

Processamento e análise de imagens utilizando o ImageJ



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imageJ



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Vídeos

Imagens

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Configurações

Ferramentas

Aproximadamente 2.240.000 resultados (0,66 segundos)

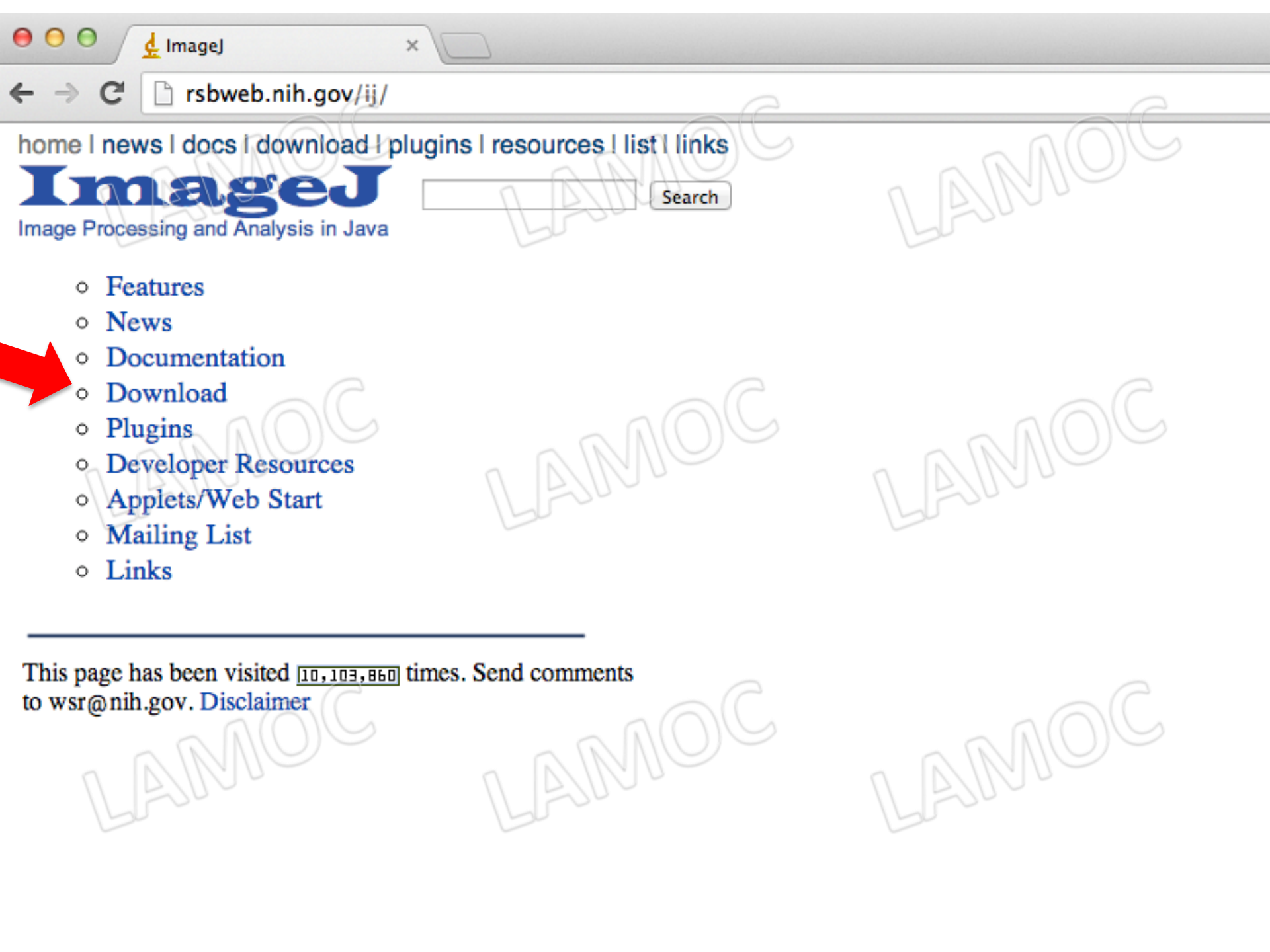
ImageJ - RSB Home Page - NIH



<https://imagej.nih.gov/ij/> ▼ Traduzir esta página

home | news | docs | download | plugins | resources | list | links. [ImageJ]. Features · News · Documentation · Download · Plugins · Developer Resources · Mailing ...

