



Advanced Light Microscopy

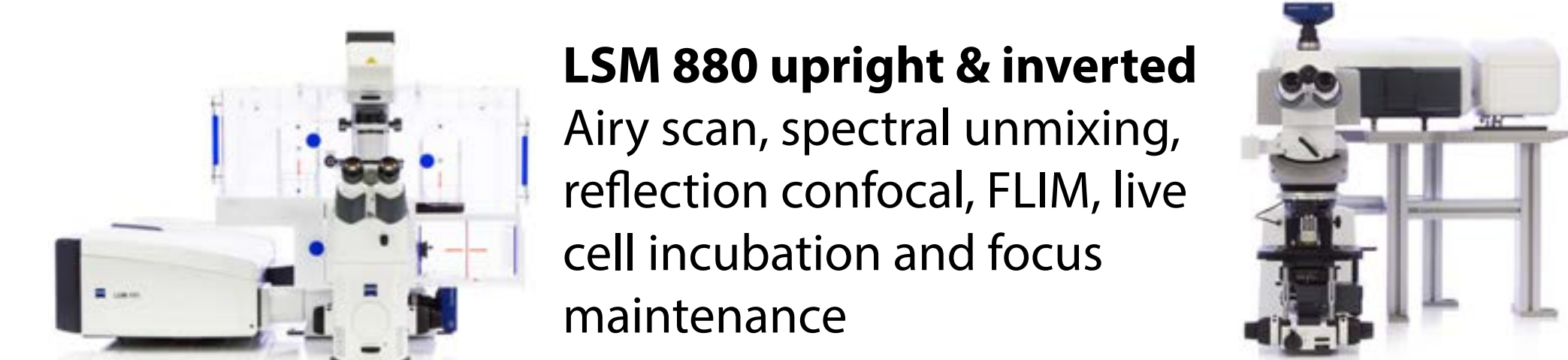
Harvard Center for Biological Imaging
Room 2052 Biological Laboratories, 16 Divinity Ave, Cambridge
www.hcbi.fas.harvard.edu



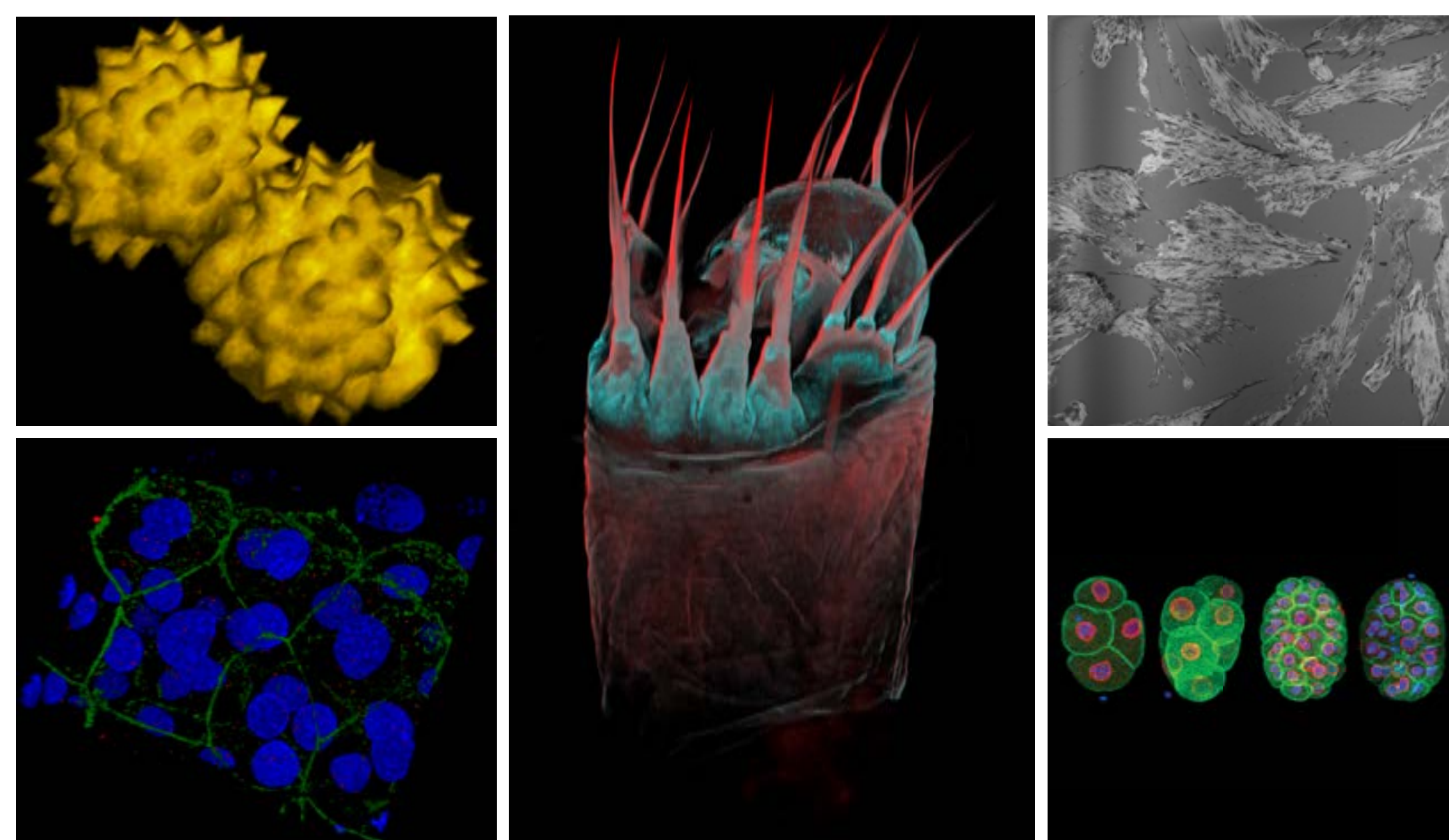
About the HCBI

- 13 Imaging Platforms, 5 Workstations, Cloud Data Storage
- 'Evergreen' facility: microscopes replaced every 24-36 months
- Open to all researchers regardless of affiliation
- Free training
- Volume discounts for heavy users and live-cell imaging
- On-site support from imaging experts

