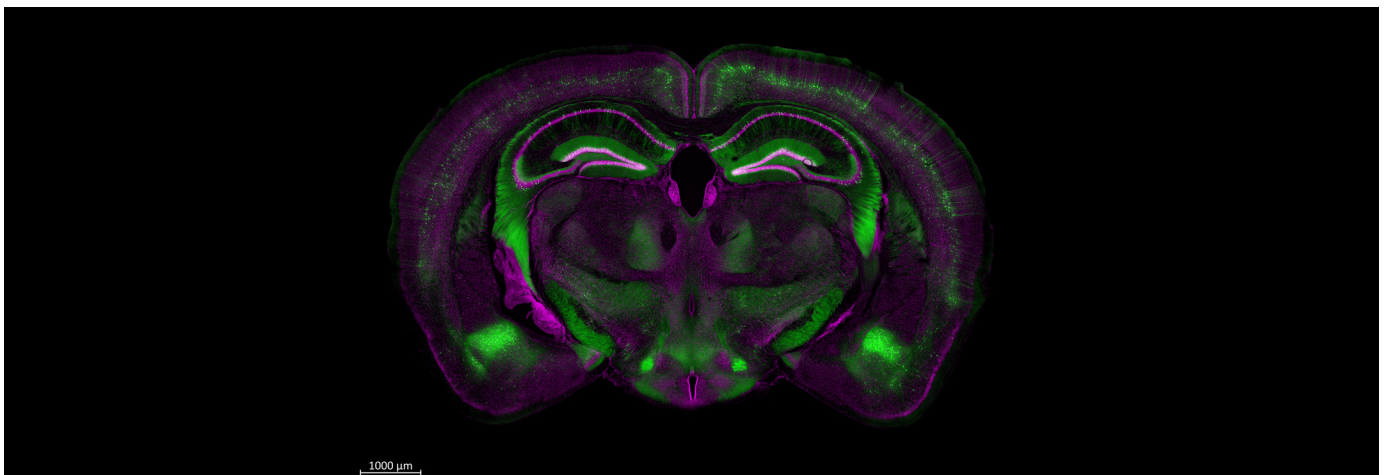# Discover and evaluate your large samples

ZEISS LSM 900 Screening

Visualization of the mouse brain. Sample Courtesy of Prof. Jochen Herms, LMU München, Germany

Life is inherently 3-dimensional. So, studying cells in their native 3D physiological environment is crucial for obtaining meaningful and relevant data. Confocal microscopes have been routinely used to screen 3D cell cultures in high throughput well plates or stitch large tiles in tissue sections, organoids, and embryos. The large dataset generated by such experiments also provides statistically more reliable information when analyzed by software tools. The ZEISS LSM 900 is equipped with high-speed scanning stages and intuitive ZEN software to make such demanding experiments truly routine.

The ZEISS LSM 900 Screening

The ZEISS LSM 900 Screening package is designed for efficient high-throughput experiments and large tiling applications. Besides the sensitive LSM 900 microscope, this package contains a high-speed scanning stage and dedicated ZEN image acquisition and analysis toolkits. It enables the user to achieve automatic sample carrier and tissue detection workflows, create flexible and adapting focusing strategies, and execute powerful image analysis.

Applications
- Well plate screening
- Large tissue stitching
- Multi-channel fluorescence imaging
- 3D imaging

Highlights
- Sensitive GaAsP detector: The GaAsP PMT boasts high light collection efficiencies across a broad range of spectra. This leads to exceptional signal-to noise ratios, which in turn enables faster scan speeds without sacrificing image quality.
- High-speed scanning stage: Together with the advanced ZEN Tiles & Positions features, users can seamlessly combine multiple positions and tiles experiments. The built-in focus strategy wizard and predefined sample carrier templates help you generate precise and high-resolution images.
- LSM Plus: LSM Plus provides a unique confocal experience, by effortlessly improving all your experiments with a system-optimized linear deconvolution algorithm.

ZEISS LSM 900 Screening
The Package Components

Microscope

- Axio Observer 7
- Scanning stage 130 × 100
- Mot. Condenser LD 0.55

Light source / Detectors

- Laser: 405, 488, 561, 633
- Colibri 5 RGB-UV with Filter sets 90 HE LED
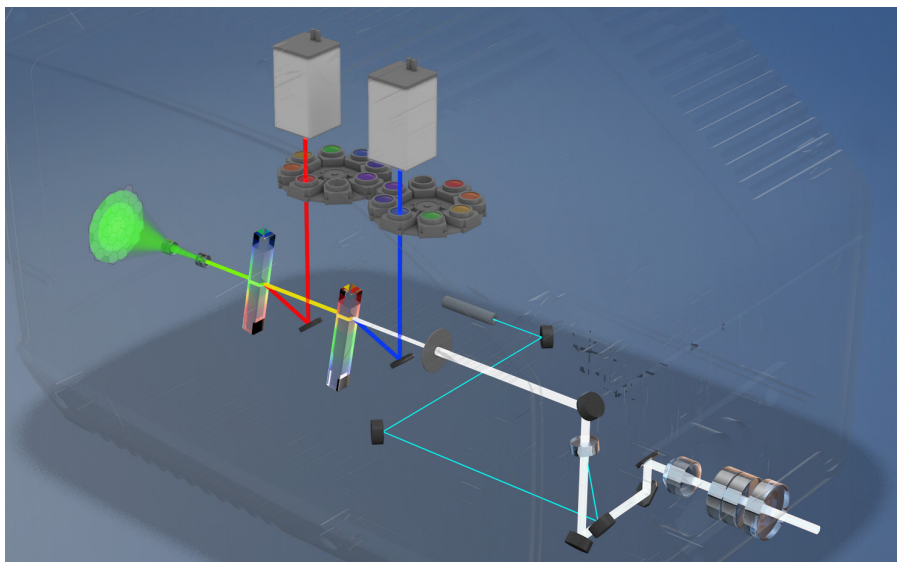- 2x MA-PMT + GaAsP-PMT

Objectives

- Plan-Apochromat 10x/0.3
- Plan-Apochromat 20x/0.8
- Plan-Apochromat 63x 1.4 Oil

Workstation / Monitor

- Microscopy Workstation Z2 G5 with 64 GB RAM and NVIDIA Quadro P1000 4 GB
- Monitor TFT 27" HP E27u G4

ZEN Software Modules

- Newest ZEN license
- ZEN Toolkit Advanced Acquisition: acquire and process multi-dimensional images with intuitive tools
- ZEN Toolkit 2D: Use advanced processing and image analysis for image data
- ZEN Toolkit 3D: Visualize and analyze 3D image stacks
- ZEN Module LSM Plus: real time linear deconvolution to improve resolution and SNR of all confocal images

LSM 900 beam path

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Seeing beyond