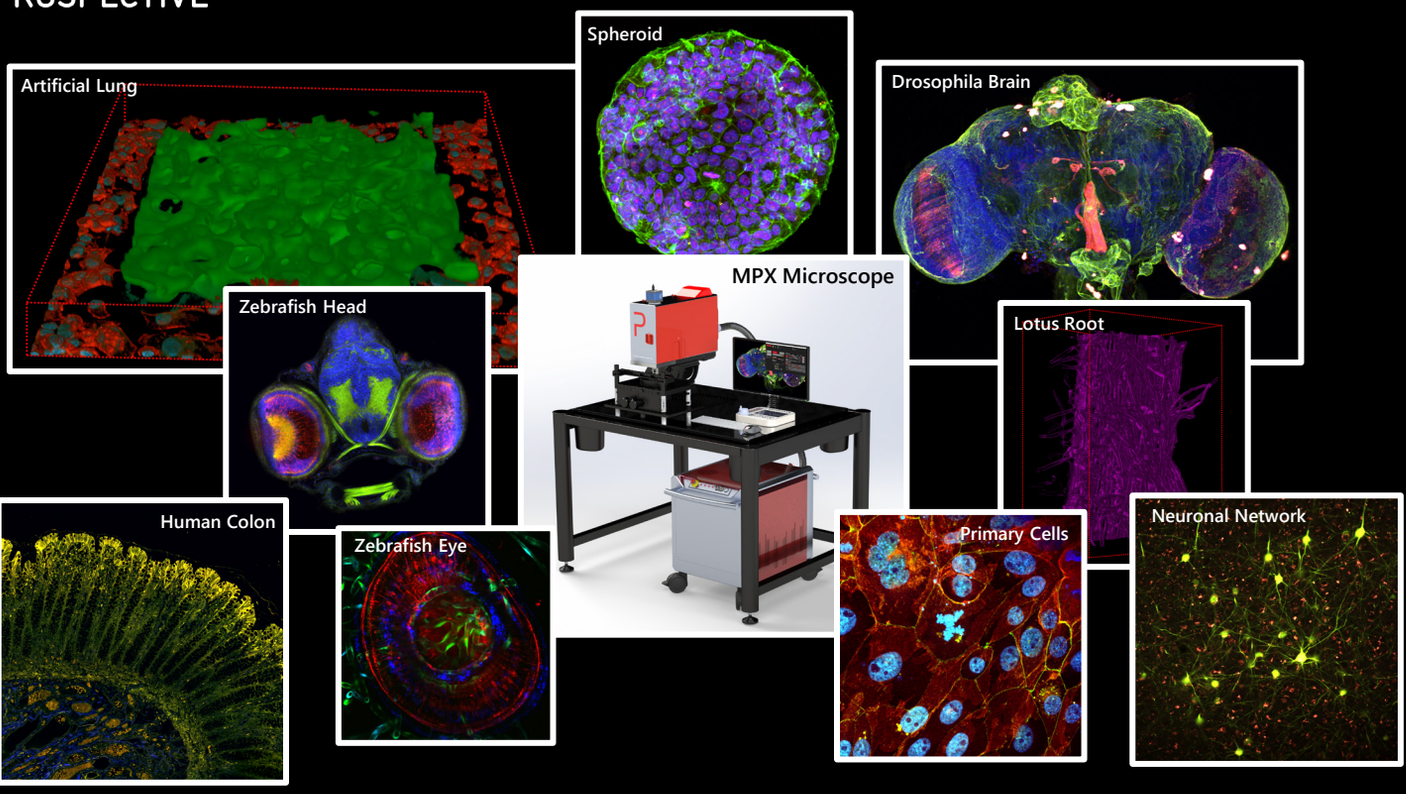
PROSPECTIVE

MULTIPHOTON

Microscopes & Imaging Service



ARTIFICIAL LUNG: Multiphoton Microscopy in Tissue Engineering

3D projection of a multiphoton z-stack of an artificial lung tissue seeded with cells. 3D nano-printed GM10 with Rose Bengal scaffold (green) seeded with A549 cells (red) – cell nuclei (blue)

The sample was kindly provided by Dr. Stefanie Sudhop and Amelie Erben, CANTER lab, University of Applied Sciences Munich

SPHEROID: Multiphoton Microscopy in 3D Cell Culture

Maximum intensity projection of a multiphoton z-stack of a 3D spheroid showing the cell nuclei (blue), E-Cad (red) and Actin (green)

The sample was kindly provided by Dr. Christine Heinzle, VIVIT, Dornbirn

DROSOPHILA BRAIN: Multiphoton Microscopy in Neuroscience

Maximum intensity projection of a multiphoton z-stack of a Drosophila brain showing the cell nuclei (blue), SHG (green), neurons (red).