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ImageJ

Image Processing and Analysis in Java

- [Features](#)
- [News](#)
- [Documentation](#)
- [Download](#)
- [Plugins](#)
- [Developer Resources](#)
- [Applets/Web Start](#)
- [Mailing List](#)
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Download

Platform Independent

To install ImageJ on a computer with Java pre-installed, or to upgrade to the latest full distribution (including macros, plugins and LUTs), download [ij150.zip](#) (4MB) and extract the ImageJ directory. Use the *Help>Update ImageJ* command to upgrade to newer versions.

Mac OS X

Download [imageJ](#) (6MB) as a double-clickable Mac OS X application. Also available [bundled with Java 1.8.0_101](#) (requires OS X 10.8 or later). [Instructions](#).

Linux

Download [ImageJ bundled with Java 1.8.0_112](#) (82MB). [Instructions](#).

Windows

Download ImageJ [bundled with 64-bit Java 1.6.0_24](#) (37MB), [bundled with 32-bit Java 1.6.0_24](#) (44MB) or [bundled with 64-bit Java 1.8.0_112](#) (70MB).

Documentation

Tiago Ferreira's comprehensive [ImageJ User Guide](#) is available as an 8MB PDF document and as a [ZIP archive](#). The online [JavaDoc API documentation](#) is also available as a [ZIP archive](#).

