



Online Workshop in Microscopy techniques: from Electron to Intravital Microscope

Location: Ribeirao Preto Medical School- University of Sao Paulo, Brazil. Av. Bandeirantes, 3900 - Vila Monte Alegre, Ribeirão Preto - SP, 14049-900, Brasilien (<http://www.fmrp.usp.br/en>)

When: October 19-23th, 2020

Application Deadline: 15th October 2020

Invited Speakers:

Dr. Hellen Ishikawa-Ankerhold (LMU-Munich)
Dr. Roland Fleck (King's College London-UK)
Dr. Markus Sperandio (LMU-Munich)
Dr. Christian Schulz (LMU-Munich)
Dr. Hugo de Castro Faria (FioCruz-RJ)
Dr. Gustavo Menezes (UFMG-MG)
Dr. Marcio Weichert (DWIH-SP)

Course coordinators:

Prof. Dr. Munira M. Abdel Baqui (FMRP-USP - Brazil)
Prof. Dr. Luis Lamberti da Silva (FMRP-USP -Brazil)
Dr. Hellen Ishikawa-Ankerhold (LMU- Germany.
Dr. Roland Fleck (UK, King's College London- UK)

The workshop is supported and funded by:



Background

This event consists in an international workshop on microscopy techniques covering electron, fluorescence and intravital microscopy. The event aim to bring talks given by international experts on the medical research field related with microscopy techniques. To transfer the content and techniques to the students and researches, hands on practical course will be offered on March 2021. The combination of theoretical and practical section will give a large spectrum of the theme offering the opportunity to exchange knowledge and with the great potential for future cooperation between Brazil-Germany projects.

Target group: Post-graduate students and researchers that want to apply Electron and Intravital Microscopy in their studies.

Group number: 12 places for the practical course (2 places for international Post-graduate students).

Online workshop: 100 places for the attendance to the online lectures.

Goal of the course: The participants will learn the theoretical background as well as the entire workflow how to practically prepare samples for Electron Microscopy and how to prepare mouse tissues models for Intravital Microscopy.

Registration (application deadline: **October 15th, 2020**)

Required documents for a successful registration:

- Motivation Letter (including academic interests and your purpose in undertaking the course).
- Curriculum vitae

Please send the required documents by e-mail to:

Dr. Hellen Ishikawa-Ankerhold

Head of the Multiphoton Intravital Microscopy Core Facility,
Ludwig Maximilian University of Munich, Germany

Email: Hellen.Ishikawa-Ankerhold@med.uni-muenchen.de

Program

Online Workshop Part I: Seminars & Talks

This part I of the workshop is designated to **100 participants**

Day 01- Monday 19.10.2020

Seminars on Electron Microscopy

09:00 – 10:00	Prof. Dr. Roland Fleck- UK- Introduction to Electron Microscopy and Applications in Biomedicine
10:00 – 11:00	Pedro Machado - Correlative Microscopy
11:00 – 12:00	Dr. Claudine Bisson - Cryo-EM

Day 02- Tuesday 20.10.2020

Seminars on Electron Microscopy

09:00 – 10:00	Alejandra Carbajal and Manuela Moreira - Introduction to Sectioning
10:00 – 11:00	Pedro Machado - Correlative high pressure freezing and freeze substitution
11:00 – 12:00	Dr. Claudine Bisson - Tomography and Cryo EM

Day 03- Wednesday 21.10.2020

Seminars on Intravital Microscopy

09:00 – 10:00	-Welcome to the Intravital Seminar Dr. Hellen Ishikawa-Ankerhold - German Exchange Programm Agency- DWIH, DAAD, DFG, Alexander von Humboldt Dr. Marcio Weichert and colleagues
10:00 – 11:00	-Introduction to Multiphoton Intravital Microscopy (IVM) and its applications Dr. Hellen Ishikawa-Ankerhold (LMU-Munich)- Germany

11:00 - 12:00	Prof. Dr. Christian Schulz - LMU-Munich-Germany
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Day 04- Thursday 22.10.2020

09:00 - 10:00	Prof. Dr. Markus Sperandio - LMU-Munich-Germany
10:00 - 11:00	Prof. Dr. Hugo de Castro-Fiocruz- Rio de Janeiro-Brazil
11:00 - 12:00	Prof. Dr. Gustavo Menezes - UFMG-MG

Day 05- Friday 23.10.2020

09:00 - 10:00	Open forum discussion- Prof. Dr. Roland Fleck, Pedro Machado, Dr. Claudine Bisson, Alejandra Carbajal, Manuela Moreira - EM
10:00 - 11:00	Open forum discussion- Dr. Hellen Ishikawa-Ankerhold- IVM
11:00 - 12:00	Meeting round up, planning for the practical course for next year

March 2021

Workshop Part II- Practical Courses

Workshops 1 (Intravital Microscopy)

Workshop 2 (Electron Microscopy)

This practical part of the workshop is designated to **12 participants pre-selected that will attend of both workshops 1 and 2**

Program Workshop 1

Workshop 1: Practical Course in Intravital Microscopy Techniques

Instructor: Dr. Hellen Ishikawa-Ankerhold - LMU -Munich-Germany

Day 01

09:00 – 09:30	Introduction to mouse anesthesia
09:30 – 10:30	<i>Coffee break</i>
10:30 – 11:00	Mouse models (skin-ear model) - groups 1-2
11:00 – 12:30	Mouse models (skin-ear model) - groups 1-2
12:30 – 14:00	<i>Lunch</i>
14:00 – 14:30	Mouse models (skin-ear model) - groups 3-4
14:30 – 16:00	Mouse models (skin-ear model) - groups 3-4
16:00 – 16:30	<i>Coffee break</i>
16:30 – 17:00	Open discussion, wrap up day 2

