



National Facility for Light Imaging

Nicola Maghelli, Head of National Facility for
Light Imaging, Human Technopole

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nf.lightimaging@fht.org

The National Facility for Light Imaging

Talk outline

Our mission

What we do

The future



Our mission

The National Facility for Light Imaging

Supporting Science

Services

Cutting-edge technologies

Assistance

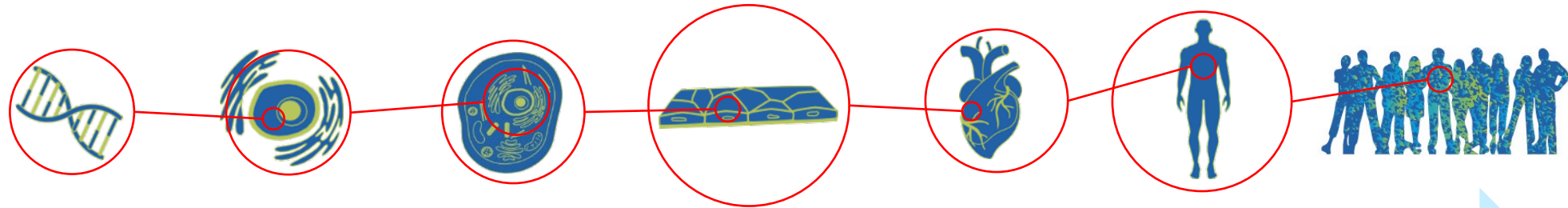
Teaching

Training



The National Facility for Light Imaging

- Motivation



~ nm

~ μm

~ 10 μm

~ mm

~ cm

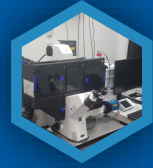
~ m

Biology happens at spatial scales which are INVISIBLE to the naked eye!

What we do

Facility structure

Infrastructural units



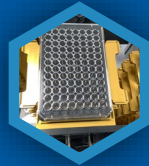
IU1 Microscopy



IU2 Tissue Processing



IU3 Flow Cytometry



IU4 High-content



IU5 Ion Imaging

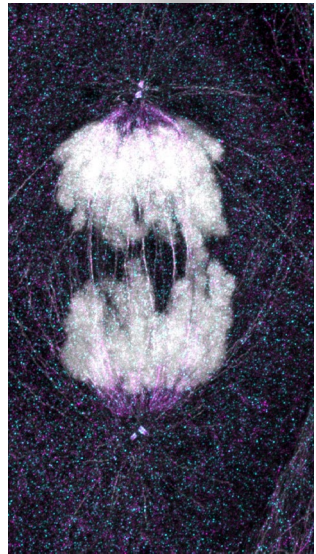
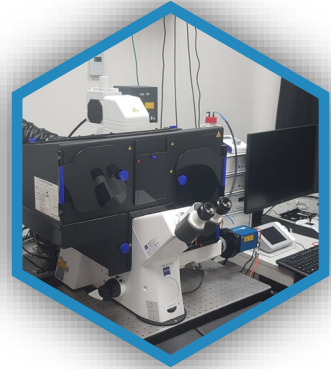


