



AMITO application for mitochondrial analysis in TEM

Open-access
Available via Figshare
Includes step-by-step instructions

User-friendly interface

Image selection

← Previous Load image Next →

Scale px/nm

Segmentation

Morphology Ultrastructure Others +

Image contrast

Low High

0 0.5 1 1.5 2 2.5 3

Mitochondria area

Min Max

0 0.25 0.5 0.75 1

Mitochondria color

Black White

0 50 100 150 200 255

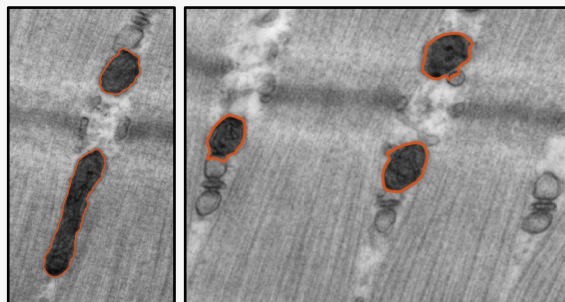
Display contours Draw contour Delete all contours

Modify Delete one Delete all

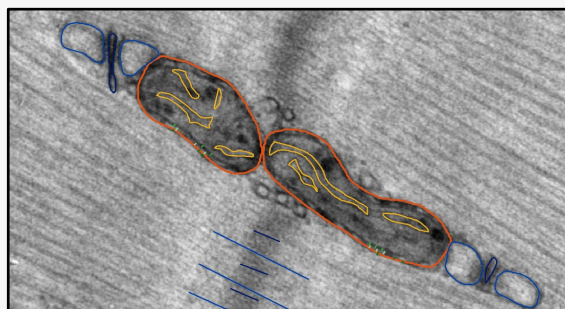
Analysis & Export

Analysis Export data Save image ALL

Complete analysis of mitochondrial environment



Automated segmentation of mitochondrial morphology



Manual segmentation of mitochondrial ultrastructure & other organelles

Validity and reproducibility of AMITO

Agreement with standard analysis
High intra-experimenter reproducibility

Time efficiency through automated analysis

Faster analysis workflow
Interest for large-scale studies
Improved tissue representativeness

Application availability

Application Name : AMITO
Development platform: MATLAB (no license required)
Compatibility: Windows & macOS
License: CC-BY (users must cite the authors when used)

AMITO provides a single, user-friendly interface for accurate and reproducible mitochondrial analysis in TEM images. It facilitates large-scale and longitudinal studies by reducing analysis time.