

## FACULTY Part I & II

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Die Inhalte der Fortbildungsmaßnahme sind produkt- und/oder dienstleistungsneutral gestaltet. Potenzielle Interessenkonflikte der Referierenden werden in einer Selbstauskunft gegenüber den Teilnehmenden offen gelegt werden. Der Introductory Course Part I + II ist eine Eigenveranstaltung der AGAH e. V. und wird nicht durch Sponsoring finanziert. Die Höhe der Gesamtaufwendungen beträgt ca. 20.000 € für die Ausrichtung.

## FACULTY Part I & II

**Dr. Jens Rengelhausen**  
Grünenthal GmbH, Aachen/Germany

**Dr. Barbara Schug**  
SocraTec R&D GmbH, Oberursel/Germany

**Dr. Wolfgang Timmer**  
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**Dr. Manfred Wargenau**  
M.A.R.C.O. GmbH & Co. KG, Düsseldorf/Germany

**Prof. Dr. Georg Wensing**  
Bayer Pharma AG, Wuppertal/Germany

**PD Dr. Michael Zühlsdorf**  
Merck Healthcare KGaA, Darmstadt/Germany

## INFORMATION

**Venue** Online Course @  
,Microsoft Teams'  
-you will receive your personal login data-

**Requirement** Please download the Desktop App  
when you are ask

**Date** Part II  
17-18 September 2020  
21-22 September 2020

**Fees** Part II (4 days)  
1.100 EUR Member\*  
1.450 EUR Non Member

\*of AGAH, AHPPI, BAPU, AFPT-CPI, ACCP,  
EUFEMED

Special fees for students are available  
on request.

Minimum number of participants 10 guests  
Registration deadline Part II: 10/8/2020

## CONTACT AND FURTHER INFORMATION

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# AGAH

Arbeitsgemeinschaft  
für angewandte  
Humanpharmakologie e.V.

Association for Applied  
Human Pharmacology

**INTRODUCTORY COURSE  
IN EXPLORATORY MEDICINES DEVELOPMENT**

**PART II**

**-ONLINE COURSE-**

**17-18 September and**

**21-22 September 2020**

**PharmaTrain**  
MASTERING MEDICINES DEVELOPMENT  
COURSE RECOGNITION

**EUFEMED**  
EUROPEAN FEDERATION  
FOR EXPLORATORY  
MEDICINES DEVELOPMENT

## INTRODUCTION AND LEARNING OUTCOMES

This course addresses postgraduates in life sciences interested in early clinical development of medicinal products. Two training parts of 3 days each provide a concise overview on Human Pharmacology / Translational Medicine spanning from non-clinical pharmacology and toxicology over first-in-man studies to proof-of-concept clinical trials.

### Learning Outcomes

On successful completion of Part II, students should be able to demonstrate an understanding / knowledge of the following:

- nonclinical pharmacology and toxicology
- molecular basis of drug actions
- allometric scaling and dose proportionality assessments based on characteristic PK data
- defining pharmacodynamic (PD) endpoints and biomarkers
- differentiating between primary and secondary PK and PD endpoints
- How to design an early clinical pharmacology development plan
- planning and management of a first-in-man trial
- principles of data management and information flow
- principles of reporting and publication
- principles of medical statistics
- characteristic issues involved in the development of biologicals and biosimilars

This AGAH course meets the standards for high-quality postgraduate education and training in Medicines Development established by PharmaTrain and has been awarded a PharmaTrain Recognition. The course was accredited 3 ECTS (Parts I plus II).

## Day 1 · THURSDAY, 17 September 2020

from 08:45	Dial-in
09:00 - 09:15	Introduction of faculty and participants
09:15 - 10:45 5' break after 45'	<b>Molecular basis of drug action:</b> Receptor pharmacology, agonists, antagonists, second messengers, enzymes, regulatory proteins, transcription factors, cellular sites of drug actions <i>Martin Coenen</i>
10:45 - 11:00	Break
11:00 - 13:00 5' break after 60'	<b>Pharmacokinetics III:</b> PK linearity / non-linearity / dose proportionality assessments, biopharmaceutics classification system (BCS), absorption half-life, flip-flop kinetics, protein binding, 14C-studies (mass-balance studies), allometric scaling <i>Andreas Kovar</i>
13:00 - 13:45	Break
13:45 - 17:30 5' break every 60' 15' break after 120'	<b>Assessment of non-clinical data and risk as prerequisites before administration to man:</b> Compound selection, early in vivo studies including primary and secondary pharmacodynamics and -kinetics, safety pharmacology, general toxicology in various species (rodents, non-rodents) including NOEL/NOAEL and MTD, safety ratio, toxicokinetics, genotoxicity, immunotoxicity, local tolerance, phototoxicity <i>Stephanie Plassmann</i>

