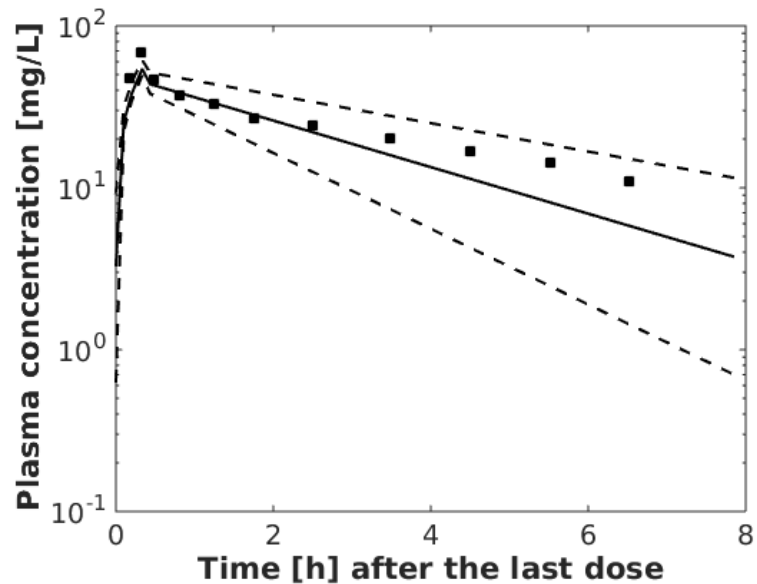


FIG. S- 4 Simulated plasma PK profiles after two doses of 1 g over 20 minutes infusion every 8 hours for the patient 6 described in the Karjagin's article [11] (**WT=70 kg and CL_{CR} =61 mL/min**). Square points are the (digitized) observed plasma concentrations. GFR is approximated by CL_{CR} .

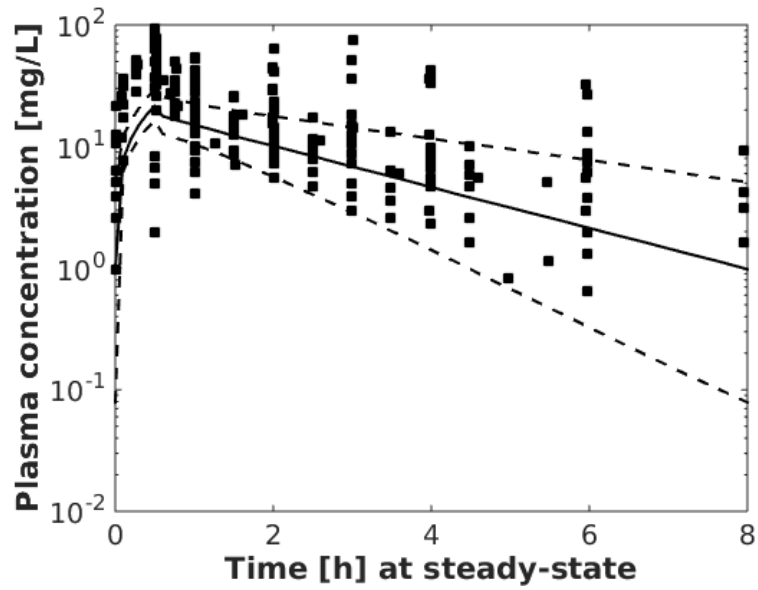


FIG. S- 5 Simulated plasma PK profiles (**0.5 g over a 30 minute infusion**, every 8 hours) for 1000 patients (from NHANES data bases and consistent with variable ranges described in the Li's article [8]). Square points are (digitized) observed plasma concentrations. GFR is computed with the MDRD formula.