IU6 Custom microscopy

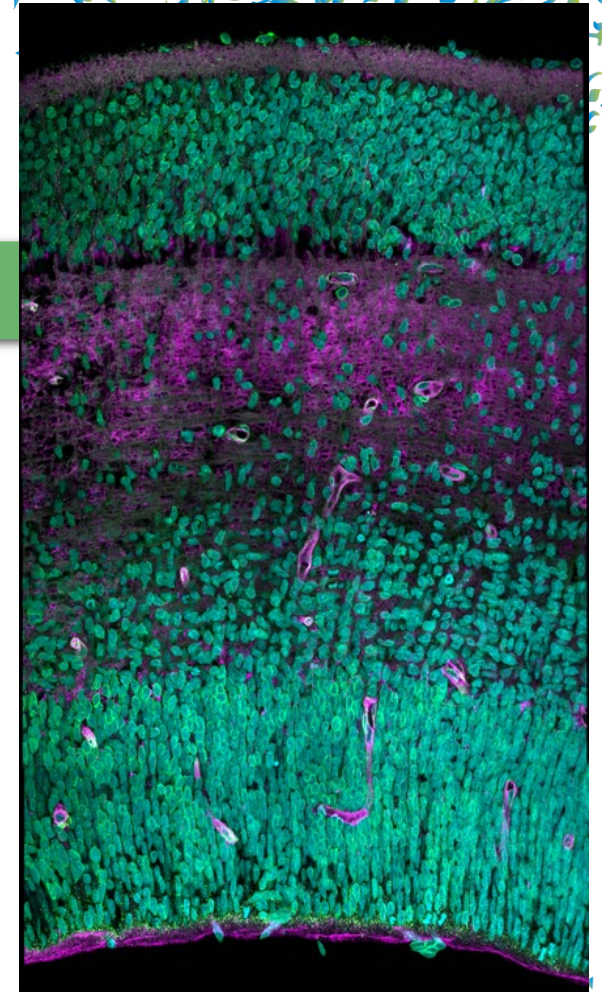
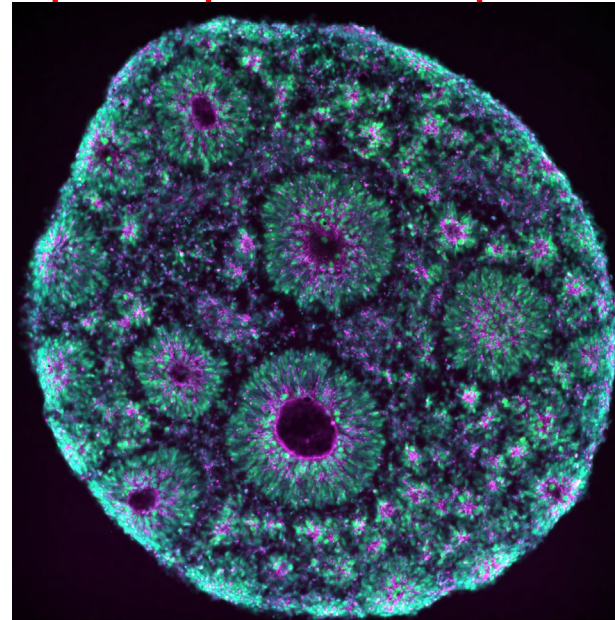
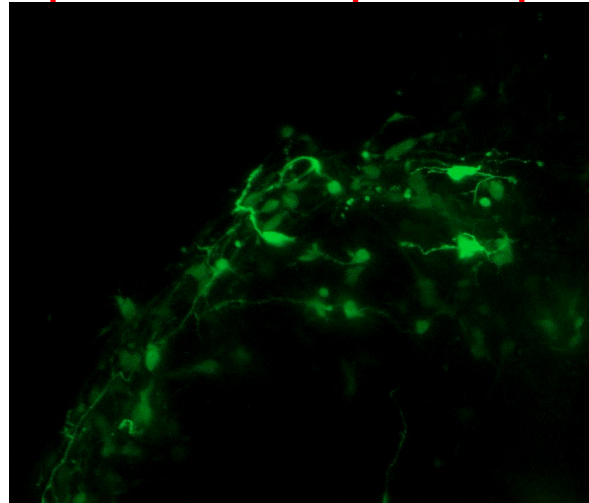


