



lifecanvas technologies

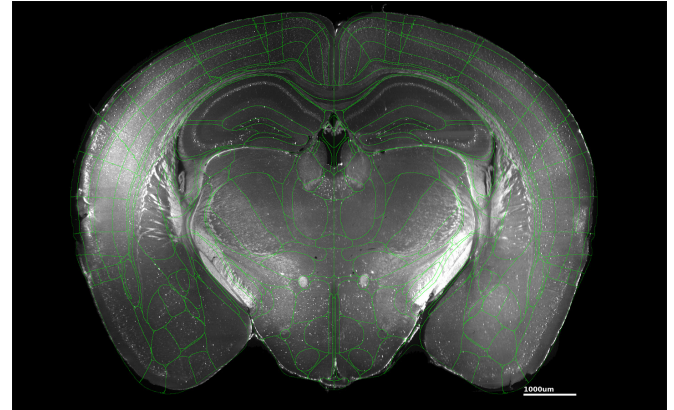
Revolutionizing bioimaging
to elevate human health.

CRO Services

Tissue processing, imaging, and analysis for unbiased 3D data

LifeCanvas offers comprehensive whole organ mapping services aligned with your scientific aims. Leverage our complete workflow and interactive data delivery tools to attain an unparalleled degree of biological detail and drive your research forward.

Right: Allen Brain Atlas overlay of c-FOS-stained mouse brain



**TISSUE
PRESERVATION**



**TISSUE
CLEARING**



**TISSUE
LABELING**



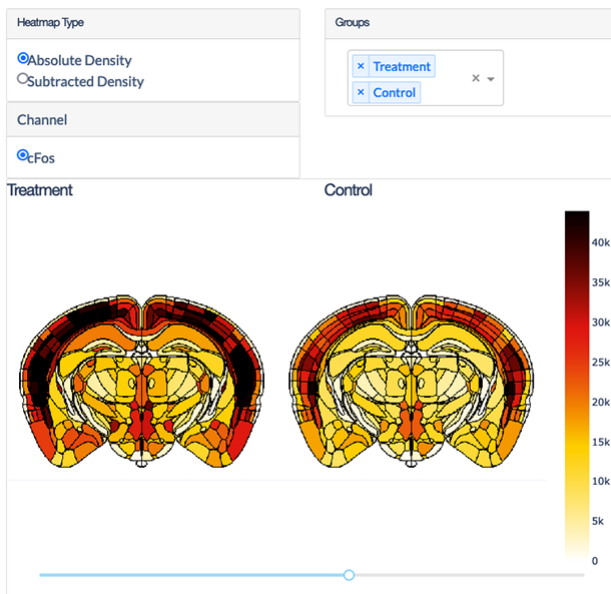
**LIGHT SHEET
MICROSCOPY**



**TISSUE
SECTIONING**



**3D DATA
ANALYSIS**



Side-by-side heatmaps of c-FOS+ cell density per brain region of Treatment vs. Control experimental groups, visualized via our interactive platform.

Leverage our advanced tools for spatial biology:

- **SHIELD** preserves samples and biomolecules
- **SmartBatch+** actively clears and labels groups of samples for maximum experimental consistency
- **SmartSPIM** and **MegaSPIM** rapidly acquire high-resolution images of a variety of samples
- **Megatome** precisely and uniformly sections a diverse range of tissue types and sizes
- **SmartAnalytics** enables quantification of 3D data

Just send PFA-fixed samples and obtain 3D data:

- Quantifying neural activity (c-FOS+)
- Mapping endogenous fluorescence signals
- Molecular phenotyping for neurological disorders
- Modeling tumors
- Labeling nuclei and vasculature
- Imaging multiple tissue types

