

## **Info on Population Pharmacokinetics and Pharmacodynamics course**

### Name of the course

Model Informed Precision Dosing: How to interpret and apply pharmacometric results in patient care

Language: English

### Time and location

October 30<sup>th</sup>-31<sup>st</sup>, 2018, Säätiö – lecture hall at Medisiina D (Kiinamyllynkatu 10), University of Turku, Turku, Finland

### Organizers

Associate professor Teijo Saari, Department of Anesthesiology and Intensive Care, University of Turku (email: teisaa@utu.fi)

Lecturer Veli-Pekka Ranta, School of Pharmacy, University of Eastern Finland

Senior Scientist Pyry Väliälä, Orion Pharma, Kuopio

### Aim of the course

The general aim of the course is to give an overview of population pharmacokinetics and pharmacodynamics. The specific aims are:

- 1) To help the participants to interpret the results of population pharmacokinetic and pharmacodynamic studies and to apply the results in patient care
- 2) To give the participants a practical view on the modeling process in population pharmacokinetics via hands-on modeling exercises

### Target group

The course is intended for graduate students and scientists involved in pharmaceutical, clinical and biomedical research in Nordic countries and other European countries. If you already know the basics of population pharmacokinetics and pharmacodynamics, you may wish to attend only the “clinical study day” on October 31<sup>st</sup>.

### Course fee

The course is free for all graduate students and scientists from the universities. However, accommodation and meals are not provided by the course organizers.

Researchers from industry and regulatory agencies are also welcome to the course. They are advised to contact Teijo Saari before registration.

### Registration

Registration for the course and for the optional course dinner is made via web page <will be announced later>:

### Credit

The course is equivalent to 1.0 ECTS-credit point. The credit is given to students for participating in lectures on both days and successfully passing the modeling session.

### Funded by

Turku University Faculty of Medicine Postgraduate Education Unit

University of Eastern Finland Doctoral School

Preliminary course program

## **October 30<sup>th</sup>, 2018, focusing on basic theory**

### Registration

A registration desk is located in front of lecture hall Pha1 in Pharmacy building (Itäinen pitkäkatu 4, Turku). The desk will be open from 9.00 to 10.15.

### Lectures in lecture hall Pha1 in Pharmacy

- 10.15-10.30 **Introduction to the course**  
*Professor Teijo Saari (University of Turku)*
- 10.30-11.15 **Introduction to population modeling**  
*Professor Teijo Saari (University of Turku)*
- 11.15-12.00 **Defining compartmental models, between-subject variability and residual variability**  
*Dr. Veli-Pekka Ranta (University of Eastern Finland)*
- 12.00-13.15 Lunch
- 13.15-14.00 **Covariate modeling: explaining between-subject variability with demographic factors (age, weight, genetics, kidney function etc.)**  
*Dr. Veli-Pekka Ranta (University of Eastern Finland)*
- 14.00-14.45 **Evaluating a population pharmacokinetic model**  
*Dr. Pyry Väliälä (Orion Pharma)*
- 14.45-15.00 Break

### Hands-on session in lecture hall Pha1 in Pharmacy

- 15.00-18.00 **Practical view on modeling via computer exercises**  
Monolix software will be used with the kind permission by Lixoft company (Orsay, France; [www.lixoft.com](http://www.lixoft.com)). The participants are expected to bring their own laptops (it is possible to work as a pair). A free test licence of Monolix will be provided by the course organizers.  
*Teijo Saari, Pyry Väliälä and Veli-Pekka Ranta*

## **October 31<sup>st</sup>, 2018, focusing on clinical studies**

### Registration

A registration desk is located in front of lecture hall Pha1 in the Pharmacy building. The desk will be open from 8.45 to 9.15.

### All presentations in lecture hall Pha1 in the Pharmacy

*Morning session: Chair Professor Klaus Olkkola (University of Turku)*

- 9.15-9.30      **Introduction to the “clinical study day”**  
*Professor Klaus Olkkola (University of Helsinki)*
- 9.30-10.15    **PKPD modelling of naloxone**  
*Assoc. prof. Teijo Saari (University of Turku)*
- 10.15-10.30   Coffee break
- 10.30-11.15   **Remimazolam pharmacokinetics**  
*Dr. Harald Ihmsen (University of Erlange-Nuremberg)*
- 11.15-11.30   **Discussion**
- 11.30-12.30   Lunch

*Afternoon session: Chair Professor Janne Backman (University of Helsinki)*

- 12.30-13.15   **Model-based phenobarbital dose optimization in neonates**  
*Dr. Swantje Völler (Leiden University)*
- 13.15-14.00   **Oxycodone pharmacokinetics in old and young**  
*Dr. Pyry Väitalo (Orion Pharma)*
- 14.00-14.15   Break
- 14.15-15.00   **A semi-mechanistic model of S-ketamine**  
*Doctoral candidate Waqar Ashraf (University of Turku)*
- 15.00-15.30   **Bayesian, model-based vancomycin dose optimization: First experiences at Kuopio University Hospital**  
*Dr. Veli-Pekka Ranta (University of Eastern Finland)*
- 15.30-15.45   **Closing comments by the chairs**  
*Professors Klaus Olkkola and Janne Backman*