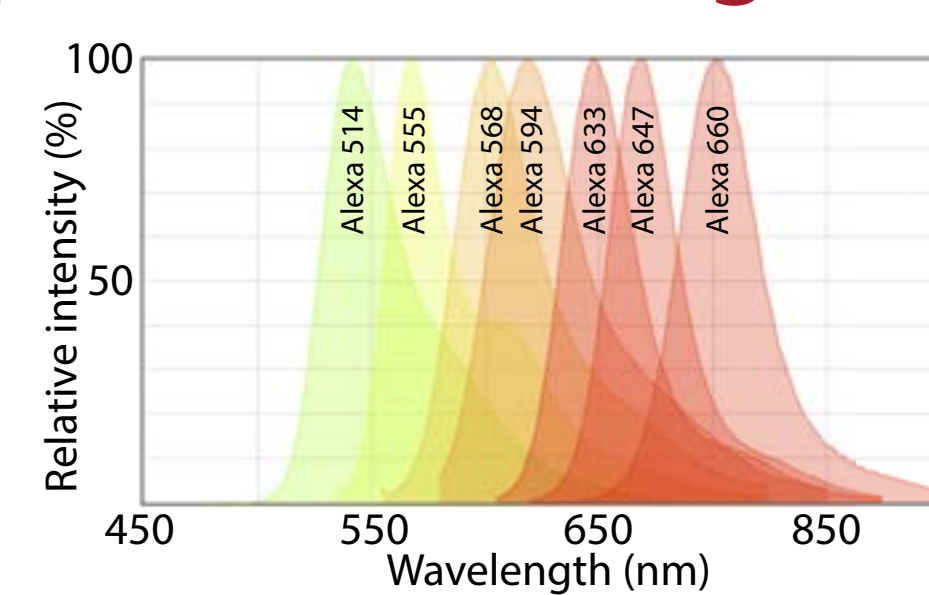
Confocal



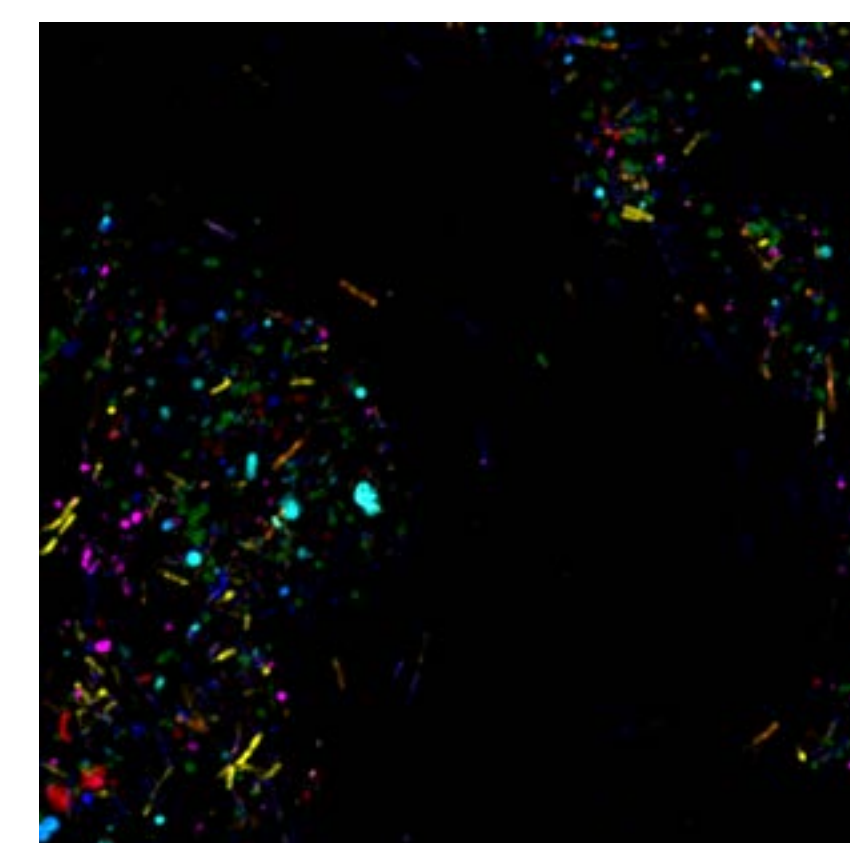
LSM 880 upright & inverted
Airy scan, spectral unmixing, reflection confocal, FLIM, live cell incubation and focus maintenance