Making the invisible visible

Light microscopy



IU1 MICROSCOPY



STED

SMLM

SIM

Lattice
Lightsheet

Confocal

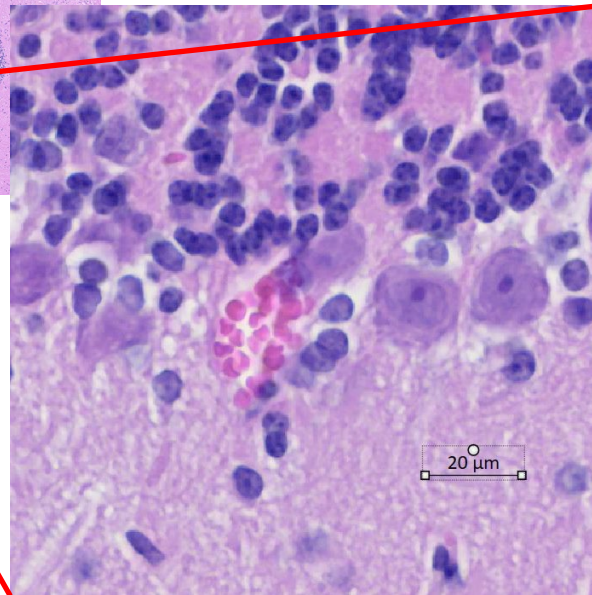
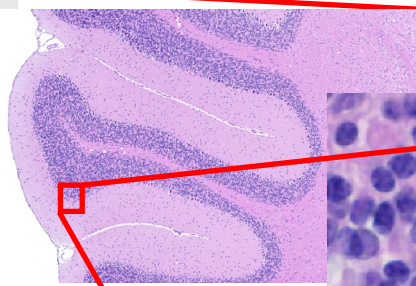
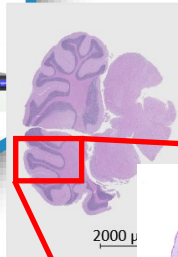
Multiphoton

Lightsheet

From tissue to samples

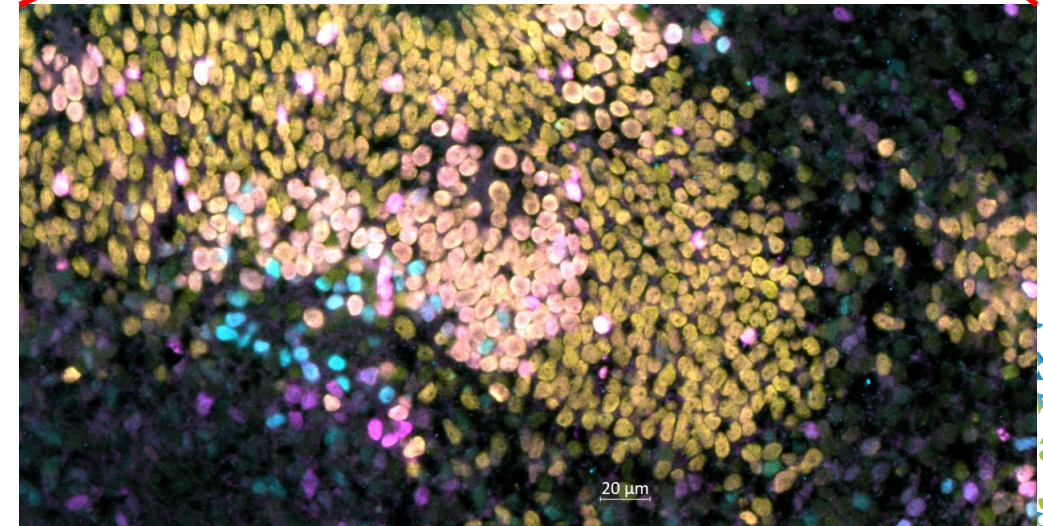
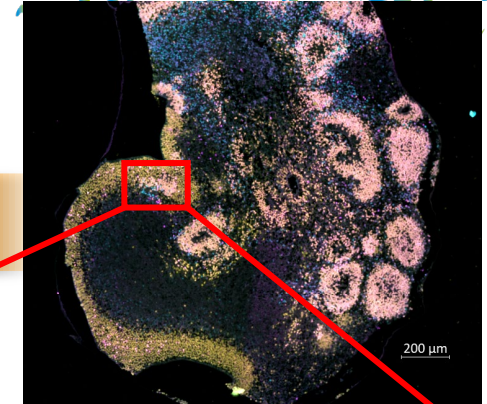