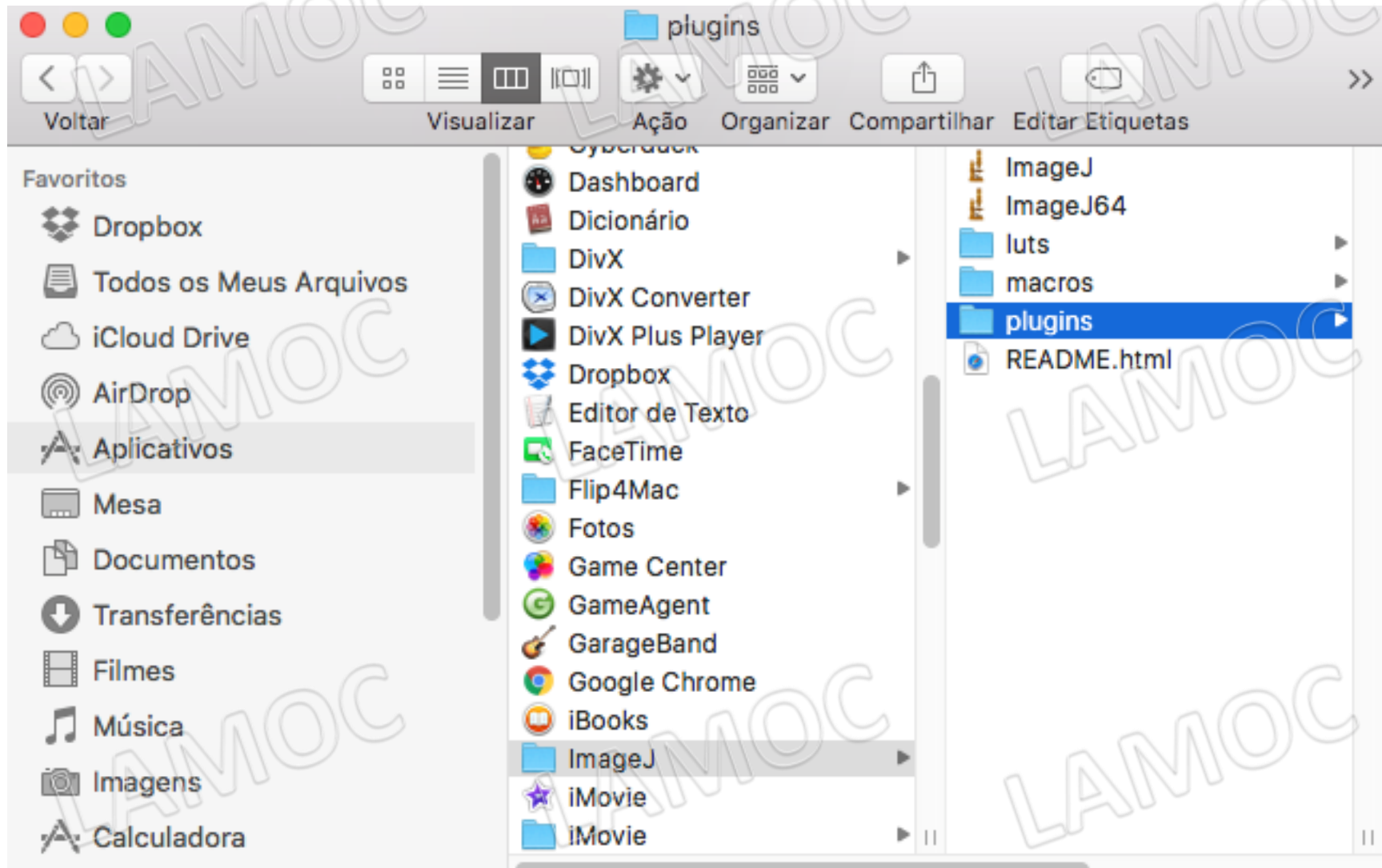
Source Code

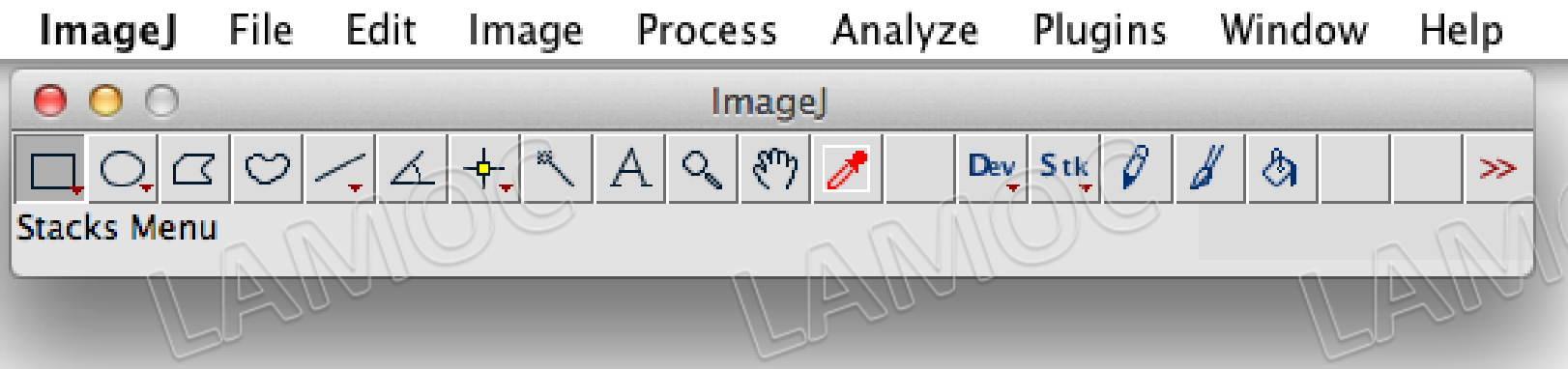
The ImageJ [Java source](#) consists of 132,000 lines of code in 348 files. It is available [online](#) and as [zip archives](#).

Example Images

[31 downloadable sample images and stacks](#) are available in ImageJ's *File>Open Samples* submenu. These images, and more, are also available as a [8.2MB zip archive](#).