Spectral unmixing



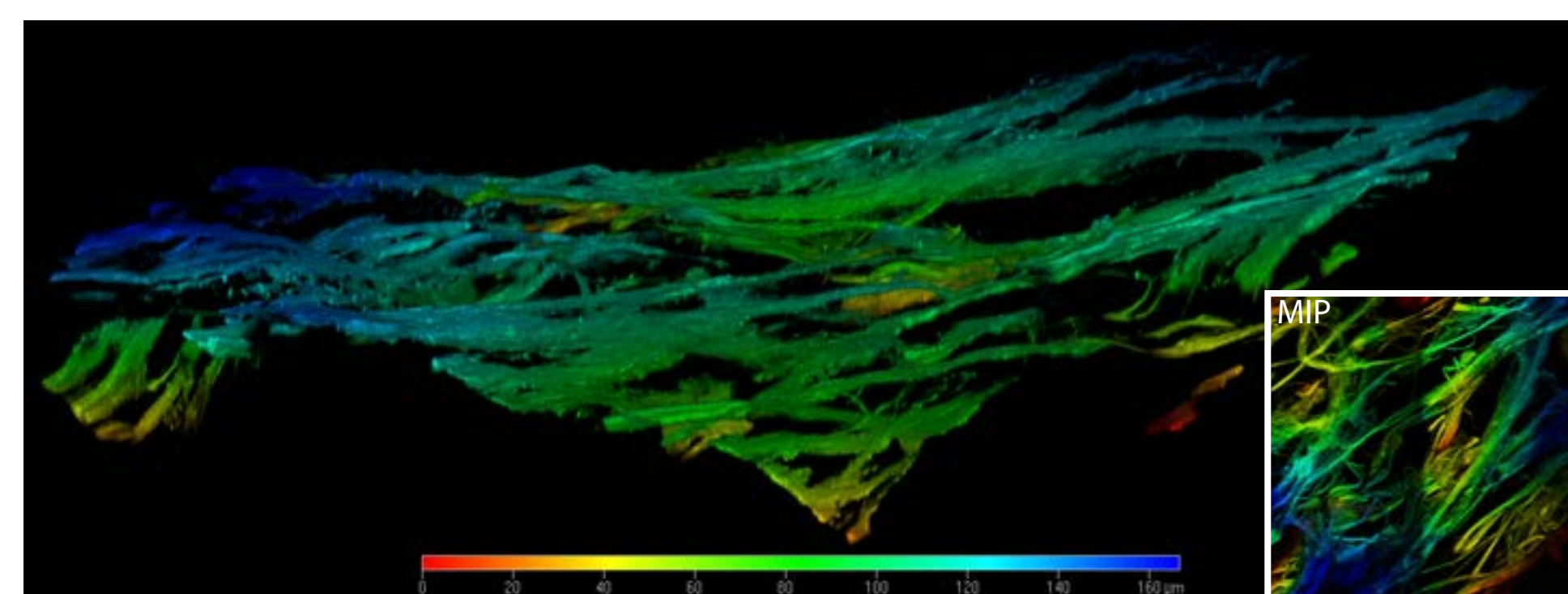
- *Porphyromonas endodontalis*
- *Fusobacterium nucleatum*
- *Prevotella Oris*
- *Streptococcus sanguinis*
- *Parvimonas micra*
- *Veillonella parvula*
- *Actinomyces sp. 169*



Multi-photon



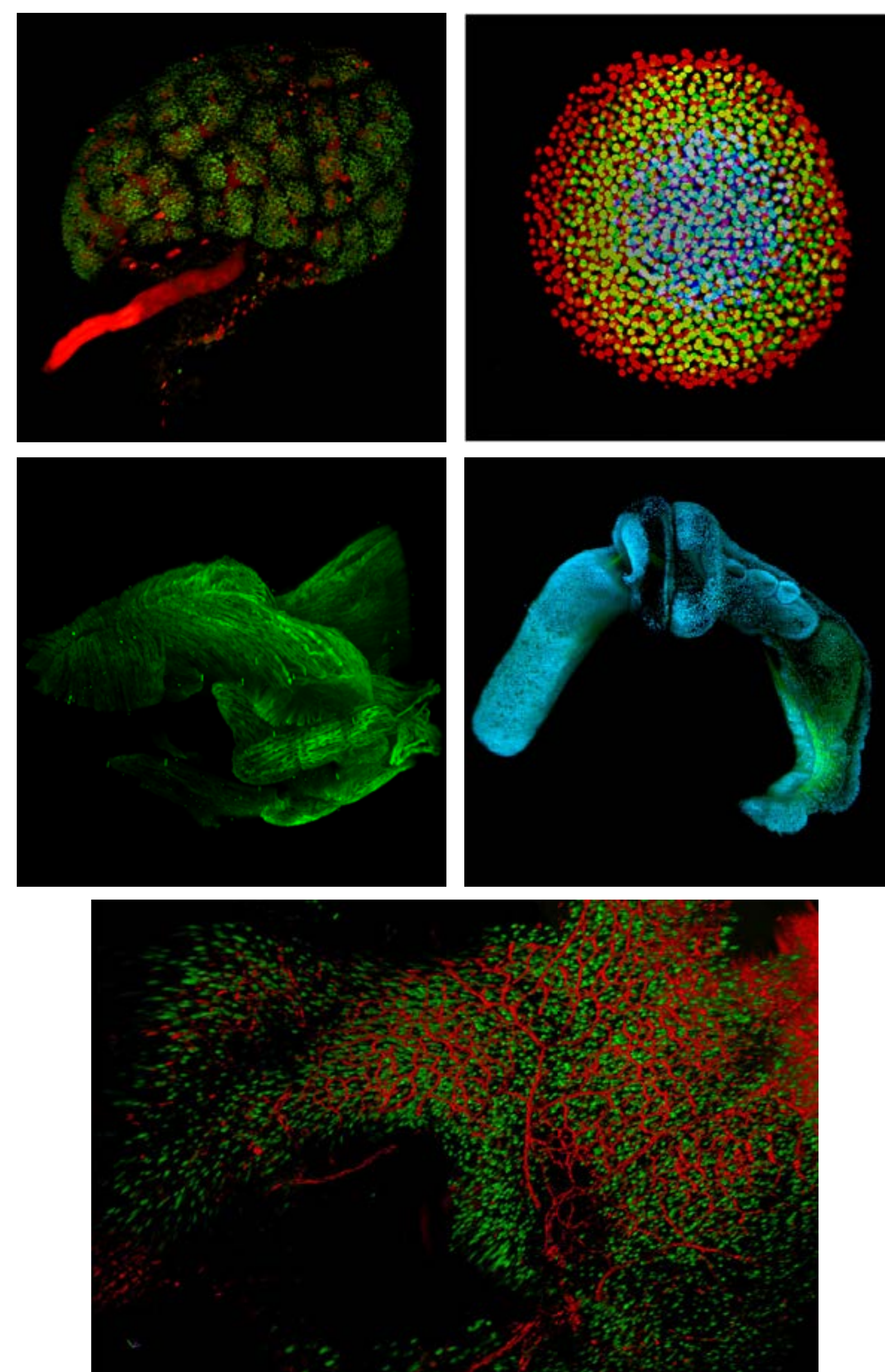
Insight DS+ on upright LSM 880
Tunable from 680 to 1300 nm, enables 2-photon, 3-photon, SHG and THG imaging