Tissue processing



National for Facility
Structural Biology

IU2 TISSUE PREP



National Facility for
Genomics

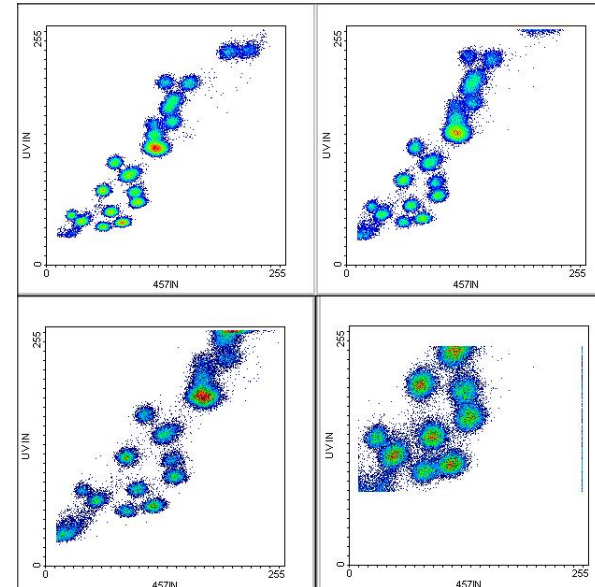
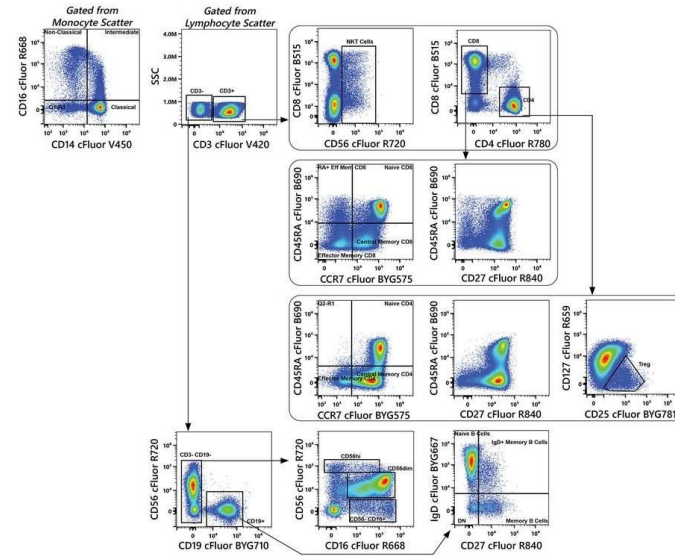