## Day 2 · FRIDAY, 18 September 2020

09:00 - 11:00 5' break after 60'	<b>Assessment of non-clinical data and risk as prerequisites before administration to man</b> (continuation of Day 1) <i>Stephanie Plassmann</i>
11:00 - 11:15	Break
11:15 - 11:45	<b>The revised EMA guideline on early phase clinical trials – key elements</b> <i>Kerstin Breithaupt-Grögler</i>
11:45 - 13:00	<b>How to determine a safe starting dose for first-in-human?</b> Key safety parameters, case study developed in break-out groups <i>Stephanie Plassmann</i>
13:00 - 13:45	Break

13:45 - 15:15	<b>How to determine a safe starting dose for first-in-human?</b> Presentations of case study <i>Stephanie Plassmann</i>
15:15 - 15:30	Break
15:30 - 16:15	<b>Stop dose escalation or continue dosing?</b> Introduction to case study <i>Kerstin Breithaupt-Grögler</i>
Mandatory Homework	<b>Stop dose escalation or continue dosing?</b> Case study developed in break-out groups

## Day 3 · MONDAY, 21 SEPTEMBER 2020

09:00 - 10:00	<b>Stop dose escalation or continue dosing?</b> Presentation of case studies <i>Kerstin Breithaupt-Grögler</i> <i>Jens Rengelshausen</i>
10:00 - 11:30	<b>How to design an early clinical pharmacology development program?</b> Basic concepts of early phase trials supporting early clinical development and decision making: how to design the first-in-human trial? how to proceed from single to multiple ascending dose? which questions needs to be answered prior to further clinical development?, including case study <i>Jens Rengelshausen</i> <i>Kerstin Breithaupt-Grögler</i>
11:30 - 11:45	Break
11:45 - 13:15	<b>How to design an early clinical pharmacology development program?</b> (continued) <i>Kerstin Breithaupt-Grögler</i> <i>Jens Rengelshausen</i>
13:15 - 14:00	Break
14:00 - 15:00	<b>Bioequivalence trials:</b> How to do it right – planning a successful BE trial <i>Barbara Schug</i>
15:00 - 15:15	<b>Q&amp;A session regarding method validation</b> (pre-reading of slides required)
15:15 - 15:30	Break

15:30 - 17:15 5'break after 60'	<b>Pharmacodynamic endpoints and biomarker:</b> Biomarkers for stratified medicine, companion diagnostics and proof of concept; biomarkers and PD endpoints in oncology, diabetes, cardiovascular diseases, cardiac safety and in pain <i>Jens Rengelshausen</i>
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## Day 4 · TUESDAY, 22 SEPTEMBER 2020

09:00 -10:00	<b>Data management:</b> Principles, electronic / paper CRFs, queries, data cleaning, data base closure <i>Manfred Wargenau</i>
10:00 - 10:15	Break
10:15 - 11:15	<b>Monitoring and Auditing -</b> An essential tool to ensure credibility of data <i>Christian Hinze</i>
11:15 - 11:30	Break
11:30 - 13:15 5' break after 60'	<b>Analysis of early exploratory development studies - principles of medical statistics:</b> Differences between treatments regarding biomarkers, pharmacokinetic / -dynamic effects, safety, parametric vs. non-parametric analysis, t-tests, repeated measures ANOVA, parametric vs. non-parametric analysis, Chi-square, Fisher's exact <i>Manfred Wargenau</i>
13:15 - 14:00	Break
14:00 - 15:00	<b>Analysis of early exploratory development studies - principles of medical statistics</b> (continued) <i>Manfred Wargenau</i>
15:00 - 15:15	Break
15:15 - 15:30	<b>Q&amp;A session regarding report writing</b> (pre-reading of slides required) <i>Kerstin Breithaupt-Grögler</i>
15:30 - 17:00	<b>Introduction to biologicals and biosimilars</b> <i>Barbara Schug</i>
17:00 - 17:15	<b>Feed back and end of Part II</b>
17:30 - 18:30	<b>Mandatory Test on Part II via Survey</b> (within 1 hour, 60 % of questions must be correctly answered to pass test and receive a certificate)