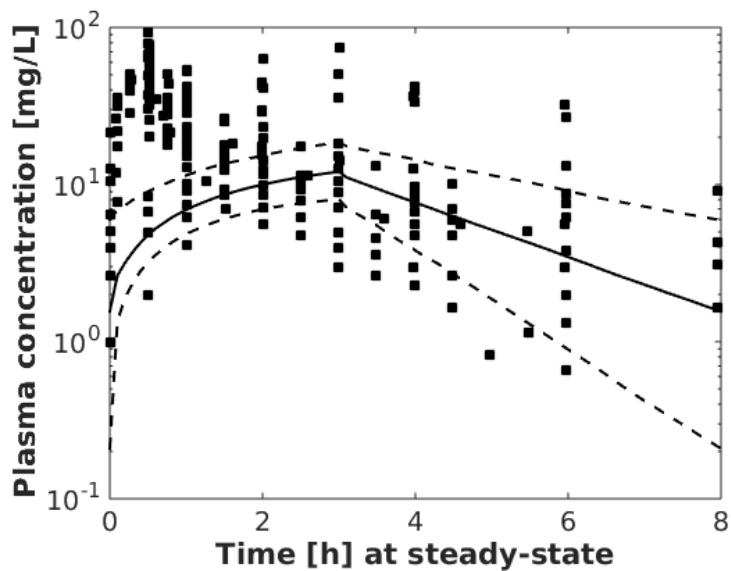


FIG. S- 6 Simulated plasma PK profiles (**0.5 g over a 3 hour infusion**, every 8 hours) for 1000 patients (from NHANES data bases and consistent with variable ranges described in the Li's article [8]). Square points are (digitized) observed plasma concentrations. GFR is computed with the MDRD formula.

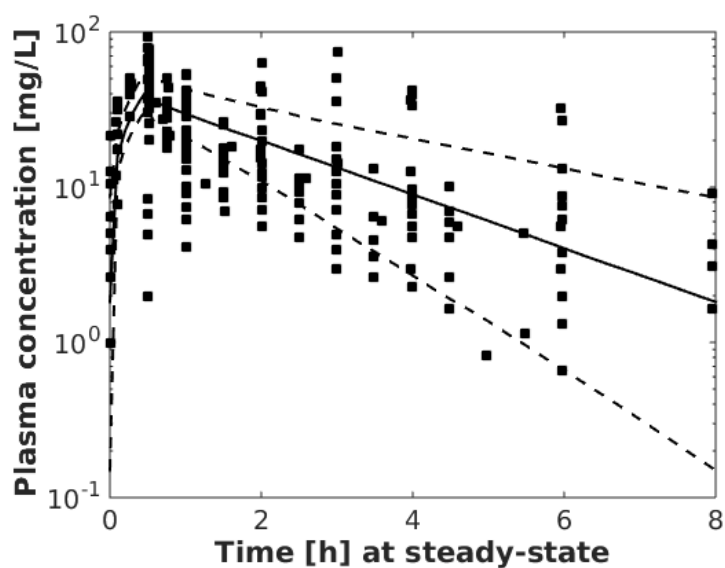


Fig. S- 7 Simulated plasma PK profiles (1 g over a 30 minute infusion, every 8 hours) for 1000 patients (from NHANES data bases and consistent with variable ranges described in the Li's article [8]). Square points are (digitized) observed plasma concentrations. GFR is computed with the MDRD formula.

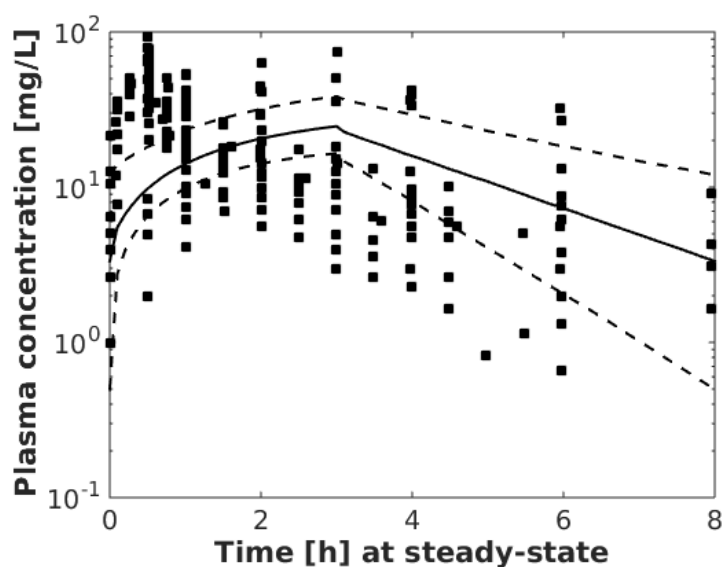


Fig. S- 8 Simulated plasma PK profiles (1 g over a 3 hour infusion, every 8 hours) for 1000 patients (from NHANES data bases and consistent with variable ranges described in the Li's article [8]). Square points are (digitized) observed plasma concentrations. GFR is computed with the MDRD formula.