Sorting rare populations

Flow cytometry



IU3 FLOW CYTOMETRY



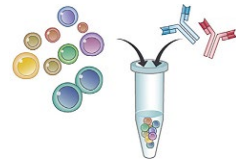
Tissue or Cell
Suspension

Disaggregation

Labelling

Analysis or
Sorting

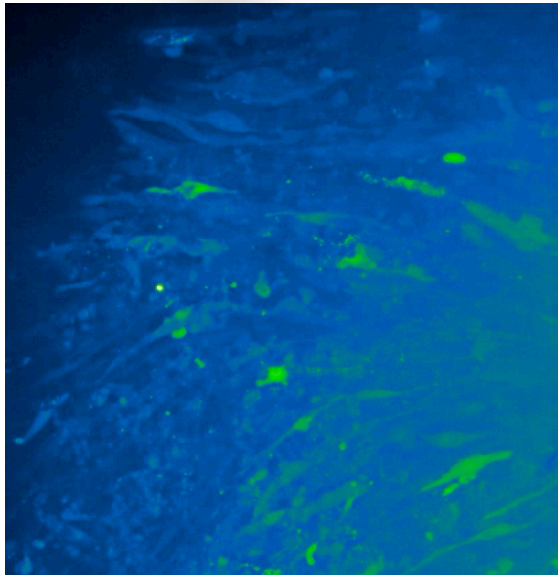
Data, Sorted
Cells & Report



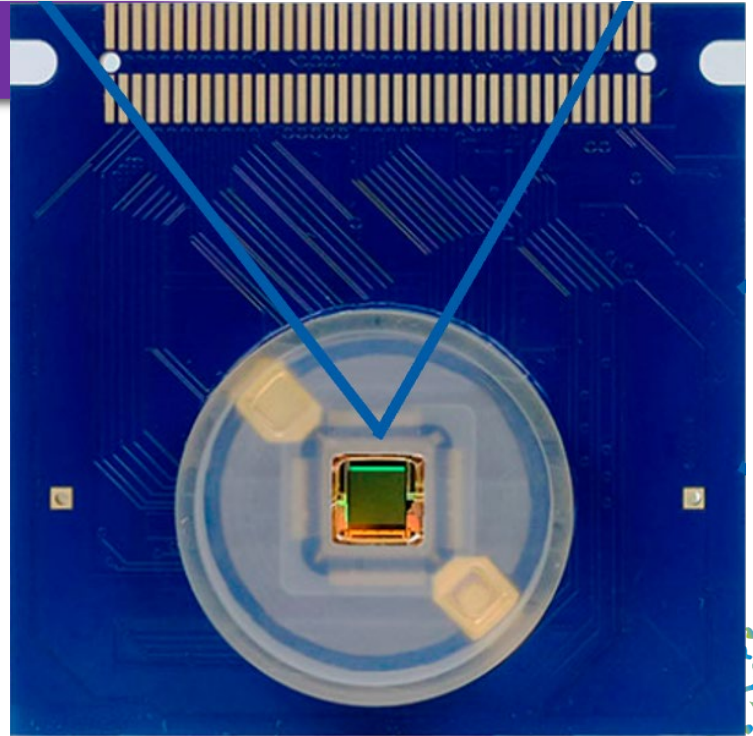
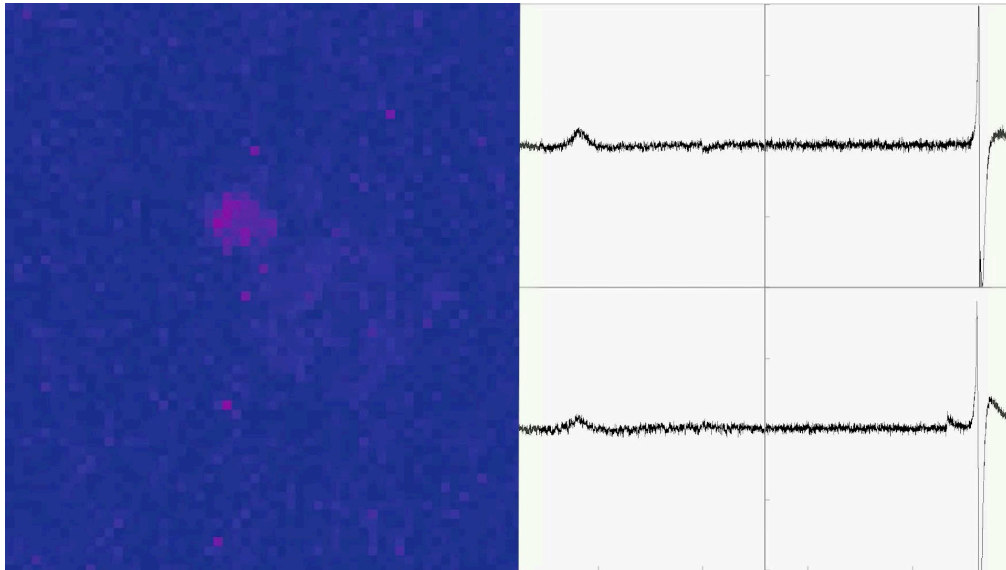
Visualizing cellular activity

