MIC Workshop:  

**Recording and Analyzing Calcium Signals with Laser-Scanning Confocal Microscopy**

**Date:**  
Spring 2018; 3 days

**Location:**  
University of Bern, Department of Physiology

**Organizers/Tutors:**  
Prof. Ernst Niggli, University of Bern, Department of Physiology  
Prof. Marcel Egger, University of Bern, Department of Physiology  
Dr. Nina D. Ullrich, University of Heidelberg, Department of Physiology  
Prof. Ana Gomez, INSERM, Paris  
Prof. Natalia Shirokova, Pharmacology & Physiology, Rutgers, Newark  
Groups of E. Niggli and M. Egger

**Number of participants:**  
Between 6 and 9 students for practical part, lectures are public.

**Budget:**  
approx. CHF 600

**KSL Stamm-Nr.:**  
Will be entered on request

**Reward:**  
1.5 ECTS

**Description:**  
The objective of the course is to introduce participants to the complexities of calcium (Ca^{2+}) imaging in living cells using laser-scanning confocal microscopy and fluorescent Ca^{2+} indicators. Lectures will provide background information on Ca^{2+} channels and transporters, on Ca^{2+} indicators, on genetic Ca^{2+} probes for organelle targeting and on caged Ca^{2+} compounds.

**Course structure:**  
Experimental work, confocal image data acquisition in living cells, data extraction and analysis, presentation of results, lectures, demonstrations.

**Assessment:**  
Participation to all activities, a presentation and a quiz test at the end of the course.

**Program overview:**

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