## Course: Course on High Throughput Screening and Image Analysis for Biosciences
## Date: 23-27 Maio 2022

| | Monday, 23 | Tuesday, 24 | Wednesday, 25 | Thursday, 26 | Friday, 27 |
|---|---|---|---|---|---|
| 09:30 | Registration and Reception | High Throughput Systems \| Kristyna Sala, Molecular Devices, LusoPalex | **Lab Session** | **Image Analysis II** | **Data Analysis I** |
| 09:45 | | | | | |
| 10:00 | Welcome & introduction to the course | High Throughput Flow imagers \| Sandra Cuni, Izasa Scientific | Exp 1 (Plate Reader) \| Exp 2 (ImageXpress Pico, Molecular Devices) \| Exp 3 (HTS prep, Multidrop Combi+Liquid Handling) \| Exp 4 (ImgStream, Luminex) | CellProfiler \| André Maia, i3S | Introduction to Cytosplore \| Huw Summers, Swansea U |
| 10:15 | High Content Imaging and Screening \| André Maia, i3S | | | | |
| 10:30 | | Lab automation and liquid handling \| tba, Formulatrix | | | |
| 10:45 | | | | | |
| 11:00 | Coffee-break | Coffee-break | Coffee-break | Coffee-break | Coffee-break |
| 11:15 | | | | | |
| 11:30 | Imaging in Flow \| Maria Lázaro, i3S | Research tools for Drug Discovery \| Rosaria Esposito, Enzo Life Sciences | **Lab Session** | **Image Analysis II** | Data Analysis \| Hugo Botelho, BioISI, FCUL |
| 11:45 | | | | | |
| 12:00 | | | Exp 1 (Plate Reader) \| Exp 2 (ImageXpress Pico, Molecular Devices) \| Exp 3 (HTS prep, Multidrop Combi+Liquid Handling) \| Exp 4 (ImgStream, Luminex) | CellProfiler \| André Maia, i3S | |
| 12:15 | Target and Drug Discovery \| António Pombinho, i3S | Cellular Imaging Reagents & 3D HTS Image acquisition\| Véronique Berchet, Perkin-Elmer, ILC (online) | | | **Data Analysis II** |
| 12:30 | | | | | shinyHTM Explorer: Inspection and statistical analysis of high throughput microscopy data \| Hugo Botelho, BioISI, FCUL |
| 13:00 | Lunch | Lunch | Lunch | Lunch | Lunch |
| 13:30 | | | | | |
| 14:00 | Light microscopy overview \| Paula Sampaio, i3S | **Lab session** | **Image Analysis I** | **Image Analysis III** | **Data Analysis II** |
| 14:15 | | | | | |
| 14:30 | | Exp 1 (Plate Reader) \| Exp 2 (ImageXpress Pico, Molecular Devices) \| Exp 3 (HTS prep, Multidrop Combi+Liquid Handling) \| Exp 4 (ImgStream, Luminex) | Image segmentation using machine learning - Ilastik \| Dominik Kutra, EMBL | Introduction to CellProfiler Analyst \| Huw Summers, Swansea U | shinyHTM Explorer: Inspection and statistical analysis of high throughput microscopy data \| Hugo Botelho, BioISI, FCUL |
| 14:45 | Introduction to image analysis \| Paula Sampaio, i3S | | | | |
| 15:00 | | | | | |
| 15:30 | Coffee-break | Coffee-break | Coffee-break | Coffee-break | Coffee-break & Group Photo |
| 15:45 | | | | | |
| 16:00 | | **Lab session** | **Image Analysis I** | **Image Analysis III** | Roundtable, experimental workdiscussion, evaluation questionnaire |
| 16:15 | 3D Cell Models \| Marta Silva, i3S | Exp 1 (Plate Reader) \| Exp 2 (ImageXpress Pico, Molecular Devices) \| Exp 3 (HTS prep, Multidrop Combi+Liquid Handling) \| Exp 4 (ImgStream, Luminex) | Image classification using machine learning - Ilastik \| Dominik Kutra, EMBL | CellProfiler Analyst cont \| Paul Rees, Swansea U | |
| 16:30 | | | | | Certificates of attendance |
| 16:45 | | | | | Goodbye! |
| 17:00 | Assay development and LAB Sessions Overview \| André Maia / Maria Lázaro, i3S | | | Walking tour Porto Downtown (free) | Exam (required only for ECTS) |
| 17:15 | | | | | |
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| 18:30 | | | | | |
| 19:30 | | | | Dinner downtown Elebê Centro (extra fee applies) | |
| | **Seminar \|** Auditorium Corino de Andrade | | | | |
| | **Technology \|** Auditorium Corino de Andrade | | | | |
| | **Practical \|** check LAB Sessions program | | | | |