Procure o local em que o ImageJ foi instalado





ImageJ File Edit Image Process Analyze Plugins Window Help



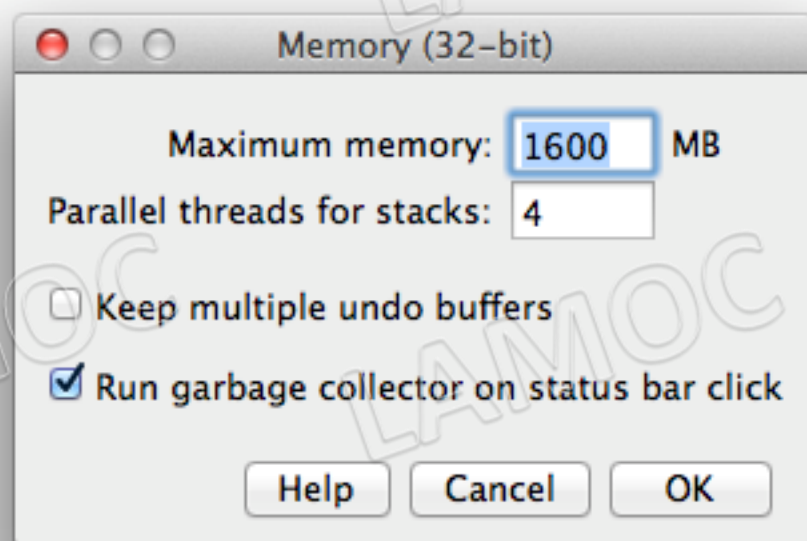
