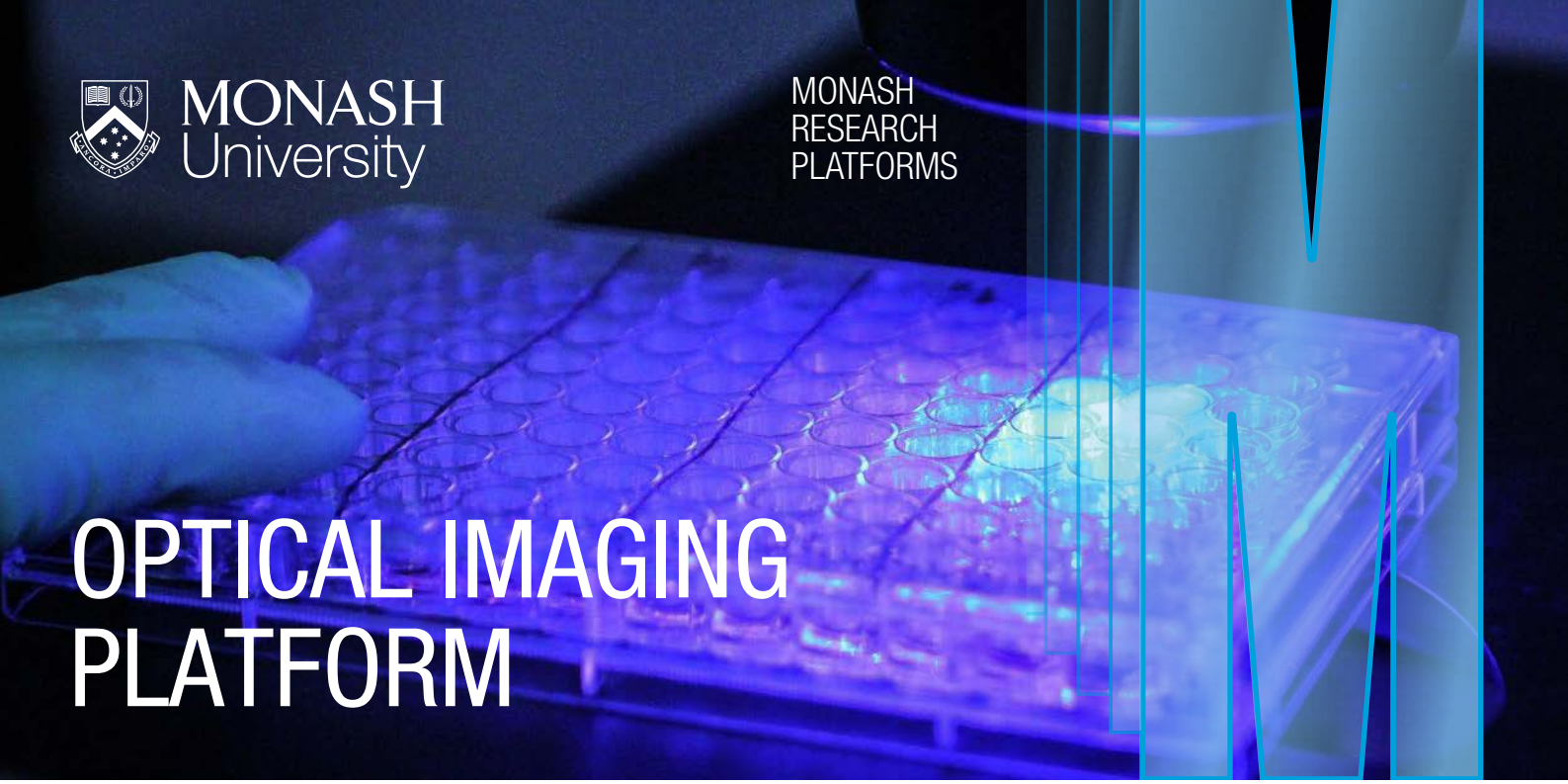
MONASH University

MONASH RESEARCH PLATFORMS



OPTICAL IMAGING PLATFORM

Monash University Malaysia's Optical Imaging Platform (OIP) provides world-class optical imaging with its core facilities.

OIP's technologies include multiphoton microscopy, fluorescence and confocal microscopy, which cater to a diverse range of morphological and functional characterisation in biomedical sciences.

All technologies are underpinned by bioimage analysis and research training.

EXPERTISE

- Our team provides expertise and training across a wide range of analytical microscopes and microscopy modalities in optical imaging.
- Our services range in complexity from sample preparation, image capturing and image data analysis
- We provide guidance and training to allow researchers to undertake cutting-edge analytical optical imaging techniques with confidence.

KEY INSTRUMENTATION

Our instrumentation is sourced from major light microscopy companies, including Leica, Nikon, Olympus and Carl Zeiss. We offer access to:

- Widefield/Inverted fluorescence microscopy
- Confocal laser scanning microscopy
- Multiphoton microscopy
- Automated slide scanner
- Stereomicroscopy (at Animal Research Platform)
- Image analysis
- Histology facilities: Cryostat, microtome, ultramicrotome, vibratome, laser capture microdissection

WORKING WITH US

- Fee for service
- Consultancies
- Collaborative research
- Training

Specialist Services

Our team provides advanced microscopy instrumentation and analytical techniques to a large research community. Ranging in complexity from the cytology, histology samples to live cell or in vivo imaging, we will guide and train users to perform experiments, produce high-quality images and extract analytical data.

Specialist Service #1: Advanced Light And Fluorescence Microscopy

- Our instrumentation provides a solid platform of advanced light and fluorescence microscopy techniques, including time-lapse, slide scanning (in conjunction with our histology facilities) and image tiling, and live-cell imaging on slides, chambers or microplates. Both upright and inverted microscopes are available, and all systems are supported by a comprehensive range of professional software for bioimage analysis to provide quantitative results.

Specialist Service #2: Live-Cell Imaging

- Our live-cell imaging instrument is equipped with a temperature-, humidity- and CO2 -levels controlled chamber and deconvolution function, which supports live and long term imaging experiments.

Specialist Service #3: Optical Sectioning And 3D Analysis

- Our range of instrument modalities includes confocal laser scanning (CLSM) and multiphoton microscopes (MP). Imaging deeper tissue can be done by multiphoton imaging in live, fixed or cleared tissue microscopy which is capable of imaging to a depth of ~800 µm with specialised objectives.

Specialist Service #4: Image Analytics

- Extracting and understanding bioimaging data is crucial, and handling big datasets is often a bottleneck in research. Our staff are available to train scientists and students in the analytical software with the help of Monash Micro Imaging at Monash Australia.

Other Capabilities

- Histology-specialised equipment includes cryostats, microtomes, vibratome and laser-capture microdissection for histological and morphological analysis. An automated brightfield and fluorescent slide scanner is also available for digitalisation of histology or cytology specimens direct to your screen.

Optical Imaging Platform

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