



## BB3R Spring School 2018 – *Alternatives to Animal Testing*

The BB3R Spring Schools are part of the mandatory course program on alternative test methods to animal experimentation within the graduate program BB3R.

This year the IV. BB3R Spring School will be organized by the Freie Universität Berlin and held in Berlin Dahlem and Berlin Mitte. The seminars are open to PhD students and Postdocs working in the field of 3R (the practical training is for BB3R graduate students only).

**Date**            **April 9th-13th 2018**

**Venue**

<b>Monday, Wednesday, Thursday</b>	<b>Tuesday</b>	<b>Friday</b>
Freie Universität Berlin Institut für Pharmazie Königin-Luise-Str. 2+4 14195 Berlin	Freie Universität Berlin Institut für Veterinär Anatomie Koserstr. 20 14195 Berlin	Technische Universität Berlin Institut für Biotechnologie Gustav-Meyer-Allee 25 13355 Berlin

**Registration**    **Attendance is free, but registration is needed (there is a limit of 40 participants).**  
**Please register until April 1<sup>st</sup>, 2018 by sending an email to:**  
[vivian.kral@fu-berlin.de](mailto:vivian.kral@fu-berlin.de)

The language of the Spring School is English. The recognition of education credits is being requested (Apothekerkammer Berlin).

[www.bb3r.de](http://www.bb3r.de)

GEFÖRDERT VOM



Bundesministerium  
für Bildung  
und Forschung



## Program

### Day 1

Monday

April 9th, 2018

### PhD Students Symposium

A. Damerau, M. Pfeiffenberger

Institut für Pharmazie, Königin-Luise-Str. 2+4, 14195 Berlin

Seminar room 1 and Foyer

09:00 – 09:15

#### Welcome address

Monika Schäfer-Korting

09:15 – 09:30

#### Welcome address

Alexandra Damerau, Moritz Pfeiffenberger

09:30 – 11:00

#### Speed lectures

PhD students

11:00 – 11:15

Coffee break

11:15 – 12:00

#### Speed lectures

PhD students

12:00 – 13:00

Lunch Break

13:00 – 15:00

#### Poster Session



## Day 2

Tuesday  
April 10<sup>th</sup>, 2018

## Angiogenesis *in vitro*

Prof. Plendl  
Institut für Veterinär Anatomie, Koserstr. 20, 14195 Berlin  
Seminar room

- 09:00 – 09:15 **Welcome and presentation of our team**  
*Johanna Plendl*
- 09:15 – 10:15 **Principles of Angiogenesis and Vasculogenesis**  
*Johanna Plendl*
- 10:15 – 11:00 **Angiogenesis Assays *in vivo* and *in vitro***  
*Juliane Rieger*
- 11:00– 11:30 *Coffee Break*
- 11:30 –12:15 **Cocultures of Endothelial Cells with Tumor Cells/ Co-Cultures of Endothelial Cells and Fibroblasts**  
*Sabine Käßmeyer*
- 12:150 – 13:15 *Lunch Break*
- 13:15 – 14:15 **Life Cell Imaging of Human and Equine Endothelial Cells - Principles and Demonstration on Basis of Video Sequences including "Wound Healing Assay"**  
*I. Slosarek*
- 14:45 – 14:45 *Coffee Break*
- 14:45 – 17:00 **Practical Training: Stages of Angiogenesis**  
*I. Slosarek and Team*

## Day 3

Wednesday  
April 11<sup>th</sup>, 2018

## Replace and Reduce *in silico* Methods

PD Dr. Beekes, Prof. Buttgereit, Prof. Volkamer, PD Dr. Weber, Prof. Wolber  
Institut für Pharmazie, Königin-Luise-Str. 2+4, 14195 Berlin  
Seminar room 1 (ground floor) and PC Pool (ground floor)

- 9:00 – 9:15 **Welcome**  
*Michael Beekes*
- 9:15 – 10:45 **Alternative Methods to Animal Bioassays for Human Prions**  
*Michael Beekes*
- 10:45 – 11:45 **Joint disorders *in vitro* – Comprising complex processes in convincing systems**  
*Frank Buttgereit*
- 11:45 – 13:00 *Lunch Break*
- 13:00 – 13:30 **Introduction to Computer-based Drug Design and *in silico* Toxicology**  
*Andrea Volkamer*
- 13:30 – 14:00 **Machine Learning, Databases and Application**  
*Gerhard Wolber*
- 14:00 – 14:30 ***In silico* Risk Assessment for Drinking Water**  
*Marcus Weber*
- 14:30 – 15:00 *Coffee Break*
- 15:00 – 17:00 **Practical Training with interactive Iphyton Notebooks**  
*Andrea Volkamer, Gerhard Wolber*