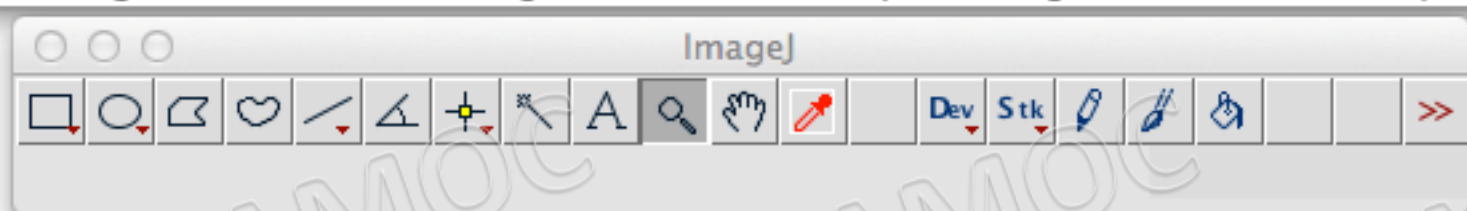
Undo ⌘Z
Cut ⌘X
Copy ⌘C
Copy to System
Paste ⌘V
Paste Control...

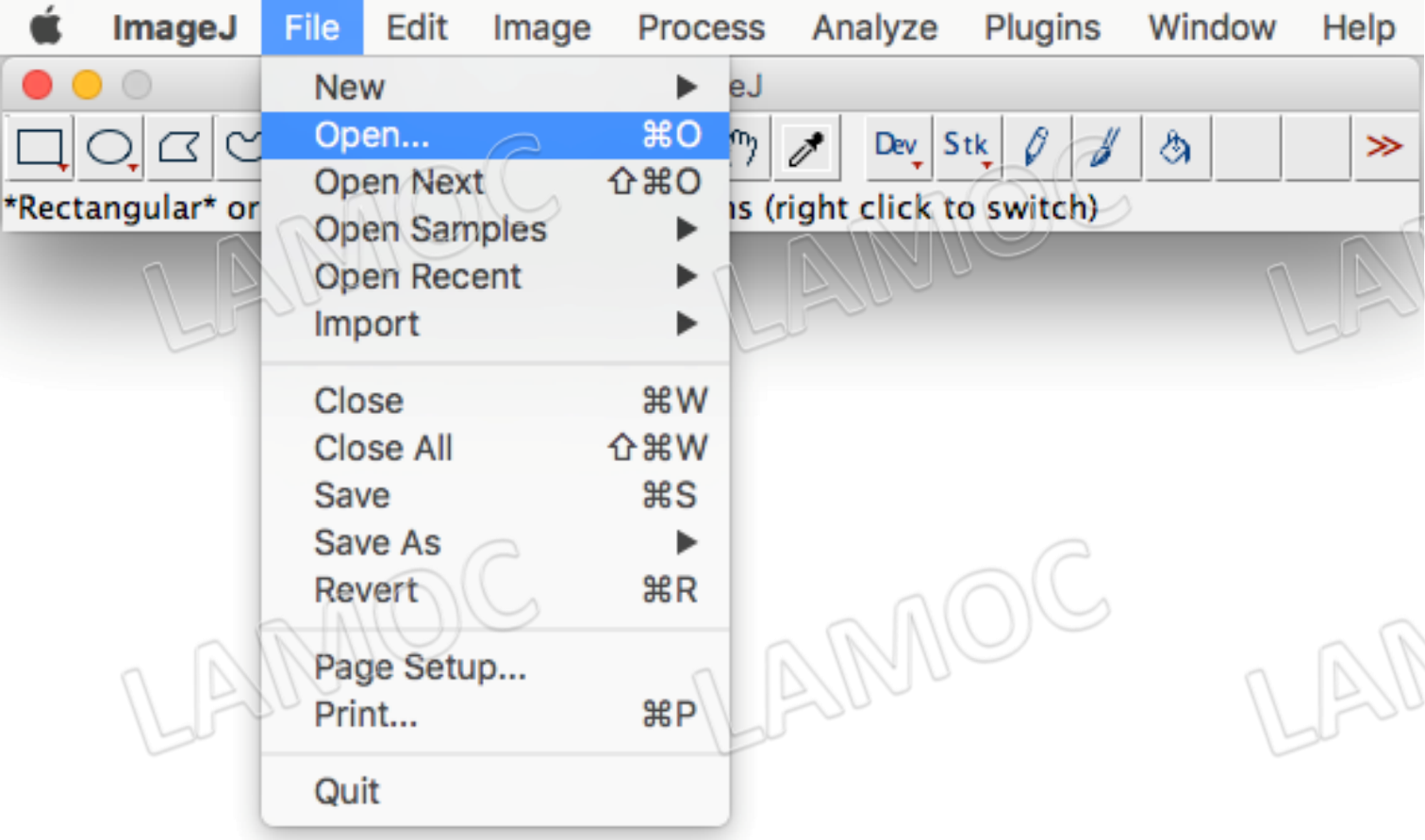
Clear
Clear Outside
Fill ⌘F
Draw ⌘D
Invert ⇧⌘I

