

DYNAMIC PROCESSES AT THE CELL SURFACE AND MULTI-SPECTRAL PHOTO MANIPULATION

THEORETICAL AND PRACTICAL SESSIONS
LAUNCH OF THE **LEICA DM18 S** WITH **TIRF** AND **INFINITY** SCANNER

DATE:

NOVEMBER 22-24/2017

PLACE:

IMAGING METHODS CORE FACILITY, BIOCEV, FACULTY OF SCIENCES CHARLES UNIVERSITY
PRŮMYSLOVÁ 595, 252 50 VESTEC, CZECH REPUBLIC

ORGANIZERS AND SPEAKERS

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MARTIN KOPECKÝ

(SALES MANAGER, PRAGOLAB s.r.o.)



PRELIMINARY PROGRAMME

NOVEMBER 22, **WEDNESDAY**

08:30	REGISTRATION
08:55 – 09:00	WELCOME BY MARTIN KOPECKÝ, ALEŠ BENDA
09:00 – 09:40	SEE THE HIDDEN: THE DMI8 S INFINITY TIRF JENS PETER GABRIEL
09:40 – 10:10	IMAGING FCS – MAPPING OF MOLECULAR MOBILITY AND INTERACTIONS IN LIVE CELLS RADEK MACHÁŇ
10:10 – 10:40	THE MECHANICS OF CYTOSKELETAL FILAMENT ORGANISATION BRAUN MARCUS
10:40 – 11:00	COFFEE BREAK
11:00 – 11:40	USING PHOTOACTIVATION TO FOLLOW INTRACELLULAR TRAFFICKING IN T CELLS JEREMIE ROSSY
11:40 – 12:10	MAKE YOUR PHOTONS WORK: THE DMI8 S INFINITY SCANNER JENS PETER GABRIEL
12:10 – 12:50	QUANTITATIVE SUPER-RESOLUTION IMAGING OF MOLECULAR STRUCTURES AND ASSEMBLIES IN CELLS MAREK CEBECAUER
13:00 – 13:45	LUNCH
14:00 – 15:30	PRACTICAL HANDS ON SESSION 1 (Group 1 – TIRF/ Photomanipulation, Group 2 – Leica SP8 SMD /LAS X Navigator) ROTATION TIME / COFFEE
15:45 – 17:15	PRACTICAL HANDS ON SESSION 2 (Group 1 – TIRF/ Photomanipulation, Group 2 – Leica SP8 SMD /LAS X Navigator) ROTATION TIME / COFFEE

NOVEMBER 23, **THURSDAY**

9:00 – 10:30	PRACTICAL HANDS ON SESSION 3 (Group 1 – TIRF/ Photomanipulation, Group 2 – Leica SP8 SMD /LAS X Navigator) ROTATION TIME / COFFEE
10:45 – 12:15	PRACTICAL HANDS ON SESSION 4 (Group 1 – TIRF/ Photomanipulation, Group 2 – Leica SP8 SMD /LAS X Navigator)

13:30 – 15:00	BREAK PRACTICAL HANDS ON SESSION 5 (Group 1 – TIRF/ Photomanipulation, Group 2 – Leica SP8 SMD /LAS X Navigator) ROTATION TIME / COFFEE
15:15 – 16:45	PRACTICAL HANDS ON SESSION 6 (Group 1 – TIRF/ Photomanipulation, Group 2 – Leica SP8 SMD /LAS X Navigator) ROTATION TIME / COFFEE

NOVEMBER 24, FRIDAY

9:00 – 10:30	PRACTICAL HANDS ON SESSION 7 (Group 1 – TIRF/ Photomanipulation, Group 2 – Leica SP8 SMD /LAS X Navigator) ROTATION TIME / COFFEE
10:45 – 12:15	PRACTICAL HANDS ON SESSION 8 (Group 1 – TIRF/ Photomanipulation, Group 2 – Leica SP8 SMD /LAS X Navigator) BREAK
13:30 – 15:00	PRACTICAL HANDS ON SESSION 9 (Group 1 – TIRF/ Photomanipulation, Group 2 – Leica SP8 SMD /LAS X Navigator) ROTATION TIME / COFFEE

SAMPLES PREPARATION:

The TIRF technique requires samples in aqueous medium, which could be live cells, bacteria, in vitro protein or nucleic acid assays, or many others (<http://www.leica-microsystems.com/science-lab/applications-of-tirf-microscopy-in-life-science-research/>). Samples must have a coverslip bottom. TIRF works best for fluorescent proteins in or near the membrane (so close to the coverslip), but using a technique called Hilo also structures further away like mitochondria or even the nucleus can be imaged with greatly improved contrast.

For photomanipulation, also live cells expressing regular fluorescent proteins (for FRAP), or photoswitchable/-activatable or -convertible proteins can be used (<http://www.leica-microsystems.com/science-lab/photoactivatable-photoconvertible-and-photoswitchable-fluorescent-proteins/>). Finally, for dSTORM super-resolution microscopy please refer to our sample preparation guide (<http://www.leica-microsystems.com/science-lab/sample-preparation-for-gsdm-localization-microscopy-protocols-and-tips/> ; <http://www.leica-microsystems.com/science-lab/practical-guide-for-excellent-gsdm-super-resolution-images/>). Fluorophores that work very well are Alexa647, Alexa 555, Alexa 535, and many more.

REGISTRATION:

PLEASE REGISTER AS SOON AS POSSIBLE, THE CAPACITY IS LIMITED!

FEE FOR THIS WORKSHOP IS 200 CZK AND INCLUDES COFFEE BREAKS REFRESHMENT AND LUNCH ON WEDNESDAY

USE THE FORM ON THE WEBSITE WWW.PRAGOLAB.CZ/TIRF OR REGISTRATION FORM [HERE](#)

REGISTRATION FOR DEMONSTRATION AND HANDS-ON SESSIONS IS OBLIGATORY. EACH SESSION - 90 MIN.; **MAX 6 PEOPLE.**

REGISTER FOR A PARTICULAR TIME SLOT IN THE REGISTRATION FORM.

PLEASE BE PRESENT FOR THE HANDS-ON SESSION 15 MINUTES IN ADVANCE. YOU CAN BRING YOUR OWN SAMPLES BUT BE AWARE THAT ONLY 2 SAMPLES CAN BE DONE IN 1 HANDS-ON SESSION.

PLEASE INFORM US ABOUT YOUR SAMPLES IN ADVANCE

In case of any questions please contact us by e-mail.

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