Courses on
Population pharmacokinetic modeling (PopPK) (two days) and
Physiologically based pharmacokinetic modeling (PBPK) (two days)

Date and location
PopPK course 22nd-23rd September 2026
PBPK course 24th-25th September 2026

Fabianinkatu 33, University of Helsinki main building, Helsinki.

Organizers
Dr. Sina Bahrpeyma, School of Pharmacy, University of Eastern Finland (sina.bahrpeyma@uef.fi)
Dr. Eva del Amo, School of Pharmacy, University of Eastern Finland (eva.delamo@uef.fi)
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Dr. Heidi Kidron, Faculty of Pharmacy, University of Helsinki
Dr. Feng Deng, Department of Clinical Pharmacology, Faculty of Medicine, University of Helsinki
Dr. Anne Filppula, Pharmacy, Faculty of Science and Engineering, Åbo Akademi University, and Department of Clinical Pharmacology, Faculty of Medicine, University of Helsinki
Dr. Veli-Pekka Ranta, School of Pharmacy, University of Eastern Finland

Principal Teachers

PopPK	Professor Andrew Hooker, Uppsala University, Sweden
	Professor Teijo Saari, University of Turku, Finland
PBPK	Professor Leon Aarons, University of Manchester, United Kingdom
	Associate professor Adam Darwich, KTH Royal Institute of Technology, Sweden

Language
English

Course description
Two separate courses will be organized. Participants may choose to attend either one of the courses or both.

1. Two-day course on PopPK
The general aim of the course is to give an overview of population pharmacokinetics and pharmacodynamics. The specific aims are:

A. To help the participants to interpret the results of population pharmacokinetic and pharmacodynamic studies and to apply the results in patient care.
B. To give the participants a practical view on the modeling process in population pharmacokinetics via hands-on modeling exercises with MonolixSuite software (license code will be provided for the course), including pharmacogenetics and allometric relationships.

2. Two-day course on PBPK
The aim is to give an overview of physiologically based pharmacokinetic modeling (PBPK). The lectures cover both the basic theory and several applications, including in vitro in vivo extrapolation (IVIVE), modeling of drug-drug interactions, and pharmacogenetics. In addition, hands-on calculation sessions with PK-Sim software (free software) are included.

Target group and course fees

The courses are intended for post-graduate students and post-doctoral scientists in pharmacy, drug discovery & development, clinical and biomedical research, and toxicology in Finland and abroad.

The course fee for a single 2-day course includes coffee/tea breaks, lunches, and a buffet dinner:

- Doctoral students and postdocs from the organizing universities/or members to NordicPharmaTrain educational project*: **free of charge**.
- Other academic participants: **200 €** (VAT included)
- Industry and regulatory agency participants: **400 €** (VAT included)

The course fee for the combined 4-day course includes coffee/tea breaks, lunches, and a buffet dinner:

- Doctoral students and postdocs from the organizing universities/or members to NordicPharmaTrain educational project*: **free of charge**.
- Other academic participants: **300 €** (VAT included)
- Industry and regulatory agency participants: **650 €** (VAT included)

The course fees will be invoiced after the workshop.

Undergraduate students with adequate training in pharmacokinetics may also attend the courses, but unfortunately, we cannot provide catering, lunches, and buffet dinner for them. Accommodation is not provided by the course organizers, but a special price hotel accommodation will be available (see below).

**organizing universities or a NordicPharmaTrain partners/associated universities: University of Helsinki, University of Turku, University of Eastern Finland, Åbo Akademi University, Uppsala University, UiT The Arctic University of Norway, Chalmers University of, Technology, University of Copenhagen, University of Eastern Finland, University of Southern Denmark, University of Oslo, University of Iceland, University of Tartu, Estonia, University of Kiel, Germany, Monash University, Australia, University of North Carolina, USA, ETH Zurich, Switzerland, University College London, UK*

Registration link

Population Pharmacokinetic & Physiologically Based Pharmacokinetic Modeling workshop – Fill out form

Credits, course material, and software

The course is equivalent to **1.0 ECTS-credit points** for each 2-day course, or **2.0 ECTS-credit points** for the combined 4-day course. Additionally, voluntary pre- and post-course modeling exercises will be provided that will expand each course to **2.0 ECTS-credit points** and the total to **4.0 ECTS-credit points**. Each participant is expected to bring a personal laptop and install MonolixSuite software (Windows/Mac/Linux versions available) for popPK course and PK-Sim software (only Windows) for PBPK course before the start of the courses. 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 start of the courses.

Accommodation

Hotel Arthur is located within short walking distance of the workshop venue. Standard Twin rooms are offered at 110 €/night for single occupancy or 120 €/night for double occupancy (breakfast included).
Individual bookings may be cancelled free of charge until 18:00 on the day of arrival. Reservations can be made at: Hotel Arthur
We recommend booking early due to limited room availability during September in Helsinki.

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University of Helsinki, Faculty of Pharmacy and Faculty of Medicine
University of Eastern Finland, Faculty of Health Sciences and School of Pharmacy
University of Turku, Faculty of Medicine
Åbo Akademi University, Pharmacy, Faculty of Science and Engineering
Finnish Pharmaceutical Society
Orion Pharma

Preliminary program for PopPK course

Day 1 of PopPK course: Tuesday, September 22nd, 2026, focusing on basic theory

Registration
A registration desk is in front of the lecture hall (room to be confirmed). The desk will be open from 9.00 to 10.15.

