MALDIVision

A comprehensive data processing & visualization tool for MALDI Imaging Mass Spectrometric data

MALDIVision, a comprehensive bioinformatics tool for MALDI imaging, facilitates data processing, visualization and analysis of spatial distribution of individual ions in a tissue section. The program accepts imaging mass spectrometric data in Analyze 7.5 and imzML format files. It generates images in 2-D and 3-D modes. To correlate MALDI images with histological information of the sampled tissue, MALDIVision enables users to co-register and overlay a MALDI image over an optical image.

MALDIVision is compatible with the AB SCIEX 4800 and 5800 MALDI TOF/TOFTM Systems.

Supports Analyze 7.5 (MSI) and imzML format files as input datasets.

Supports large imaging data files (upto 25 GB).

Displays reconstituted tissue images in 2D & 3D.

Displays reconstituted tissue images in custom color gradients for better ion distribution rendering.

Enables visualization of the relative abundance of the target compound with respect to a standard compound.

Allows co-registration and overlay of a MALDI image of interest over a target optical image.

Allows overlaying of up to 10 images.

Generates Extracted Ion Images (EII) for specific mass peak.

Allows import of optical images facilitating easy comparison of tissue sections with the ion intensity maps.

Enables defining the Region of Interest (ROI) using different geometrical shapes including free hand shapes.
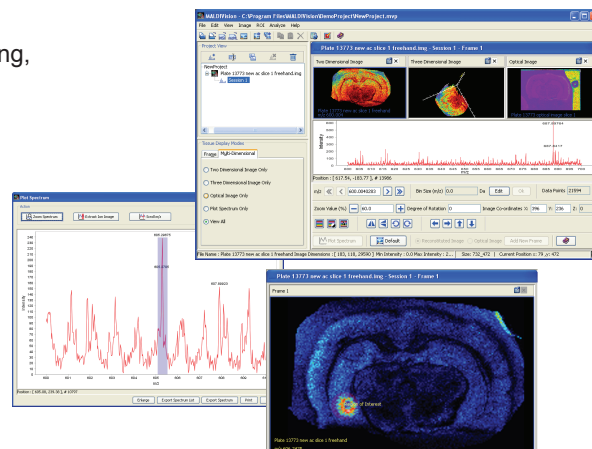
Displays histogram and cumulative probability graphs for the region of interest.

Displays averaged mass spectrum for the region of interest.

Exports mass spectrum of a pixel or the ROI to a text file.

Exports ion intensity maps as .tiff or .jpeg files.

Comprehensive Image Display
Reconstituted images generated by MALDIVision are presented under the Frame and the Multidimensional tab. Under the Frame tab, users can create images in multiple frames, allowing comparative analysis of the spatial distribution of compounds of interest. The Multidimensional tab displays the mass spectrum of the region of interest selected from the MALDI image. Users can define custom color theme to render better view of ion distribution.

Co-register and Overlay Image
For a histological interpretation, combining MALDI IMS and classic histological staining provides researchers with a better diagnoses. MALDIVision enables users to co-register images as well as overlay a MALDI image over an optical image facilitating accurate investigation of spatial distribution of compounds of interest in a single image.

Define Region of Interest
MALDIVision enables defining multiple Regions of Interest (ROI) using different geometrical shapes or using a free hand tool. The ROIs can be highlighted/masked/labeled using different colors for better visualization of the spatial distribution of compounds in a tissue.

View Histogram and Cumulative Probability Graph
Users can generate a histogram and a cumulative probability graph to observe the ion intensity distribution in the defined ROI. The probability that intensity level in the ROI is up to a specified level is displayed along with the ion intensity distribution statistics.

Extracted Ion Image
MALDIVision facilitates reconstruction of image of a specific mass from the mass spectrum. The reconstructed image of such extracted ion is termed as Extracted Ion Image (EII) and provides users the means to display the distribution of a compound of a specific mass observed on the mass spectrum.

To activate & evaluate, follow these steps
  - Install MALDIVision from our website or the CD
  - Launch the program and click 'Activate' on the first window
  - Enter the 'Registration Number' requested from us and your e-mail address. Click 'Next'
  - Update the registration information following the on-screen prompts and click 'Submit'

For a quick start
  - Check the Multimedia Tutorial

Order on-line
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Development Process

- Requirement gathering
- Prototyping
- Development
- Testing & QA
- Documentation & Training
- Support & Maintenance

AlleleID®	A comprehensive tool designed to address the challenges of species identification & taxa discrimination using qPCR, xMAP® and microarrays. (for Win & Mac)
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Beacon Designer™	Design specific and efficient oligos for all major qPCR assays. (for Win & Mac)
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MALDIVision	A comprehensive data processing & visualization tool for MALDI IMS data. (for Win)
MLPA® **Designer**	A comprehensive tool co-developed with MRC-Holland to design highly specific oligos for MLPA assays. (for Win & Mac)
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Primer Premier	A comprehensive primer design tool for standard PCR assays. (for Win and Mac)
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Xpression Primer	A novel tagged primer design tool for expression cloning and for designing sequencing primers to verify transcripts. (for Win & Mac)