Image & Data Analysis for Pharma, CROs, and Academia

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Pharma Services
in Digital Pathology & Spatial Biology

Our experienced team of bioinformaticians with extensive domain knowledge in digital pathology and spatial biology offers digital image analysis services for CROs, pharmaceutical and biotech companies, biobanks, and academia.

We are your image analysis service provider with a strong expertise in research and development.

We leverage our own digital pathology software MIKAIA®, HALO® from Indica Labs, various scanners and annotation stations, as well as our in-house expertise in custom algorithm and AI development.

Our focus lies in biomarker discovery and preclinical R&D.

Non-exhaustive list of analyses

- Cell grading and phenotyping in IHC, mIF, or H&E
- Cell population comparison between ROIs, e.g., metastasis core vs. interface vs. stroma
- Tissue quantification, e.g., tumor area in mm^2
- Markers co-localization analysis using multiplex immunofluorescence or IHC serial sections
- Identification of cellular neighborhoods or cell-cell connections
- Quantifying spatial heterogeneity of various signatures such as tumor-stroma-ratio or cell type ratios
- Measurements of crypts, glands, fibers, vessels, etc.
- Downstream statistical bioinformatics analysis and report generation

Pharma Services – We turn your images into actionable data.

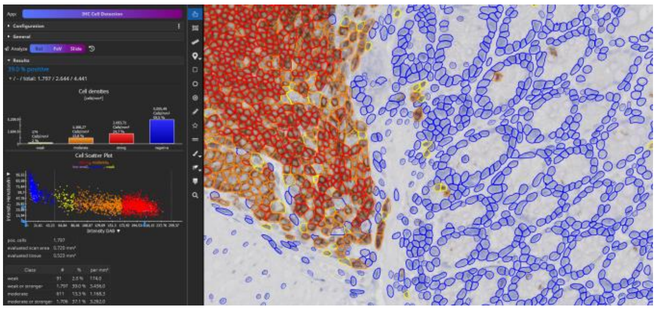
Highlights

- Quantitative analysis of whole-slide-images (**WSIs**) using HALO®, MIKAIA®, or custom AIs and algorithms
- Immunofluorescence (**mIF**), immunohistochemistry (**IHC**), standard morphology (**H&E**), mass spectrometry imaging (**MSI**), or spatial transcriptomics
- Multimodal analyses with slide alignment
- Wide range of supported image formats: DICOM, SVS,
- CZI, VSI, NDPI, MRXS, OME-TIFF, BIF, and many more
- Whole slide single cell analysis of Akoya, Lunaphore, MACSima, or other sequential IF scans
- Gateway into vast network of Fraunhofer expertise, academic, and clinical partners

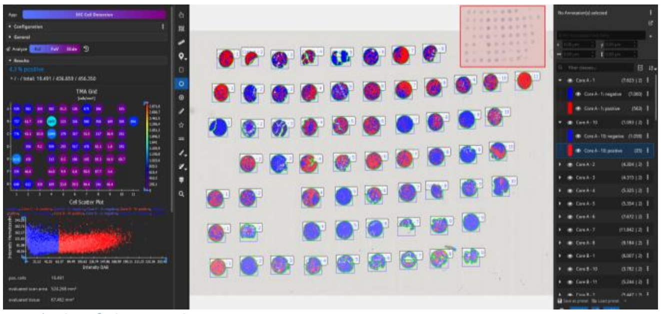
Our offer

- Image analysis as a service, custom AI development, or customization of MIKAIA® for subsequent in-house use
- Digitization of glass slides (multiple resolutions, multiple formats, with or without oil immersion)
- Creation of multi-scanner datasets for deep learning
- Bootstrapped tissue or cells annotation

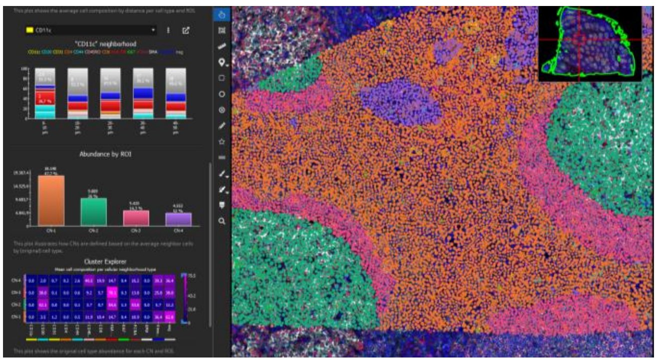
We are your image analysis service provider with a strong expertise in research and development.



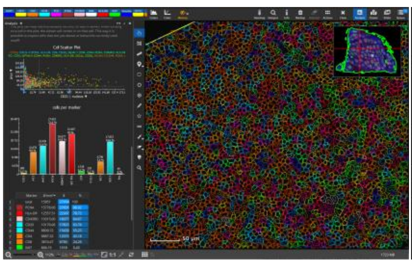
AI powered IHC cell quantification. Off-the-shelf support for nuclear, cytoplasmic and membrane stains.



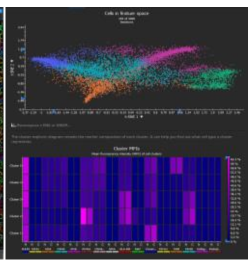
Analysis of tissue micro array.



Cellular neighborhood analysis in multiplexed immunofluorescence



Cellular typing in multiplexed immunofluorescence.



Cell typing via clustering (T-SNE visualization), and cluster explorer heatmap diagram.

Supported modalities

- Immunohistochemistry (IHC)
- Multiplexed immunofluorescence (mIF)
- Standard morphology (H&E)
- Mass spectrometry imaging (MSI)
- Spatial transcriptomics
- Multimodal analysis leveraging slide alignment

Why Fraunhofer?

- Vast experience from numerous interdisciplinary projects in histopathology and spatial biology
- Low turn-around times: We can use or extend MIKAIA®, leverage its interactive AI Author, adapt or retrain existing AIs, or develop new algorithms.
- Possibility of subsequent independent use by customers through integration of custom algorithms in MIKAIA®.
- Gateway into vast network of Fraunhofer expertise (>30k researchers) as well as academic and clinical partners

Wet lab & data acquisition services

We can tap into our network of Fraunhofer and other partner institutes to bring in expertise and instruments from various fields.

Contact

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