Lectures in a lecture hall (room to be confirmed)

10.00-10.15 Introduction to the course
Professor Teijo Saari (University of Turku)

10.15-11.00 Introduction to population modeling
Professor Teijo Saari (University of Turku)

11.00-11.45 Defining compartmental models, between-subject variability and residual variability
Professor Teijo Saari (University of Turku)

11.45-13.00 Lunch

13.00-13.45 Covariate modeling: explaining between-subject variability with demographic factors (age, weight, genetics, kidney function etc.)
Professor Andrew Hooker (Uppsala University)

13.45-14.30 Evaluating a population pharmacokinetic model
Professor Andrew Hooker (Uppsala University)

14.30-15.00 Coffee break

Hands-on session in a lecture hall (room to be confirmed)

15.00-18.00 Practical view on modeling via computer exercises.
MonolixSuite software will be used with the kind permission of Simulations Plus company. The participants are expected to bring their own laptops (it is possible to work as a pair). A free test license for MonolixSuite software will be provided by the course organizers.
Veli-Pekka Ranta, Eva del Amo, Sina Bahrpeyma

Buffet dinner

19-22 Hotel Scandic Grand Central Helsinki, Glass Terrace.

Day 2 of PopPK course: Wednesday, September 23rd, 2026, focusing on clinical studies

Morning research session: Chair Professor Klaus Olkkola (University of Helsinki)

9.15-9.30 Introduction to the "clinical study day"
Professor Klaus Olkkola (University of Helsinki)

9.30-10.15 Population pharmacokinetic analysis of extravascular naloxone administration in healthy volunteers
Professor Teijo Saari (University of Turku)

10.15-11.00 Topic to be announced
Dr. Harald Ihmsen (University of Erlangen-Nuremberg, Germany)

11.00-12.00 Lunch

Afternoon session: Chair Professor Klaus Olkkola (University of Helsinki)

12.00-12.45 Topic to be announced
Professor Andrew Hooker (Uppsala University)

12.45- 13.30 Topic to be announced
Professor Leon Aarons (University of Manchester)

13.30-14.15 Population pharmacokinetics of CYP2D6 activity in codeine metabolism in ambulatory surgical patients: implications for model-informed precision dosing.
Dr. Waqar Ashraf (European Chemicals Agency, ECHA) to be confirmed

14.15-14.35 Coffee break

14.35-15.50 Summary of the modeling exercises and introduction of postcourse excercises.
Veli-Pekka Ranta, Eva del Amo, Sina Bahrpeyma

15.50-16.00 Closing comments by the chair and the organisators
Professors Klaus Olkkola and Teijo Saari

Preliminary program for PBPK course

Day 1 of PBPK course: Thursday, September 24th, 2026

Registration
A registration desk is in front of a lecture hall (room to be confirmed). The desk will be open from 9.00 to 9.50.

Lectures in a lecture hall (room to be confirmed)

9:50-10.00 Welcoming words

10.00-10.45 Introduction to PBPK modeling and PBPK theory: Drug Distribution
Professor Leon Aarons (University of Manchester)

10.45-11.45 PBPK theory: Drug Elimination
Professor Leon Aarons (University of Manchester)

11.45-12.45 Lunch

12.45-14.15 PBPK theory: Whole-body PBPK models for intravenous administration
Professor Leon Aarons (University of Manchester)

14.15-14.30 Coffee break

Hands-on session in a lecture hall (room to be confirmed)
14.30-18.00 Hands-on 1 with PK-sim: first models for intravenous and per oral administrations.
Leon Aarons, Adam Darwich, Eva del Amo, Sina Bahrpeyma and Veli-Pekka Ranta

Buffet dinner
19-22 Hotel Scandic Grand Central Helsinki, Glass Terrace.

Day 2 of PBPK course: Friday, September 25th, 2026

Morning research session:

8.30-9.15 PBPK modelling as a tool to elucidate clinical drug-drug interactions
Dr. Anne Filppula (Åbo Akademi University, Turku, Finland)

9.15-10.00 Toxicokinetics and the role of PBPK modeling in chemical risk assessment.
Dr. Waqar Ashraf (ECHA) to be confirmed

10.00-10.15 Coffee break

10.15-11.00 PBPK theory: Defining dissolution and absorption from the gut for per oral administration
Dr. Adam Darwich (KTH Royal Institute of Technology, Sweden)

11.00-12.00 Lunch

12.00-13.00 PBPK theory: metabolic drug-drug interactions
Dr. Adam Darwich (KTH Royal Institute of Technology, Sweden)

13.00-15.15 Hands-on 2 with PK-Sim: example of metabolic drug-drug interaction
Leon Aarons, Adam Darwich, Eva del Amo, Sina Bahrpeyma and Veli-Pekka Ranta

15.15-15.30 Closing the course
Leon Aarons, Adam Darwich, Eva del Amo, Sina Bahrpeyma and Veli-Pekka Ranta