Published in Biophotonics, Oct. 2022 - A Multiphoton Microscope Enables Portable 3D Biological Imaging

The sample was kindly provided by Dr. Tongchao Li

ZEBRAFISH HEAD: Multiphoton Microscopy in Developmental Biology

Maximum intensity projection of a Multiphoton z-stack of a zebrafish larvae showing the cell nuclei (blue), prox1-tagRFP (red) and Actin-Phalloidin488 (green)

The sample was kindly provided by Dr. Sara Caviglia, Neuhauss Lab, University of Zürich and Ober Lab, University of Copenhagen

LOTUS ROOT: Multiphoton Microscopy in Plant Research

3D projection of a Multiphoton z-stack of a lotus root stained with Fuchsin (magenta)

The sample was kindly provided by Dr. Defeng Shen, Max Planck Institute for Plant Research, Cologne

HUMAN COLON: Multiphoton Microscopy in Medical Research and Diagnostics

Label-free whole slide image of a human FFPE colon section

The sample was kindly provided by Dr. Branislav Zagrapan, Landeskrankenhaus Feldkirch

ZEBRAFISH EYE: Multiphoton Microscopy in Neuroscience and Developmental Biology

Maximum intensity projection of a multiphoton z-stack of a zebrafish eye showing SHG (blue), the vascular system (green) and the retina cells (red). Published in Biophotonics, Oct. 2022 - A Multiphoton Microscope Enables Portable 3D Biological Imaging

The sample was kindly provided by Dr. Sara Caviglia, Neuhauss Lab, University of Zürich and Ober Lab, University of Copenhagen

PRIMARY CELLS: Multiphoton Microscopy in 2D Cell Culture

Multiphoton image of swine primary cells showing the cell nuclei (blue), ZO-1 (green) and E-Cadherin (red)

The sample was kindly provided by Prof. Dr. Katharina Schindowski , University of Applied Sciences Biberach

NEURONAL NETWORK: Multiphoton Microscopy in Deep Tissue Neuroscience

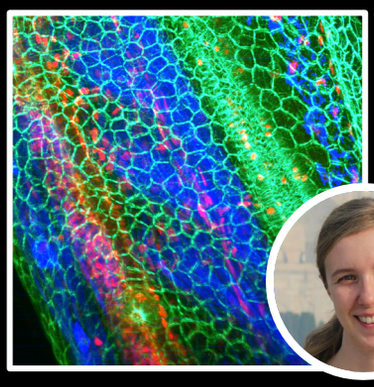
Multiphoton deep tissue image in a whole cleared mouse brain showing the gfp-expressing neurons

The sample was kindly provided by Monika Puchalska, Nencki Institute of Experimental Biology

PROSPECTIVE INSTRUMENTS

MULTIPHOTON MICROSCOPES & IMAGING SERVICE

For a microscope or contract imaging service request please contact us:
www.p-inst.com
contact@p-inst.com



„For my research I focus on how progenitor cells self-organize in the zebrafish liver. For that 3D imaging of the whole organ and ideally the whole animal model is crucial to understand the complex interrelationships between individual organs during development"
Dr. Sara Caviglia

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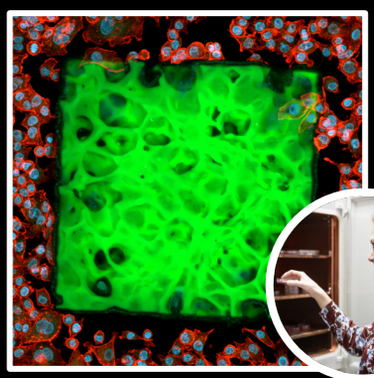

"Multiphoton imaging with the MPX allows us to image our 3D tissue-engineered constructs. Here, we could image a cell-seeded nanoscribed 3D-printed lung tissue scaffold of 300 x 300 x 300 µm. The high penetration depth combined with the intrinsic confocal features of multiphoton microscopy makes it a suitable tool for us to image our samples"
Amelie Erben, PhD student

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Dr. Stefanie Sudhop, CANTER lab, Munich
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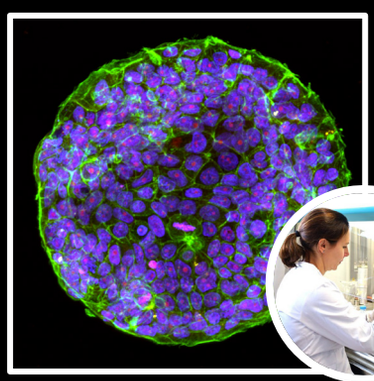

"Using the MPX multiphoton setup we could easily image spheroids up to 200 µm without clearing methods. Sample transfer was very straightforward and correspondence with the team of PI highly satisfactory"
Dr. Christine Heinzle

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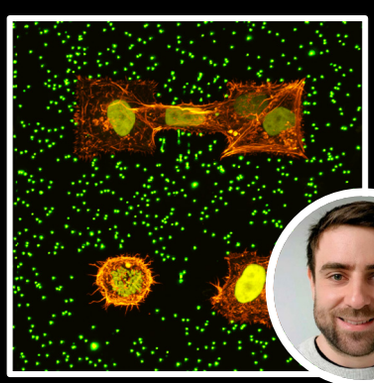

"With 3D cell culture experiments comes the challenge of 3D imaging. The MPX system enables us to visualize the cells in a 3D hydrogel. The MPX enables z-stack imaging with high resolution which is a requirement for the analysis of 3D traction force microscopy"
Stefan Stöberl, PhD student

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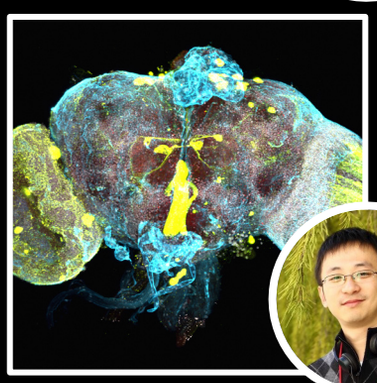

„For me multiphoton imaging with the MPX was a great opportunity to create 3D z-stacks of the whole drosophila brain without any need of slicing or clearing procedures. This allows me to analyze neuronal tracking within the brain in 3D"
Dr. Tongchao Li

PARTNER CONTACT:
Dr. Tongchao Li

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