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Physiologically based pharmacokinetic modeling (PBPK) course

Time and location
October 20-21, 2020
University of Eastern Finland (UEF), Kuopio Campus, Tietoteknia building, auditorium
Street address: Savilahdentie 6

Organizers
Dr. Eva Maria del Amo Paez, School of Pharmacy, UEF, eva.delamo@uef.fi
Dr. Veli-Pekka Ranta, School of Pharmacy, UEF, veli-pekka.ranta@uef.fi,
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Principal teachers
Professor Leon Aarons, University of Manchester, United Kingdom
Dr. Adam Darwich, KTH Royal Institute of Technology, Sweden

Language
English

Course description
The aim is to give an overview of physiologically based pharmacokinetic modeling (PBPK). The lectures cover both the basic theory and several applications, including inter-species scaling from animals to human, modeling of drug-drug interactions, and pharmacokinetics in special patient groups. In addition, hands-on calculation sessions with PK Sim software (freeware) are included.

Target group, course fee and registration
The course is intended for post-graduate students and senior scientists in pharmacy, drug discovery & development, clinical research, and toxicology in Finland and abroad:

- The course is free (including lunches and buffet dinner) for all participants from academy.
- Participants from industry and regulatory agents are welcome, but one representative from each institution is advised to contact Veli-Pekka Ranta before registration.
- Undergraduate students with an adequate training in pharmacokinetics may also attend the course, but unfortunately, we cannot provide lunches and buffet dinner for undergraduate students from UEF.

The registration form is here:
https://elomake.uef.fi/lomakkeet/25426/lomake.html

Accommodation
Hotel Scandic Atlas is located conveniently beside the market place and it offers special prices for the participants in the period of October 19-22, 2020:
a single room 115 EUR/night, and a double room 135 EUR/night.
The reservation code is **BITA191020**, and the reservation can be made via www.scandichotels.fi or by phone call or email to the hotel. Please notice that the special price is valid for those reservations that are made before October 5, 2020, and the number of rooms is limited.
There are also several other hotels in the center of Kuopio.

Credits, course material and software

The course is equivalent to **1.0 ECTS-credit point** for the 2-day course, or total **2.0 ECTS-credit points** when the participant solves voluntary pre- and post-course modeling exercises. Each participant is expected to bring the personal laptop, and install PK Sim software before the course. However, it is possible to work as a pair. Course material and instructions for software installation will be emailed to the participants two weeks before the course.

Funding

Nordic POP consortium via School of Pharmacy, University of Eastern Finland
University of Eastern Finland, Faculty of Health Sciences
University of Helsinki, Doctoral programme in Drug Research

Preliminary course schedule

First workshop day 20.10.2010

9.00-	**Registration**
10.00-10.45	**Introduction to PBPK modeling** *Leon Aarons*
10.45-11.00	**Break**
11.00-12.00	**PBPK theory: Perfusion- and permeability-limited drug distribution** *Leon Aarons*
12.00-13.00	**Lunch**
13.00-14.15	**PBPK theory:** **Hepatic and renal elimination, and** **Compilation of a whole-body PBPK model for intravenous administration** *Leon Aarons*
14.15-14.30	**Break**
14.30-18.00	**Hands-on 1 with PK Sim** *Leon Aarons, Adam Darwich, Eva del Amo and Veli-Pekka Ranta* Coffee will be served 15.15-15.45
19-	**Course buffet dinner in hotel Scandic Atlas** (beside the market place)

Second workshop day 21.10.2020

8.30-9.40	**PBPK theory:** **Defining dissolution and absorption from gut for per oral administration, and Basics of drug-drug interactions** *Leon Aarons*
9.40-10.00	**Break**
10.00-12.00	**Hands-on 2 with PK Sim** *Leon Aarons, Adam Darwich, Eva del Amo and Veli-Pekka Ranta*
12.00-13.00	**Lunch**

Applications of PBPK

13.00-13.45	**Janne Backman** (University of Helsinki): PBPK modeling of drug-drug interactions
13.45-14.30	**Adam Darwich** (KTH, Stockholm, Sweden): Topic open
14.30-14.50	**Break**
14.50-15.35	**Aki Heikkinen** (Admescope): Prediction of human PK with PBPK modeling prior to First-In-Man study
15.35-15.45	**Marko Lamminsalo** (UEF): Virtual 3-dimensional pharmacokinetic eye
15.45-16.00	**Closing the course** *Leon Aarons, Adam Darwich, Eva del Amo and Veli-Pekka Ranta*