

WISOFT® ATHENA SOFTWARE: SIMPLIFYING IMAGE ANALYSIS FOR BIOLOGISTS

Athena software provides unparalleled ease to streamline image analysis and data visualization for experiments using fluorescence microscopy.

VERSATILE ANALYSIS OPTIONS:

- ✓ Detect and measure individual cells, spheroids or organoids for cytometry and morphological analysis.
- ✓ Identify and examine colonies or groups of cells with special tools to study neighbor-neighbor interactions.
- ✓ Classify individuals into groups for a quantitative population and phenotype analysis.
















CLEAR, SIMPLE AND INFORMATIVE RESULTS:

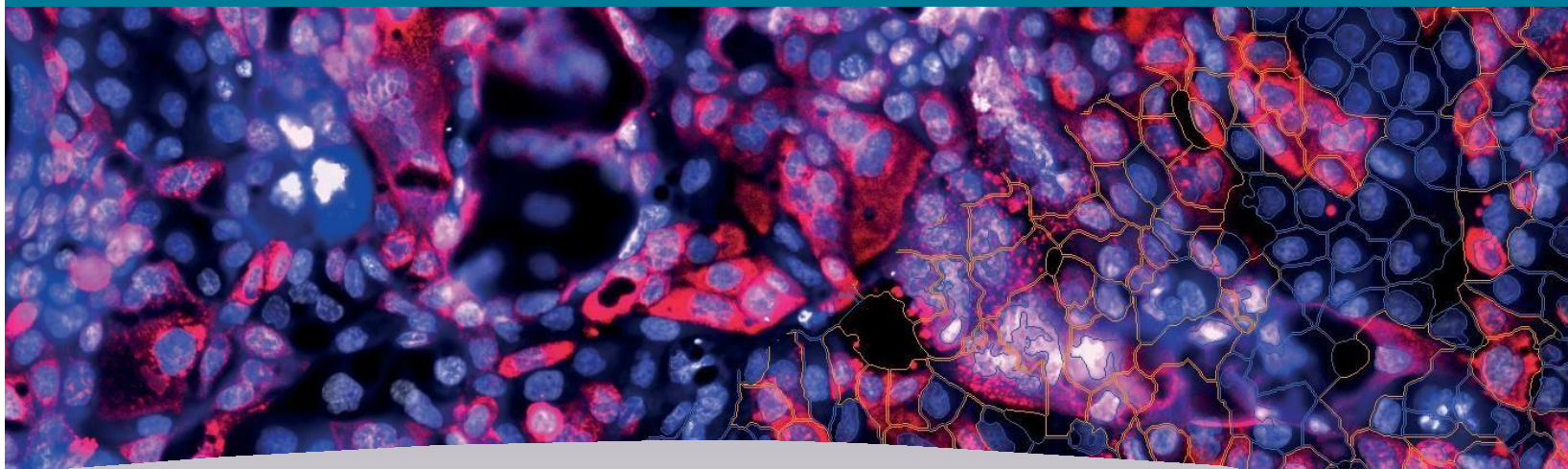
- ✓ Visualize your data quickly with Athena's built-in tools and interactive plots: heat maps, histograms, scatter plots, dose curves and time-plots.
- ✓ Calculate common statistics on the fly through interactive menus.
- ✓ Generate digital summary reports to save plot images for presentations, create a digital lab notebook, and easily export the raw data for use in other applications.

EFFORTLESS OPERATION FOR ALL USERS:

- ✓ Access Athena's powerful analysis algorithms through an intuitive, push-button interface that ensures productive use from day one, even for newcomers.
- ✓ Select applications tailored for common biological assays to begin image analysis within minutes.
- ✓ Analyze images from other microscope manufacturers thanks to Athena's compatibility with the most common image file format types.

WISOFT® ATHENA READY-MADE APPLICATIONS:

 CELL MORPHOLOGY	 FIBER-ANALYSIS	 RNA & ORGANELLE CO-LOCALIZATION
 PROTEIN EXPRESSION	 VIRAL PLAQUE ASSAY	 MITOCHONDRIA QUANTIFICATION
 CELL COUNT	 TRANSLOCATION + INTRACELLULAR GRANULES	 SCRATCH ASSAY
 CELL CYCLE	 VIRAL SPREAD QUANTIFICATION	 LIVE-DEAD TOXICOLOGY ASSAYS
 SPHEROIDS	 INTRANUCLEAR FOCI	 ZEBRAFISH FLUORESCENCE QUANTIFICATION



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SPECIALIZED APPLICATIONS FOR ADVANCED RESEARCH:

✓ **Cell Count & Morphology:**

Quantify numbers and shapes of spheroids, organoids, or single cells to robustly assess cellular health in your experiment.