Lightsheet



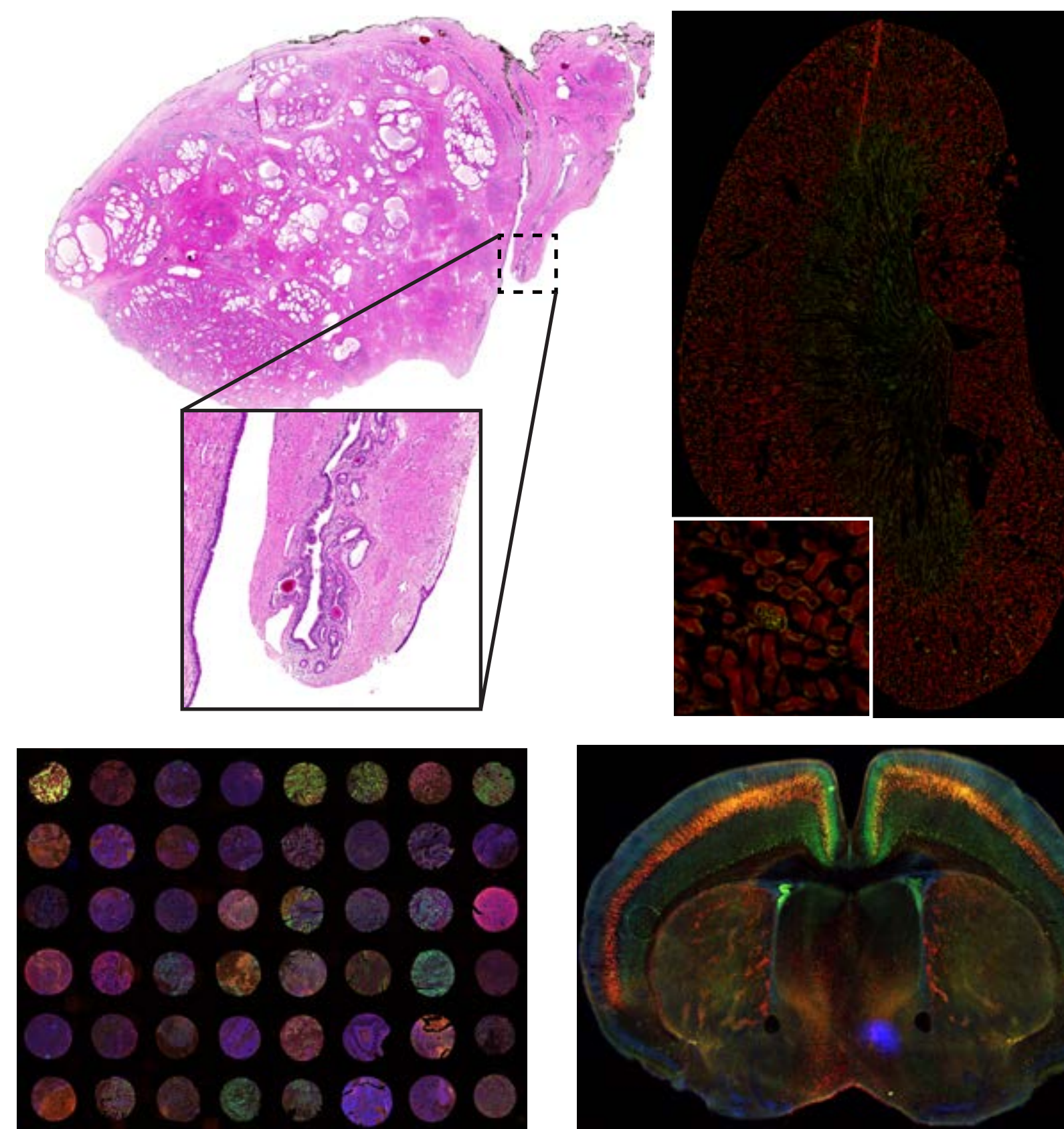
Lightsheet Z.1
Dual camera, incubation for live samples, optics for cleared tissue