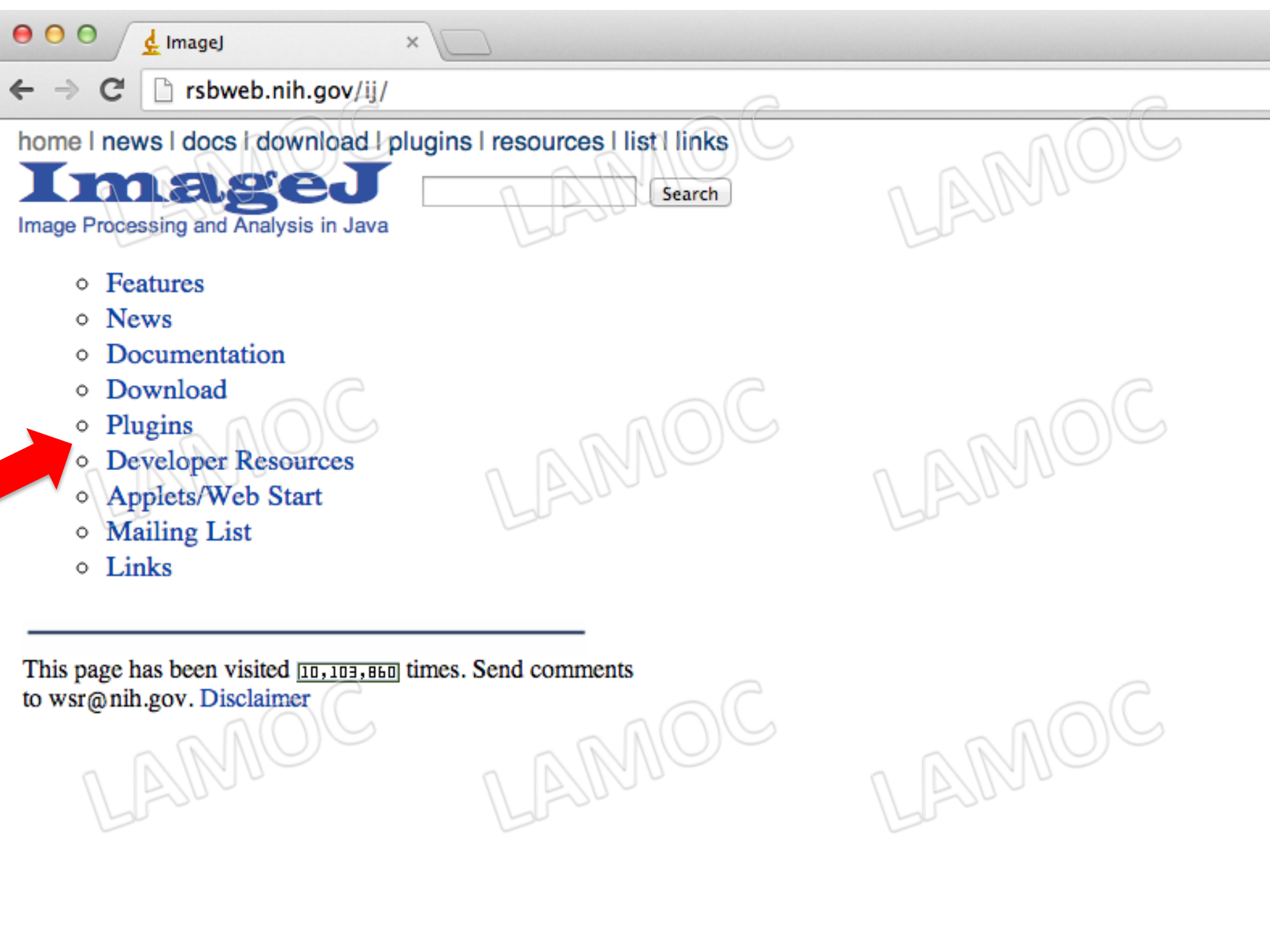
Selection ▶

Options ▶

Line Width...
Input/Output...
Fonts...
Profile Plot Options...
Rounded Rect Tool...
Arrow Tool...
Point Tool...
Wand Tool...
Colors...
Appearance...
Conversions...
Memory & Threads...
Proxy Settings...
Compiler...
DICOM...
Misc...





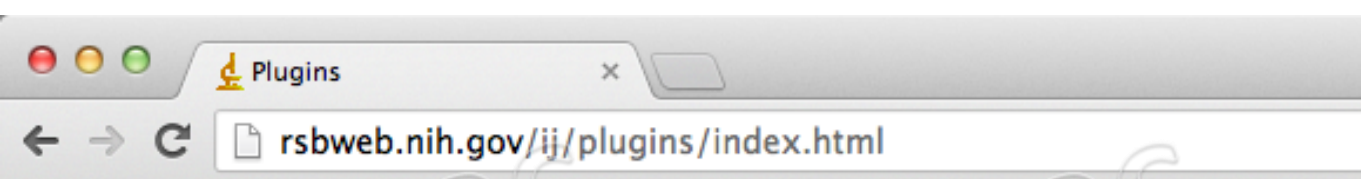


ImageJ

Image Processing and Analysis in Java

- [Features](#)
- [News](#)
- [Documentation](#)
- [Download](#)
- [Plugins](#)
- [Developer Resources](#)
- [Applets/Web Start](#)
- [Mailing List](#)
- [Links](#)

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[home](#) | [news](#) | [docs](#) | [download](#) | [plugins](#) | [resources](#) | [list](#) | [links](#)

Plugins

Contents

[Acquisition](#)

[Analysis](#)

[Collections](#)

[Color](#)

[Filters](#)

[Segmentation](#)

[Graphics](#)

[Input/Output](#)

[Programming Examples](#)

[Scripting](#)

[Stacks](#)

[Tools](#) New

[Toolsets](#) New

[Utilities](#)

[Links to External Sites](#)

Tenha o plugin certo...