## Day 4

Thursday  
April 12th, 2018

## *In vitro* Methods

Prof. Schäfer-Korting  
Institut für Pharmazie, Königin-Luise-Str. 2+4, 14195 Berlin  
Lecture Hall 1<sup>st</sup> floor

9:00 – 10:00	<b>Drug Development</b> Christian Zoschke
10:00 – 11:00	<b><i>In vitro</i> Methods for Reproductive Toxicology</b> Horst Spielmann
11:00 – 11:15	Coffee Break
11:15 – 12:15	<b><i>In vitro</i> Testing of airborne Nanoparticles</b> Sandra Wagener
12:15– 13:30	Lunch Break
13:15 – 14:15	<b>Immunocompetent Skin Models?</b> Günther Weindl
14:15– 15:15	<b>Methods for Eye Irritation</b> Robert Landsiedel
15:15 – 15:30	Coffee Break
15:30 – 17:00	<b>Practical Training: RBC-Assay</b> Nan Zhang

## Day 5

Friday  
April 13th, 2018

## Tissue Printing

Prof. Kurreck  
TU Berlin, Gustav-Meyer-Allee 25, 13355 Berlin  
Seminar room

9:00 – 10:00	<b>Introduction into 3D Bioprinting</b> Jens Kurreck
10:00 – 10:45	<b>Principles of 3D Bioprinting</b> Johanna Berg
10:45 – 11:00	Coffee Break
11:00 – 11:45	<b>Materials for 3D Bioprinting</b> Johanna Berg
11:45 – 12:30	<b>3D Organ Models for Infection Studies</b> Munir Al-Zeer
12:30 – 13:30	Lunch Break
13:30 – 15:00	<b>Practical Training: Group 1: 3D Computer Software</b> <b>Practical Training: Group 2: Bioprinters in Action</b> Johanna Berg, Munir Al-Zeer, T. Hiller, A. Dietrich, V. Röhrs
15:00 – 15:15	Coffee Break
15:15 – 16:45	<b>Practical Training: Group 1: Bioprinters in Action</b> <b>Practical Training: Group 2: 3D Computer Software</b> Johanna Berg, Munir Al-Zeer, T. Hiller, A. Dietrich, V. Röhrs
16:45 – 17:00	<b>Discussion</b> Monika Schäfer-Korting, Burkhard Kleuser



## Speaker

**Dr. Munir Al-Zeer**

Institut für Biotechnologie  
Technische Universität Berlin

**Dr. Johanna Berg**

Institut für Biotechnologie  
Technische Universität Berlin

**Dr. Sabine Käßmeyer**

Institut für Veterinäranatomie  
Freie Universität Berlin

**PD Dr. Robert Landsiedel**

Experimental Toxicology and Ecology  
BASF SE

**Juliane Rieger**

Institut für Veterinäranatomie  
Freie Universität Berlin

**Ilka Slosarek**

Institut für Veterinäranatomie  
Freie Universität Berlin

**Prof. Dr. Andrea Volkamer**

Institut für Physiologie  
Charité – Universitätsmedizin Berlin

**PD Dr. Marcus Weber**

Computational Molecular Design  
Zuse Institut Berlin

**Univ.-Prof. Dr. Gerhard Wolber**

Institut für Pharmazie  
Freie Universität Berlin

**PD Dr. Michael Beekes**

Centre for Biological Threats and Special  
Pathogens Robert-Koch Institut Berlin

**Univ.-Prof. Dr. Frank Buttgereit**

Rheumatologie u. klinische Immunologie  
Charité – Universitätsmedizin Berlin

**Univ.-Prof. Dr. Jens Kurreck**

Institut für Biotechnologie  
Technische Universität Berlin

**Univ.-Prof. Dr. Johanna Plendl**

Institut für Veterinäranatomie  
Freie Universität Berlin

**Univ.-Prof. Dr. Monika Schäfer-Korting**

Institut für Pharmazie  
Freie Universität Berlin

**Univ.-Prof. Dr. Horst Spielmann**

Institut für Pharmazie  
Freie Universität Berlin

**Dr. Sandra Wagener**

Chemikalien- und Produktsicherheit  
Produktbeschaffenheit und Nanotechnologie  
Bundesinstitut für Risikobewertung

**Univ.-Prof. Dr. Günther Weindl**

Institut für Pharmazie  
Freie Universität Berlin

**Dr. Christian Zoschke**

Institut für Pharmazie  
Freie Universität Berlin