✓ **Protein Expression & Cell Cycle Analysis:**

Delve into single-cell fluorescence intensity and DNA labeling for cycle populations.

✓ **Intracellular Analysis:**

From translocation studies to granule or spot quantification, Athena measures a wide range of cellular properties.

✓ **Label-free analysis:**

Explore specialized studies for non-labeled samples such as spheroids, organoids, Zebrafish, cellular colonies, confluency, and scratch assay/wound healing.

✓ **Innovative Quantification:**

Tackle questions about fluorescence overlap, co-localization, or analysis of 3D model systems including zebrafish and *C. elegans*, with a reliable partner at your side.



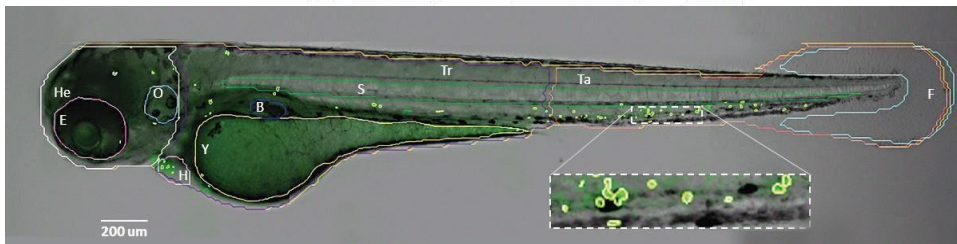
Athena Software is made by biologists, for biologists as it is a comprehensive, user-friendly platform for analyzing fluorescence and bright-field microscopy images. Athena empowers life science researchers to extract copious data quickly and easily. Dive into your research with Athena and experience the future of cell biology analysis.

Revolutionary Deep Learning- Based Image Analysis For TRUE Zebrafish High-Content Screening

Zebrafish (*Danio rerio*) are an attractive model organism for the study of human disease pathology because of their optical transparency and genetic tractability. They serve as a great alternative to mammalian screening due to cost, throughput and reduced ethical concerns. Automated analysis of Zebrafish imposes unique demands due to the versatility of organs and features needed to be detected.

IDEA Bio-Medical is proud to present our unique dedicated imaging platform for automated data acquisition & analysis to quantify fluorescence, morphological changes & other features in Zebrafish larvae in a high throughput format.

Hermes for Zebrafish automatically quantifies area, fluorescence intensity, and count of whole fish and internal organelle properties, including eye, yolk, spine, tail, brain, internal granules and more.



Fish organs & regions automatic segmentation

Key Features:

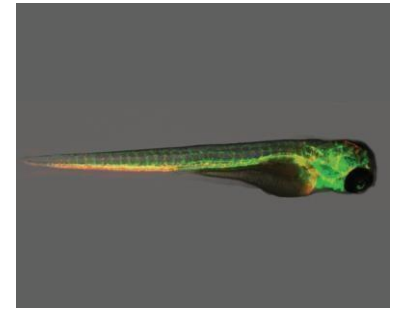
- Image & analyze Label-free or fluorescently tagged fish and internal organelles
- Multiple levels of magnification available from 2X up to 60X with high NA
- Keep images in focus from head to tail with images acquired in single plane, Z stack and projections
- Novel artificial Intelligence-based algorithms for automated fish and organ-specific segmentation in brightfield
- Unbeatable throughput: Image 96 larvae within minutes
- Ensure proper fish orientation in post-analysis with customizable, software-based selection
- Statistical data calculated per fish and per organelle

Organs Identified Automatically or Manually

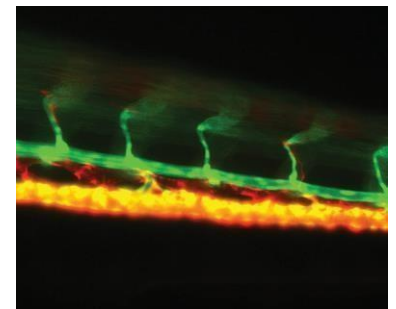
Fish Outline	Bladder
Yolk Sac	Heart
Eye	Head
Tail Fin	Trunk
Spine	Tail
Otic vesicle	Internal granules
	User-definable region

Morphological Features Extracted

Area
Count
Fluorescence Intensity
Shape parameters



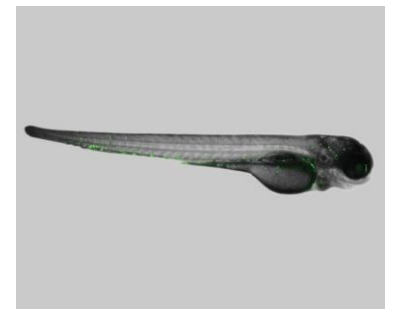
Multiplexing Fluorescence & Bright field



Blood vessels at 10X magnification



Well montage



Internal granules detection

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