Day 02

09:00 – 10:30	Mouse models (spleen model) - groups 1-2
10:30 – 11:00	<i>Coffee break</i>
11:00 – 12:30	Mouse models (spleen model) - groups 1-2
12:30 – 14:00	<i>Lunch</i>
14:00 – 14:30	Mouse models (spleen model) - groups 3-4
14:30 – 16:00	Mouse models (spleen model) - groups 3-4
16:00 – 16:30	<i>Coffee break</i>
16:30 – 17:00	Open discussion, wrap up day 2

Day 03

09:00 – 10:30	Mouse models (Bone Marrow model) – groups 1-2
10:30 – 11:00	<i>Coffee break</i>
11:00 – 12:30	Mouse models (Bone Marrow model) – groups 1-2
12:30 – 14:00	<i>Lunch</i>
14:00 – 14:30	Mouse models (Bone Marrow model) – groups 3-4
14:30 – 16:00	Mouse models (Bone Marrow model) – groups 3-4
16:00 – 16:30	Coffee break
16:30 – 17:00	Open discussion, wrap up day 2

Day 04

09:00 – 09:30	Introduction to clearing technique
09:30 – 10:30	Mouse models (tissue clearing) – groups 1-2
10:30 – 11:00	<i>Coffee break</i>
11:00 – 12:30	Mouse models (tissue clearing) – groups 1-2
12:30 – 14:00	<i>Lunch</i>
14:00 – 14:30	Mouse models (tissue clearing) – groups 3-4
14:30 – 16:00	Mouse models (tissue clearing) – groups 3-4
16:00 – 16:30	<i>Coffee break</i>
16:30 – 17:00	Open discussion, wrap up day 2

Day 05

09:00 – 10:30	Imaging analysis– groups 1-2
10:30 – 11:00	<i>Coffee break</i>
11:00 – 12:30	Short reports – groups 1-2
12:30 – 14:00	<i>Lunch</i>
14:00 – 15:00	Imaging analysis – groups 3-4
15:00 – 16:30	Short reports – groups 3-4
16:30 – 17:00	<i>Coffee break</i>
17:00 – 18:00	Feedback discussion, final wrap-up, and farewell

Program Workshop 2

Workshop 2: Practical Course in Electron Microscopy Techniques

Instructor: Prof. Dr. Roland Fleck - King's College London-UK

Day 01

09:00 – 09:30	Introduction to Electron Microscopy
09:30 – 10:30	<i>Coffee break</i>
10:30 – 11:00	Practical aspects of EM groups 3-4
11:00 – 12:30	Practical aspects of EM groups 3-4
12:30 – 14:00	<i>Lunch</i>
14:00 – 14:30	Introduction to Electron Microscopy
14:30 – 15:30	Practical aspects of EM groups 1-2
15:30 – 16:30	Practical aspects of EM groups 1-2
16:30 – 17:00	<i>Coffee break</i>
17:00 – 18:00	Open discussion, wrap up day 2

Day 02

09:00 – 10:30	Practical aspects of EM groups 3-4
10:30 – 11:00	<i>Coffee break</i>
11:00 – 12:30	Practical aspects of EM groups 3-4
12:30 – 14:00	<i>Lunch</i>
14:00 – 14:30	Introduction to Electron Microscopy
14:30 – 15:30	Practical aspects of EM groups 1-2
15:30 – 16:30	Practical aspects of EM groups 1-2
16:30 – 17:00	<i>Coffee break</i>
17:00 – 18:00	Open discussion, wrap up day 2

Day 03

09:00 – 10:30	Practical aspects of EM groups 3-4
10:30 – 11:00	<i>Coffee break</i>
11:00 – 12:30	Practical aspects of EM groups 3-4
12:30 – 14:00	<i>Lunch</i>
14:00 – 14:30	Introduction to Electron Microscopy
14:30 – 15:30	Practical aspects of EM groups 1-2
15:30 – 16:30	Practical aspects of EM groups 1-2
16:30 – 17:00	<i>Coffee break</i>
17:00 – 18:00	Open discussion, wrap up day 2

Day 04

09:00 – 09:30	Introduction to Electron Microscopy
09:30 – 10:30	Practical aspects of EM groups 3-4
10:30 – 11:00	<i>Coffee break</i>
11:00 – 12:30	Practical aspects of EM groups 3-4
12:30 – 14:00	<i>Lunch</i>
14:00 – 14:30	Introduction to Electron Microscopy
14:30 – 15:30	Practical aspects of EM groups 1-2
15:30 – 16:30	Practical aspects of EM groups 1-2
16:30 – 17:00	Coffee break
17:00 – 18:00	Open discussion, wrap up day 2

Day 05

09:00 – 09:30	Introduction to Electron Microscopy
09:30 – 10:30	Practical aspects of EM groups 3-4
10:30 – 11:00	Coffee break
11:00 – 12:30	Short reports groups 3-4
12:30 – 14:00	Lunch
14:00 – 15:00	Practical aspects of EM groups 1-2
15:00 – 16:30	Short reports groups 1-2
16:30 – 17:00	Coffee break
17:00 – 18:00	Feedback discussion, final wrap-up, and farewell