HUMAN TECHNOPOLE

Ion imaging

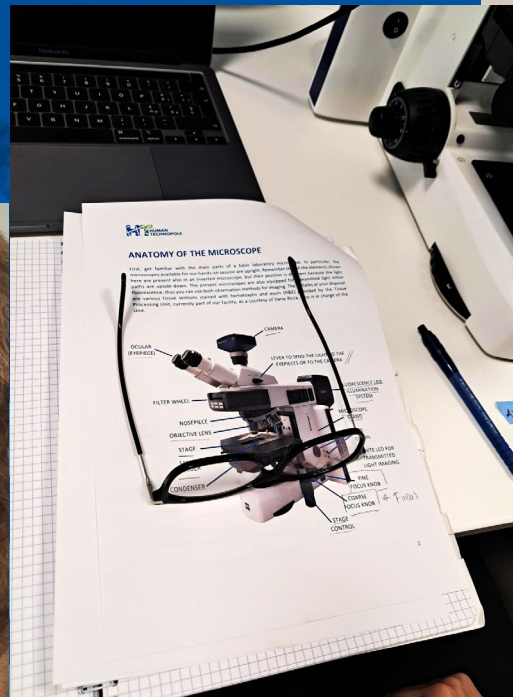


IU5 ION IMAGING



Training & teaching

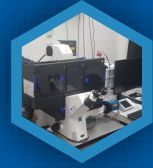
Disseminating knowledge



The future

Facility structure

Infrastructural units



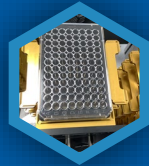
IU1 Microscopy



IU2 Tissue Processing



IU3 Flow Cytometry



IU4 High-content



IU5 Ion Imaging

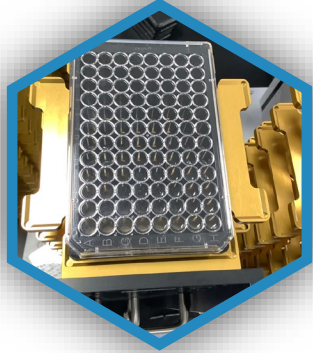