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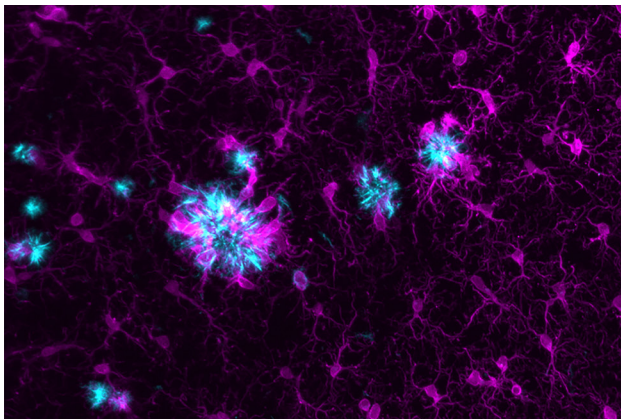
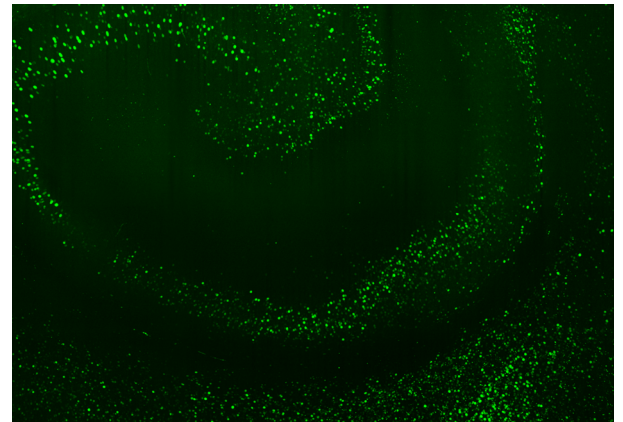
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Featured Applications

c-FOS DETECTION

Label and image c-FOS+ cells throughout the CNS with our optimized tools and protocols. We also offer robust models for detecting c-FOS+ cells in murine brain samples and provide cell counts, densities, and heat maps quantifying levels of regional neural activity registered to the Allen Brain Atlas.

c-FOS expression in rat hippocampus, 3.6X magnification.



NEUROLOGICAL DISORDERS

Process and analyze samples for β -amyloid deposition, accumulation of α -synuclein in Lewy Bodies, and assessment of neuroinflammatory responses by reactive astrocytes (GFAP) and microglia (IBA-1).

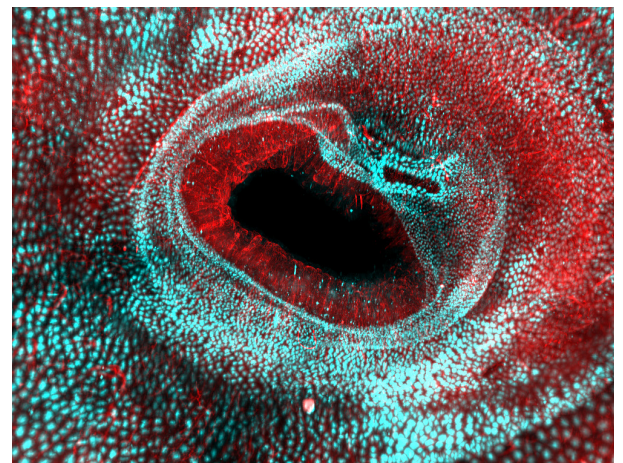
β -amyloid disease plaques in cyan, microglia (IBA-1) in magenta, in hippocampus of 7-month-old homozygous ARTE10 male mouse from Taconic Biosciences, Alzheimer's disease model #16347. 15X magnification.

CUSTOM SERVICES

Additional services include:

- Mapping and quantifying endogenous fluorescence
- Immunolabeling for other common neuroscience biomarkers (TH, ChAT, TPH2, PV, SST, NeuN, MBP)
- Staining for vasculature and nuclear markers
- Applications for other tissue types, including many mammalian vital organs, organoids, & tumors

Mouse duodenum labeled with lectin (vasculature, red) and anti-Olfm4 (stem cell marker, cyan), 3.6X magnification. Courtesy of Dr. Suhail Chaudry at Icahn School of Medicine.



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