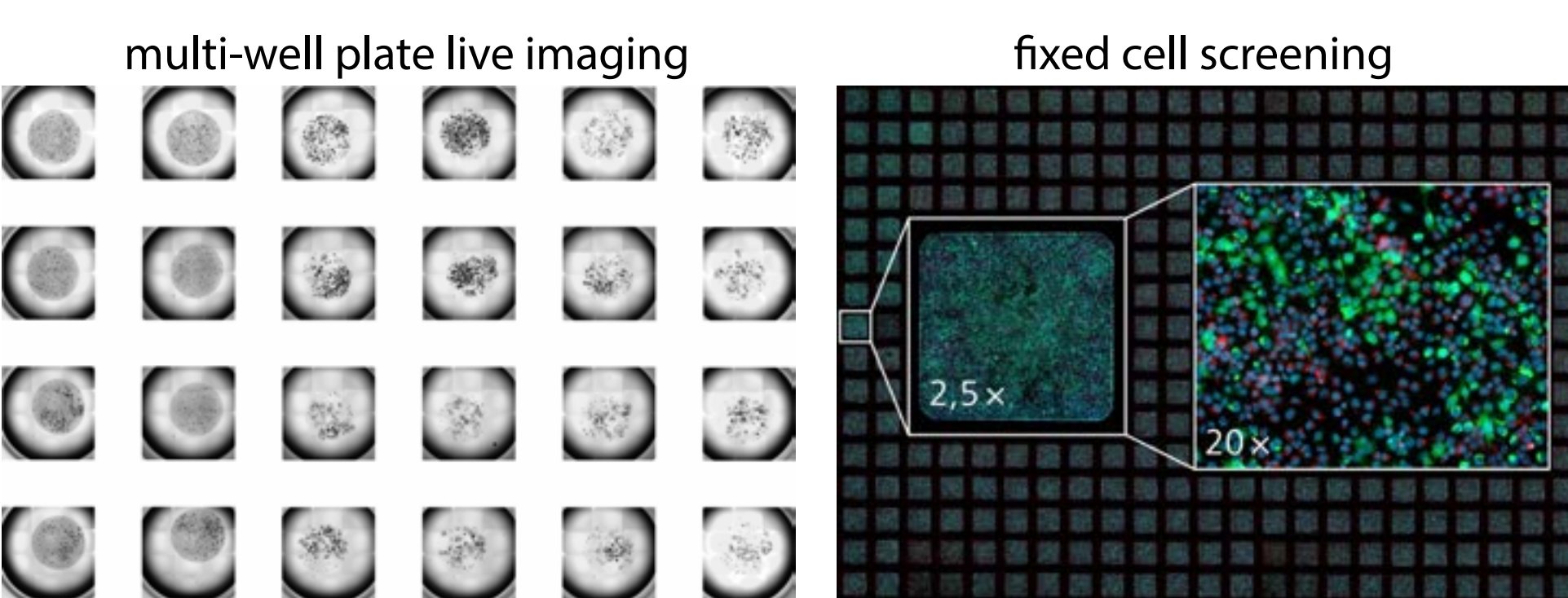
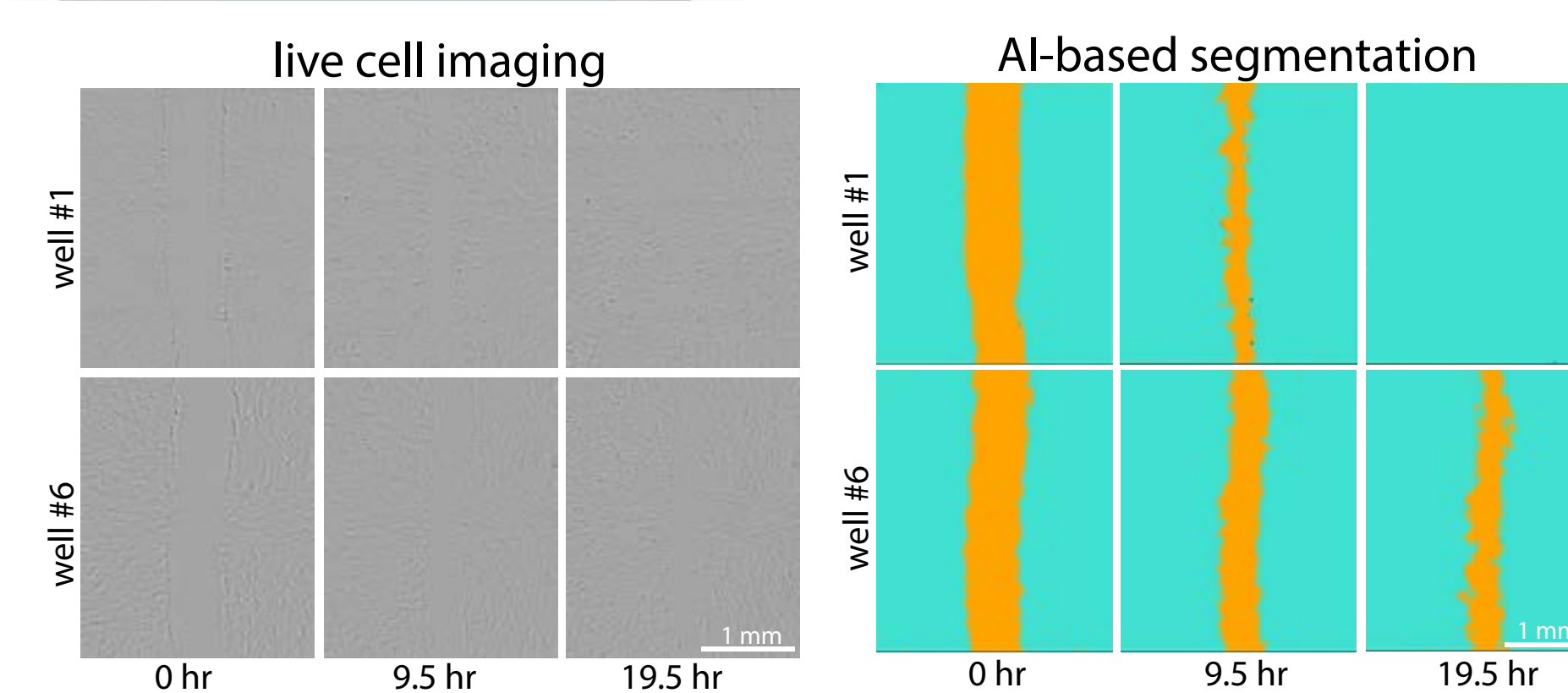
High-content screening



