# FLIM not only for biologists (FNOB)

SIS code: MB100P03

**Nov 14. – Nov 16., 2022**
**BIOCEV**, Průmyslová 595, Vestec

# Programme

## Monday, Nov 14.

09:00 – 09:10  Welcome and introduction of organizers
Aleš Benda

09:10 – 09:55  Fluorescence lifetime and imaging – Basic principles
Dalibor Pánek

09:55 – 10:05  Coffee break

10:05 – 11:20  Introduction to FLIM instrumentation
Peter Kapusta, Federica Scollo

11:20 – 11:30  Explanation of TTTR data format
Aleš Benda

11:30 – 12:30 Introductions of the participants – (2 min about yourself and your research)

12:30 – 13:30  Lunch

13:30 – 14:30  Instrument Introduction 1 round – 3 stations (Abberior Inst. Expert Line +
TH260N, Leica SP8 + MH150 P, Carl Zeiss LSM880 + HH400)

14:30 – 14:40  Coffee break

14:40 – 15:40  Instrument Introduction 2 round

15:40 – 15:50  Coffee break

15:50 – 16:50  Instrument Introduction 3 round

16:50 - 18:00  Get together (pizza time :) )

**Tuesday, Nov 15.**

09:00 – 09:45  Different ways of FLIM data analysis
Dalibor Pánek

9:45 – 10:15  Imaging membrane tension using Flipper-TR
Eliška Miková

10:15 - 10:30  Coffee break

10:30 – 11:30  Protein-protein interactions visualized by FLIM-FRET: considerations needed for reliable experiments.
Jana Humpolíčková

11:30 – 11:50  Background for NAD(P)H imaging
Aleš Benda

11:50 – 12:20  FLIM-FRET based sensor for inhibition of viral proteases in the precursor form and for drug evaluation
Jana Humpolíčková

12:20 – 13:00  Lunch

13:00 – 15:00  Hands-on – 4 stations – NAD(P)H imaging, FLIM-FRET, FLIPPER TR Imaging, Data Analysis including Pattern Matching - first round

15:00 – 15:15  Coffee break

15:15 – 17:15  Hands-on – 4 stations – NAD(P)H imaging, FLIM-FRET, FLIPPER TR Imaging, Data Analysis including Pattern Matching - second round

|  |  | Group 1 | Group 2 | Group 3 | Group 4 |
|---|---|---|---|---|---|
| Tuesday Nov 15th | 1$^{st}$ round | Flipper TR | NAD(P)H | FLIM - FRET | Data analysis |
|  | 2$^{nd}$ round | Data analysis | Flipper TR | NAD(P)H | FLIM - FRET |
| Wednesday Nov 16th | 3$^{rd}$ round | FLIM - FRET | Data analysis | Flipper TR | NAD(P)H |
|  | 4$^{th}$ round | NAD(P)H | FLIM - FRET | Data analysis | Flipper TR |

**Wednesday, Nov 16.**

09:00 – 10:00  FLIM acquisition artefacts and interpretation pitfalls
Peter Kapusta, Federica Scollo

10:00 – 10:45  Sensing lipid mobility using rotational and polarity probes – case study
Piotr Jurkiewicz

10:45 – 11:00  Coffee break

11:00 – 11:20  PicoQuant FLIM Integration in NIS Elements
Jan Horký, LIM Laboratory imaging s.r.o.

11:20 – 11:40  A guide to custom-developed TTTR Data Analysis software
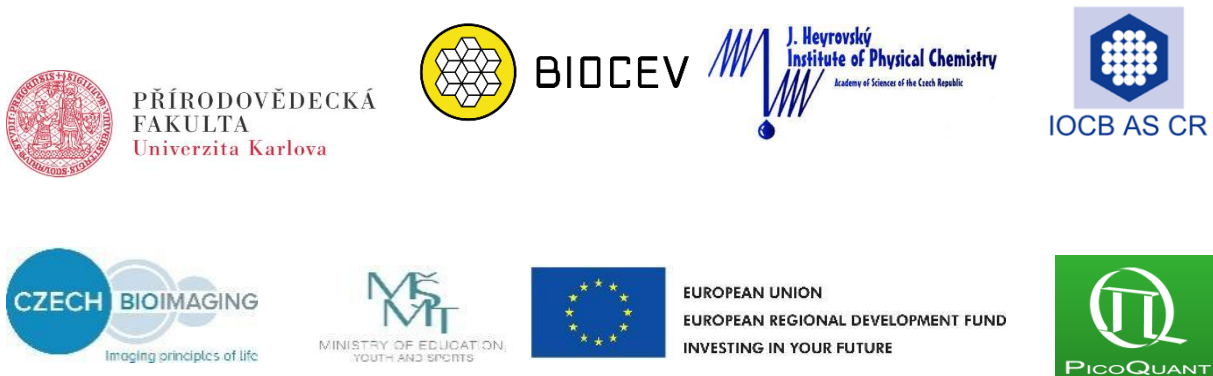Aleš Benda

11:40 – 12:10  Color coding in FLIM
Piotr Jurkiewicz

12:10 – 13:00  Lunch

13:00 – 15:00  Hands-on – 4 stations – NAD(P)H imaging, FLIM-FRET, FLIPPER TR Imaging, Data Analysis including Pattern Matching - third round

15:00 – 15:15  Coffee break

15:15 – 17:15  Hands-on – 4 stations – NAD(P)H imaging, FLIM-FRET, FLIPPER TR Imaging, Data Analysis including Pattern Matching - fourth round