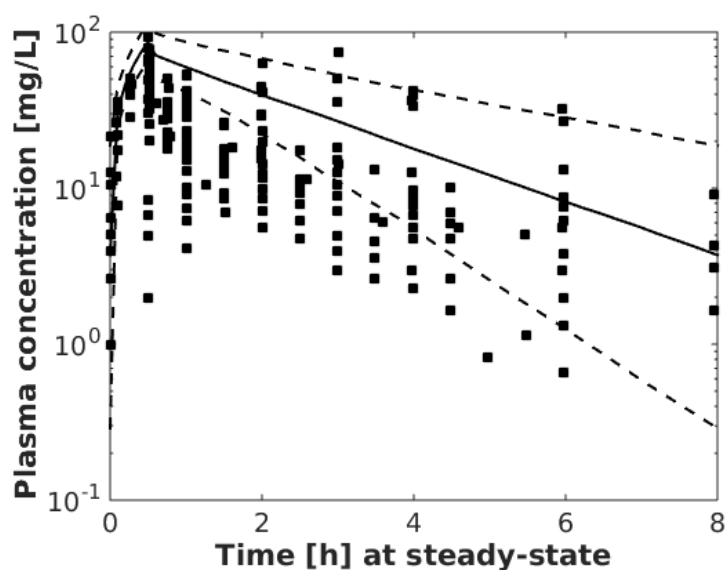


FIG. S- 9 Simulated plasma PK profiles (2 g over a 30 minute infusion, every 8 hours) for 1000 patients (from NHANES data bases and consistent with variable ranges described in the Li's article [8]). Square points are (digitized) observed plasma concentrations. GFR is computed with the MDRD formula.

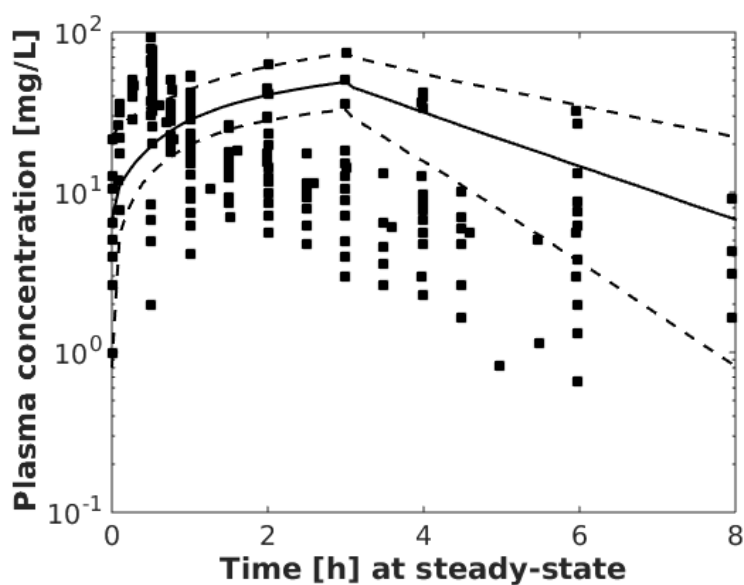


FIG. S- 10 Simulated plasma PK profiles (2 g over a 3 hour infusion, every 8 hours) for 1000 patients (from NHANES data bases and consistent with variable ranges described in the Li's article [8]). Square points are (digitized) observed plasma concentrations. GFR is computed with the MDRD formula.