ImageJ Plugins

Seguro | <https://imagej.nih.gov/ij/plugins/index.html#more>

Apps ★ Bookmarks Web of Science [v.5... Plataforma Brasil ORCID Sr

FFT BOX, Phase Space, ROI Group Manager and Tight Montage

Stephan Preibisch
Stitching, Gaussian Convolution, FFT Transform, Principal Curvature and Sobel Filter (plugins work in both 2D and 3D)

Jarek Sacha
Image IO (uses JAI to open additional image types)
Clustering, Texture Synthesis, 3D Toolkit, Half-Median
RGB to CIE L*a*b*, Multiband Sobel edges, VTK Examples
DCRaw (digital camera raw images), ImageJ for Zaurus PDA
Groovy Console (edit and run Groovy scripts)

Martin Schlueter
Geometric Mappings, Color transforms,
Delaunay Triangulation and Interpolation

Nico Stuurman
MultiTracker2, RGB Stack Merge2, ICS Opener, Optical Insights
Running Z Projector, Binner, QED Swap

TransformJ (Geometric Transformations up to 4D)
Affine, Crop, Embed, Mirror, Rotate, Scale, Shift, Turn

FeatureJ (Image Feature Extraction)
Canny edges, derivatives, Hessian, Laplacian, eigenvalues, statistics

RandomJ (Image Randomization)
Binomial, Exponential, Gamma, Gaussian, Poisson, Uniform

NeuronJ (Neurite Tracing and Quantification)

OME Bio-Formats library and plugin (loci-tools.jar)
PIC, MetaMorph STK, LSM, FluoView, IPLab, Deltavision, Leica LEI,
ABD, GEL, Imaris, Openlab LIF and RAW, DM3, PerkinElmer,
Image-Pro Sequence, NEF, PICT, IPW, PGM, OIB
AxioVision ZVI, Image Cytometry Standard ICS and IDS, UltraView ERS
DICOM, PNG, GIF, BMP, EPS, OME-XML, OME-TIFF, ABD TIFF

ImageJ Documentation Wiki
Align_4, Align_RGB_planes, Align_Slice
Fourier Shape Analysis
Threshold_Colour, Colour_Deconvolution, Lut_Panel
Canny-Deriche Edge Detection, Fit Polynomial
Tudor DICOM Toolkit, LSM_Reader, SIMS_Toolbox



Bio-Formats

Bio-Formats Downloads

Licensing

Next topic

About Bio-Formats

Quick search

Go

Enter search terms or a module, class or function name.

This Page

Show Source

Show on GitHub

Edit on GitHub

Bio-Formats Documentation

The following documentation is split into four parts. [About Bio-Formats](#) explains the goal of the software, discusses how it processes metadata, and provides other useful information such as version history and how to report bugs. [User Information](#) focuses on how to use Bio-Formats as a plugin for ImageJ and Fiji, and also gives details of other software packages which can use Bio-Formats to read and write microscopy formats. [Developer Documentation](#) covers more indepth information on using Bio-Formats as a Java library and how to interface from non-Java codes. Finally, [Formats](#) is a guide to all the file formats currently supported by Bio-Formats.

- [About Bio-Formats](#)
- [User Information](#)
- [Developer Documentation](#)
- [Formats](#)

Bio-Formats 5.6.0 uses the *June 2016* release of the [OME Model](#).

Bio-Formats is a community project and we welcome your input. You can find guidance on [Reporting a bug](#), upload files to our [QA system](#) for testing, and [contact us](#) via our mailing lists or forums. Further information about how the OME team works and how you can contribute to our projects is in the [Contributing Developer Documentation](#).



Name	Last modified	Size
🏠 Parent Directory		-
📁 artifacts/	14-Aug-2017 15:02	-
📁 api/	14-Aug-2017 14:54	-

ImageJ

Overview (Bio-Formats API)

downloads.openmicroscopy.org/bio-formats/5.6.0/api/

Apps

Bookmarks

Web of Science [v.5...

Plataforma Brasil

ORCID

SnapShots: The Arc...

SAC-Exterior

Servidor

Dinheiro Público &...