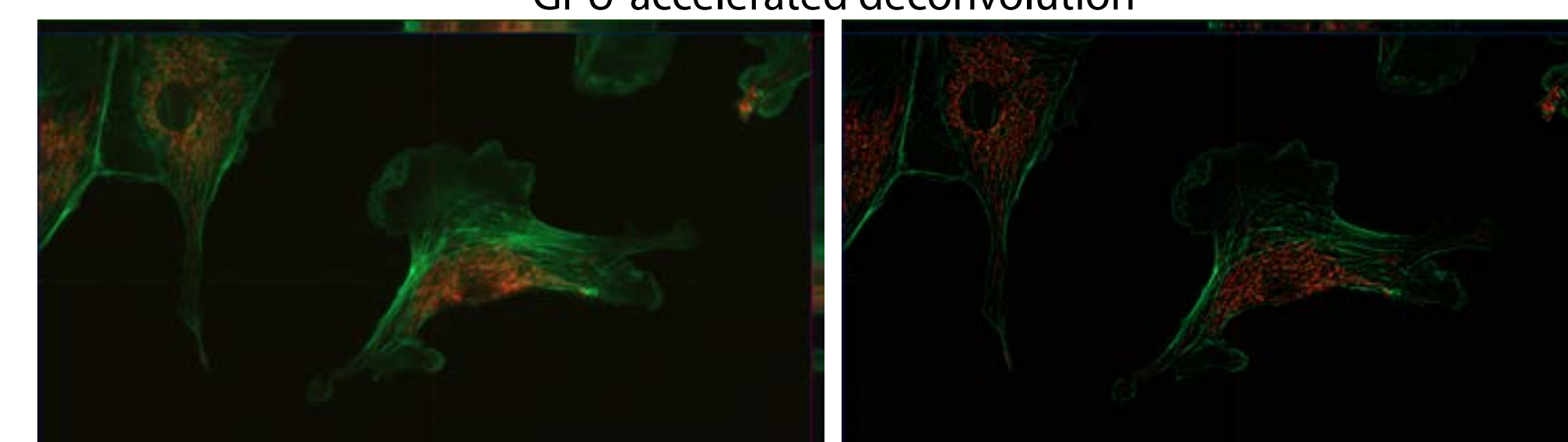
Axio Scan.Z1 whole slide scanner
100 slide capacity, bright field
5 color fluorescence, polarization



Cell Discoverer 7 automated imaging
brightfield, 4 fluorescent channels,
robotic loading of 20+ plates,
full incubation and focus maintenance