IU6 Custom microscopy

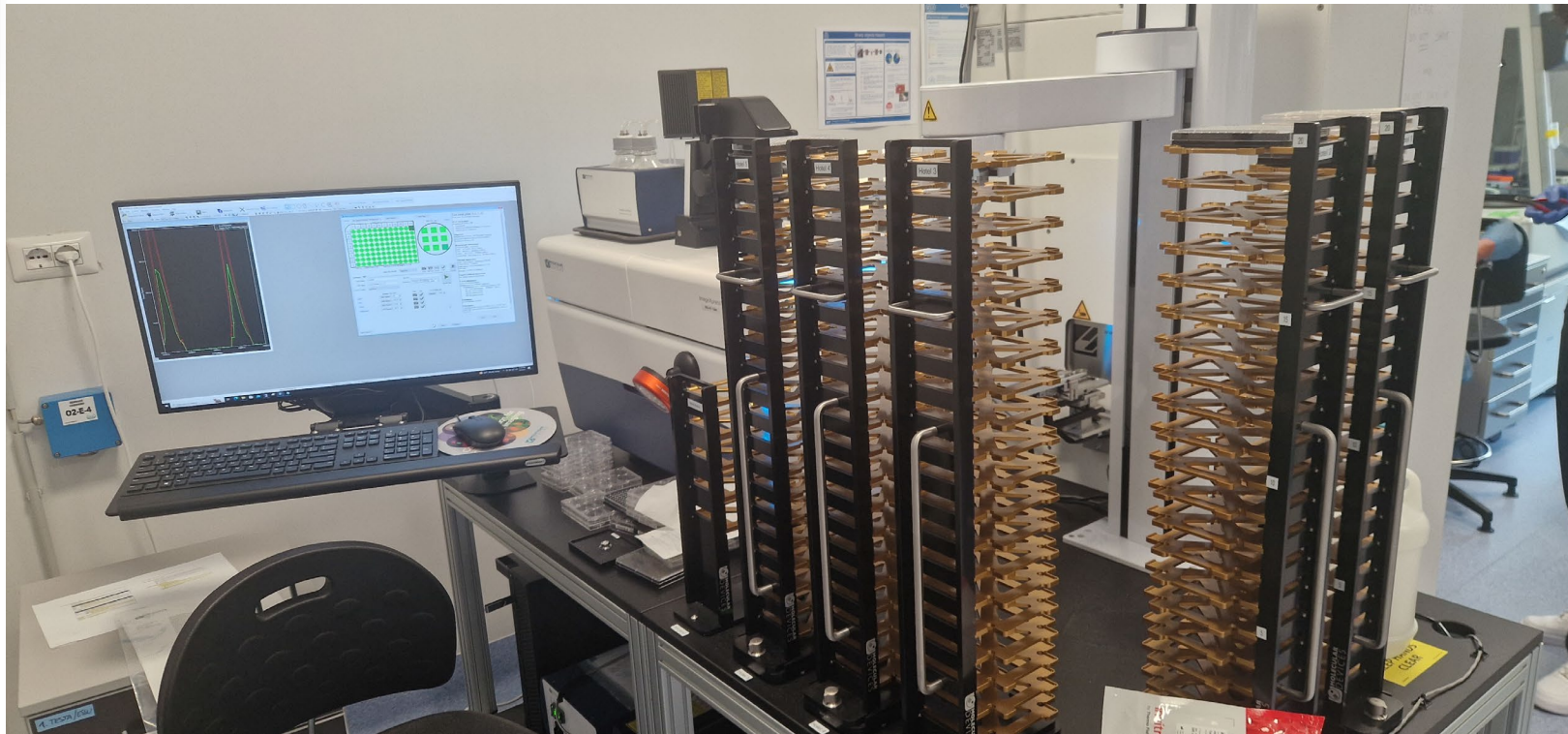


Automated microscopy

High-content



IU4 HIGH-CONTENT

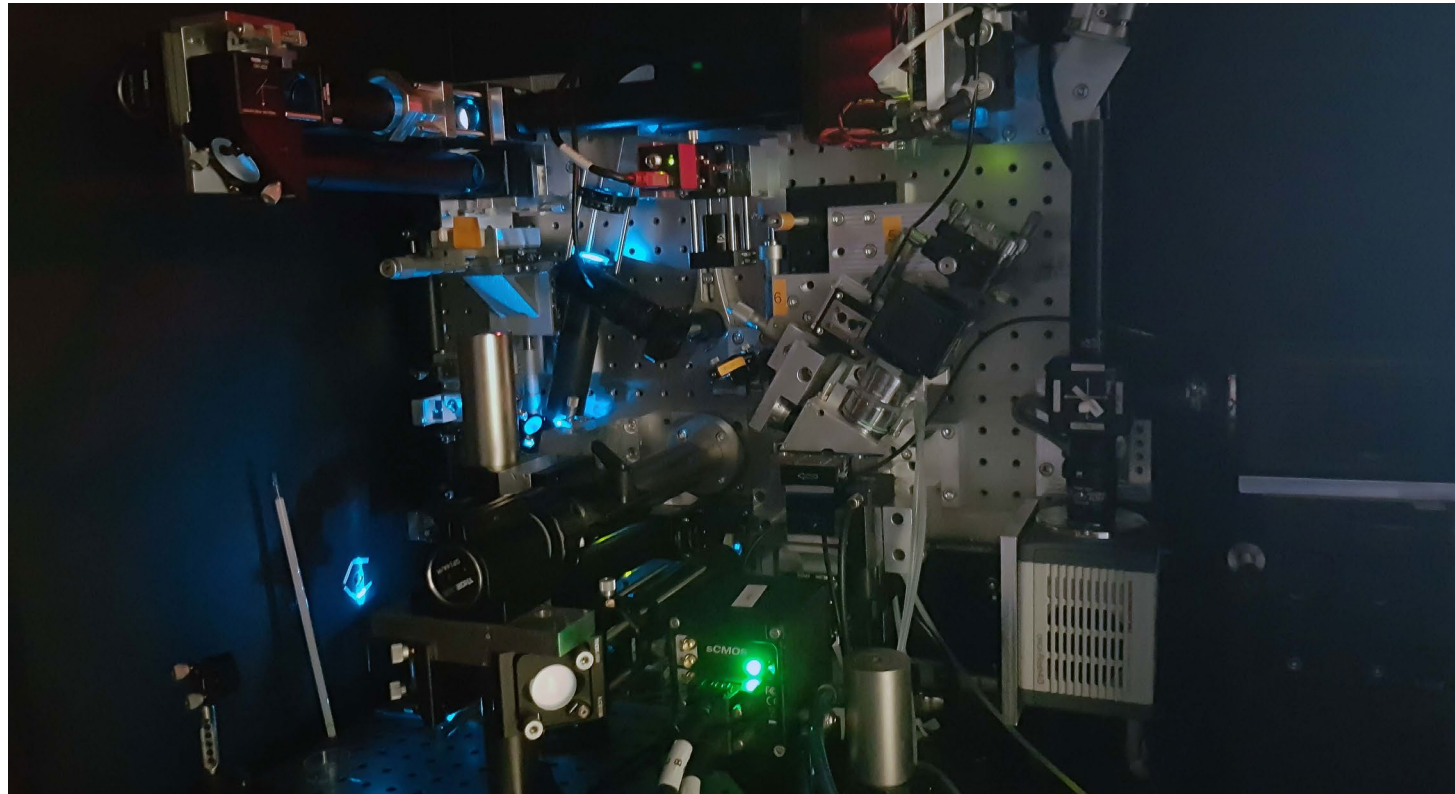


Custom technologies

Custom microscopy



IU6 CUSTOM MICROSCOPY



Thanks!



Nicola Maghelli
Head of National Facility for Light Imaging



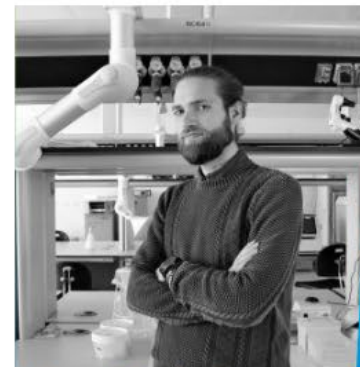
Silvia Bombelli
Senior Technician



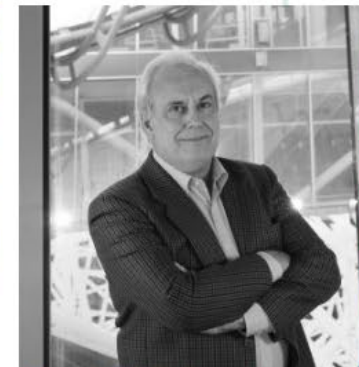
Francesca Casagrande
Senior Technician Light Imaging Facility



Alessandra Fasciani
Senior Technician



Filippo Mirabella
Senior Technician



Alessio Palini
Senior Manager Flow Cytometry Core Facility



Nicolò Panini
Senior Technician



Diletta Pozzi
Manager - Electrophysiology Scientific Service



Dario Ricca
Senior Technician

Thank you

Human Technopole

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