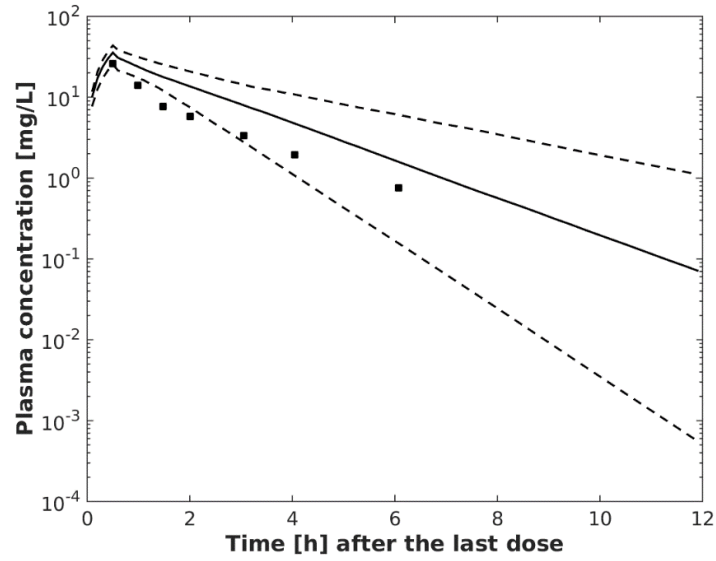


FIG. S- 11 Simulated plasma PK profiles after one dose of 0.5 g over a 30 minute infusion for four of the patients described in the Chimata's article [18] ($CL_{CR} \geq 50 \text{ mL/min}$). Square points are the observed plasma concentrations in the three groups. GFR is approximated by CL_{CR} .

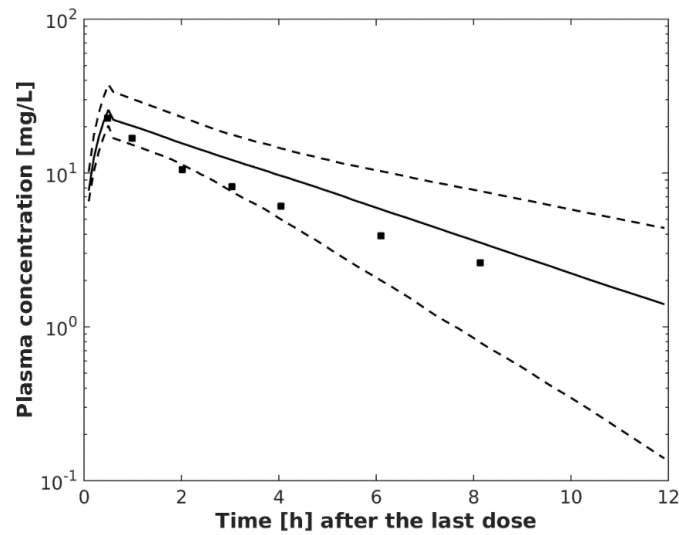


FIG. S- 12 Simulated plasma PK profiles after one dose of 0.5 g over a 30 minute infusion for four of the patients described in the Chimata's article [18] ($30 \text{ mL/min} \leq CL_{CR} \leq 50 \text{ mL/min}$). Square points are the observed plasma concentrations in the three groups. GFR is approximated by CL_{CR} .

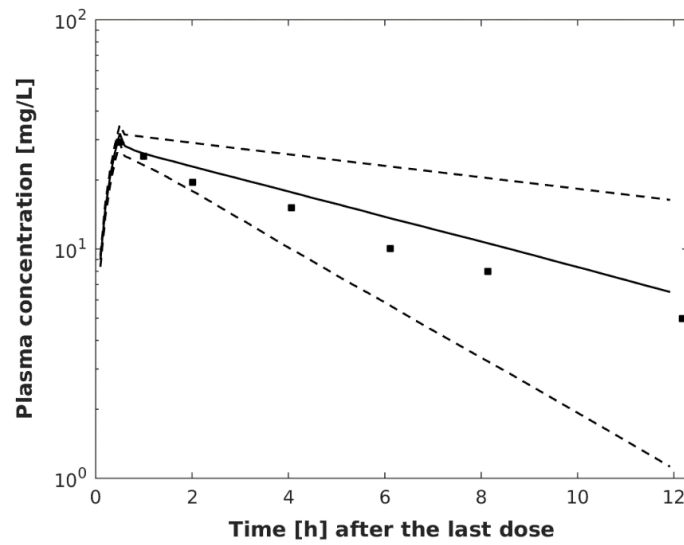


Fig. S- 13 Simulated plasma PK profiles after one dose of 0.5 g over a 30 minute infusion for four of the patients described in the Chimata's article [18] ($CL_{CR} \leq 30 \text{ mL/min}$). Square points are the observed plasma concentrations in the three groups. GFR is approximated by CL_{CR} .