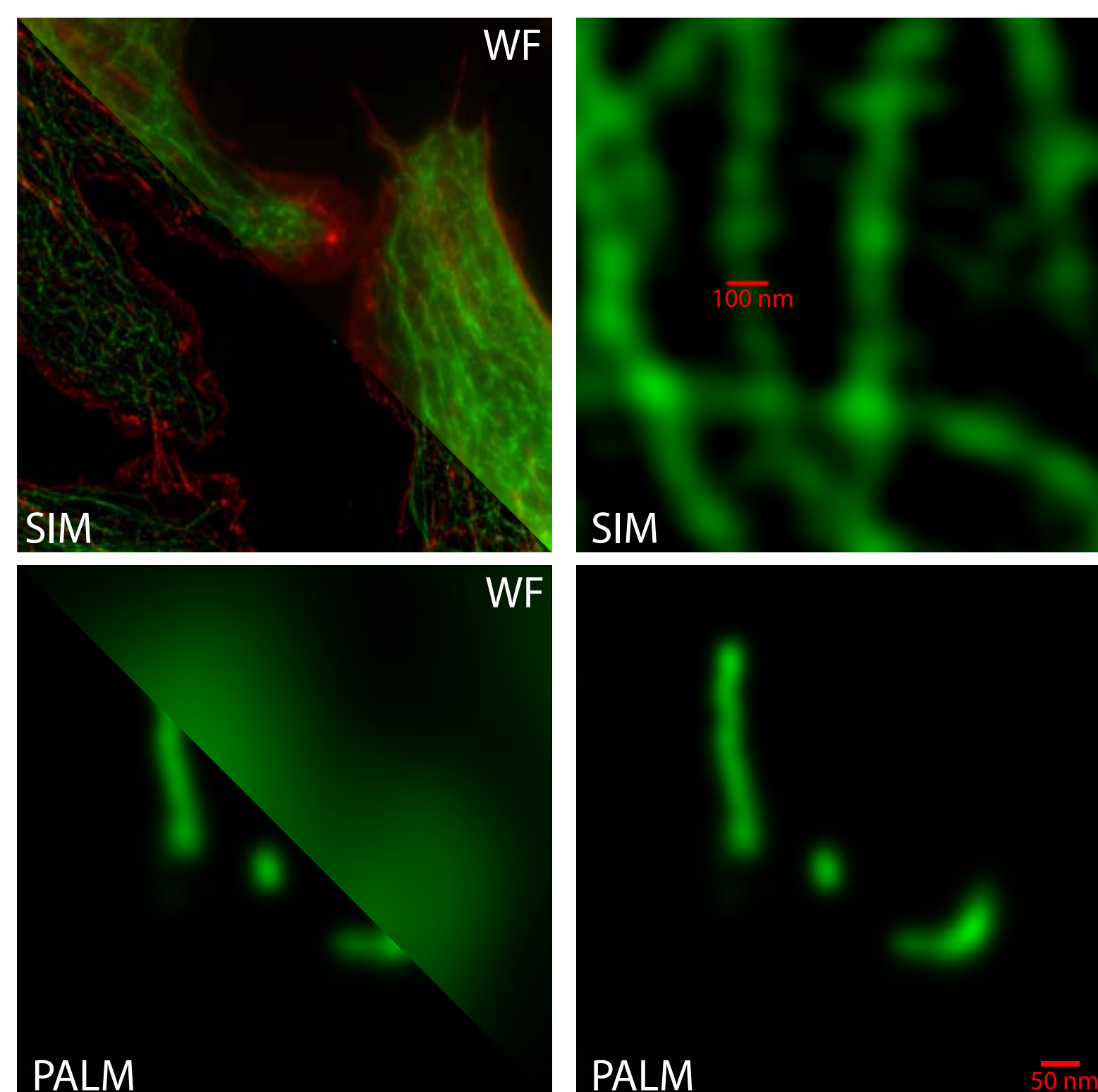
GPU-accelerated deconvolution



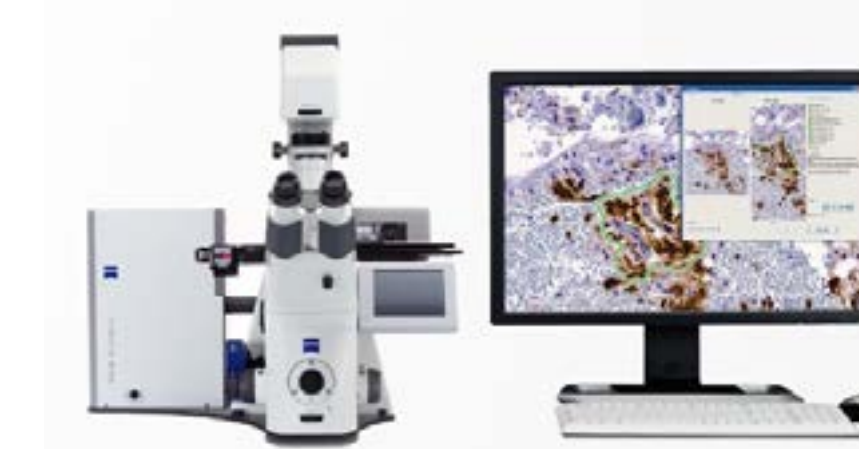
Super-resolution



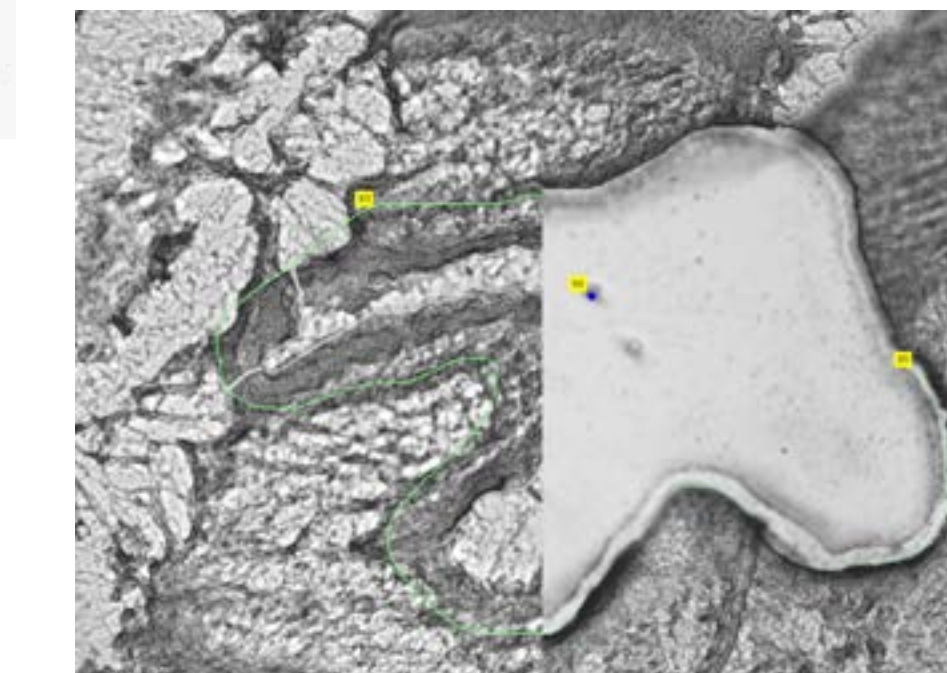
ELYRA PS1 Super-resolution
TIRF, Structured Illumination,
Single Molecule Localization
(PALM, STORM)



Laser capture dissection



PALM microbeam 3 laser dissection
Brightfield or fluorescence dissection
catapult/capture to Eppendorf tubes



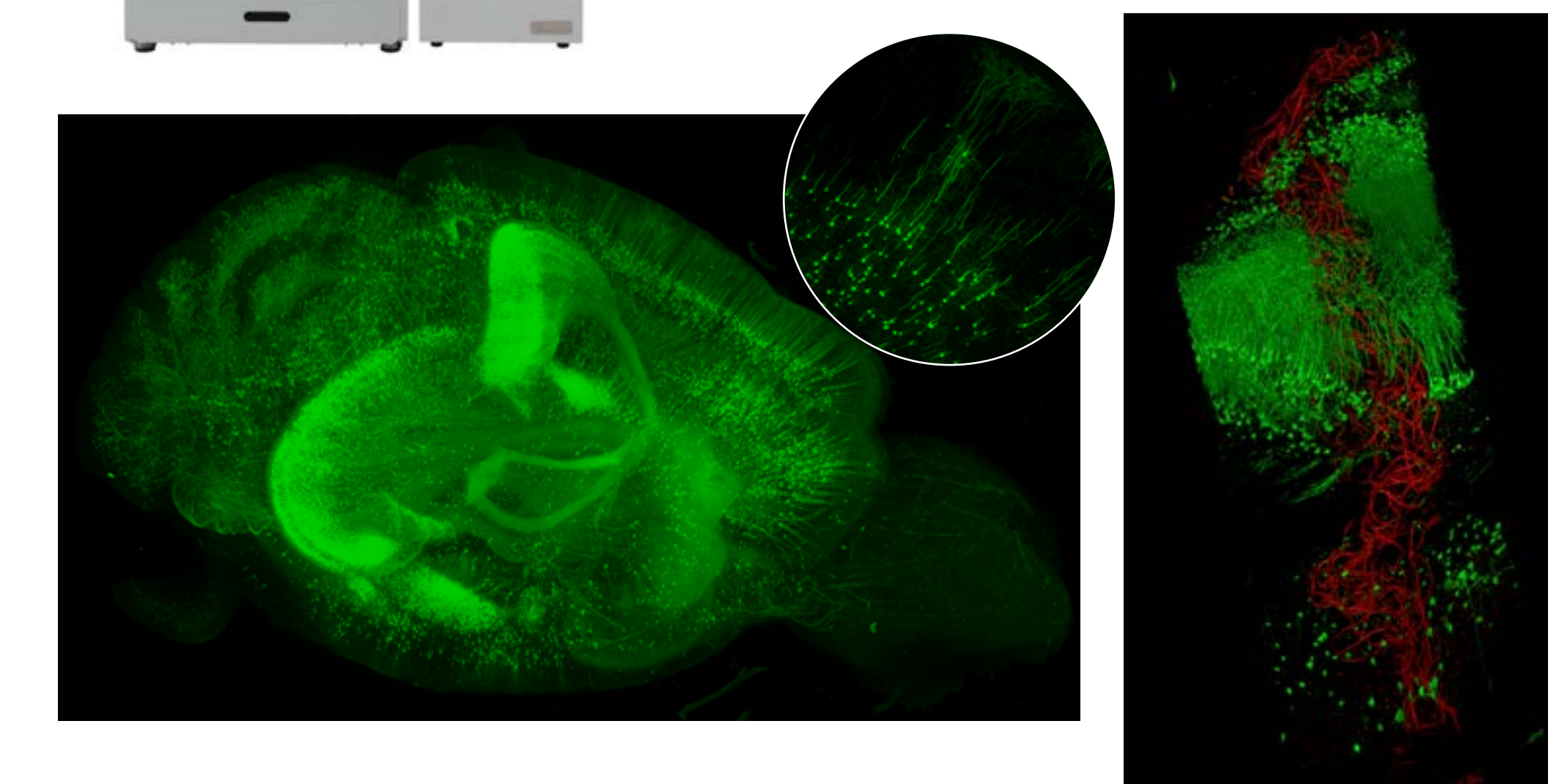
Cleared tissue imaging



X-CLARITY
Hydrogel embedding
Electrophoretic Tissue Clearing



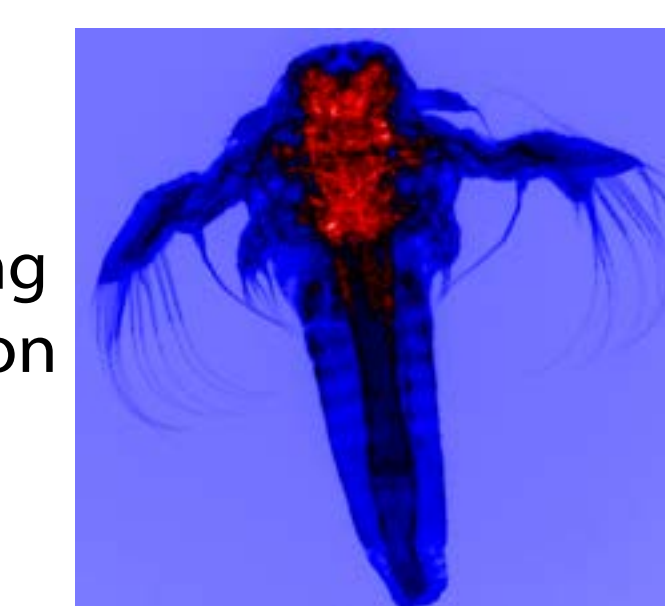
Smart Clear Pro
Electrophoretic Tissue Clearing
Electrophoretic Antibody staining (Jan 2019)



Macroscopy



Axio Zoom V16
fluorescence + optical sectioning
brightfield, darkfield, polarization



Education

- MCB 68 - Cell Biology through the microscope
- MCB 352 - Microscopy
- Bi Annual Tissue Clearing Workshop (fall 2019)
- Lunch and Learn Lecture Series (posted to HCBI YouTube channel)



Contact Us

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