All Classes

Packages

loci.formats

loci.formats.cache

loci.formats.codec

loci.formats.gui

loci.formats.in

loci.formats.meta

loci.formats.ome

loci.formats.out

All Classes

About

AbstractOMEXMLMetadata

AFIReader

AIMReader

AliconReader

AmiraParameters

AmiraReader

AmiraReader.PlaneReader

AnalyzeReader

APLReader

APNGReader

APNGWriter

ARFReader

AsciiImage

AVIReader

AVIWriter

AWTImageTools

AxisGuesser

Base64Codec

BaseCodec

BaseMetadata

BaseTiffReader

BaseZeissReader

BaseZeissReader.Charset

BaseZeissReader.Context

OVERVIEW

PACKAGE

CLASS

USE

TREE

DEPRECATED

INDEX

HELP

PREV

NEXT

FRAMES

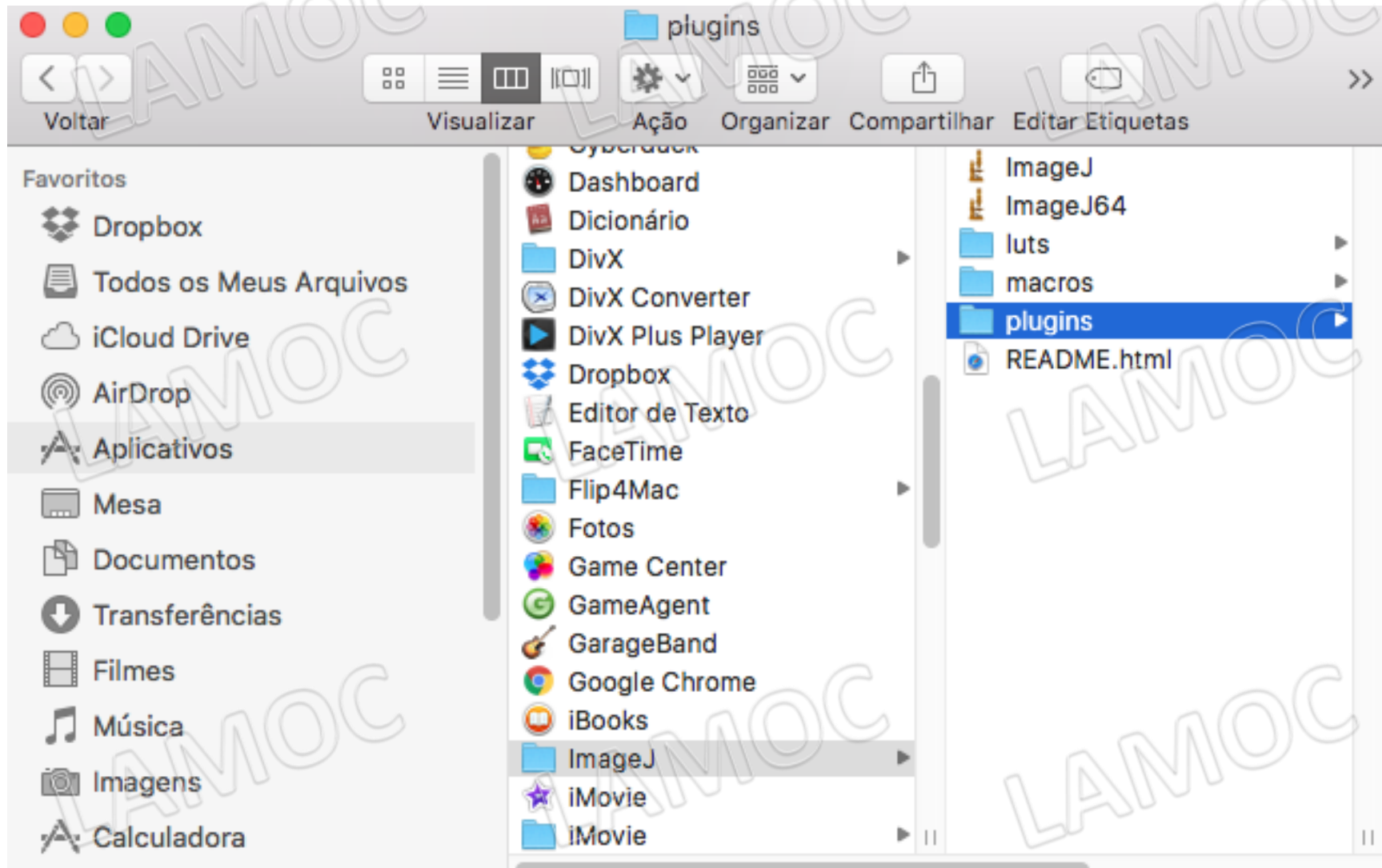
NO FRAMES

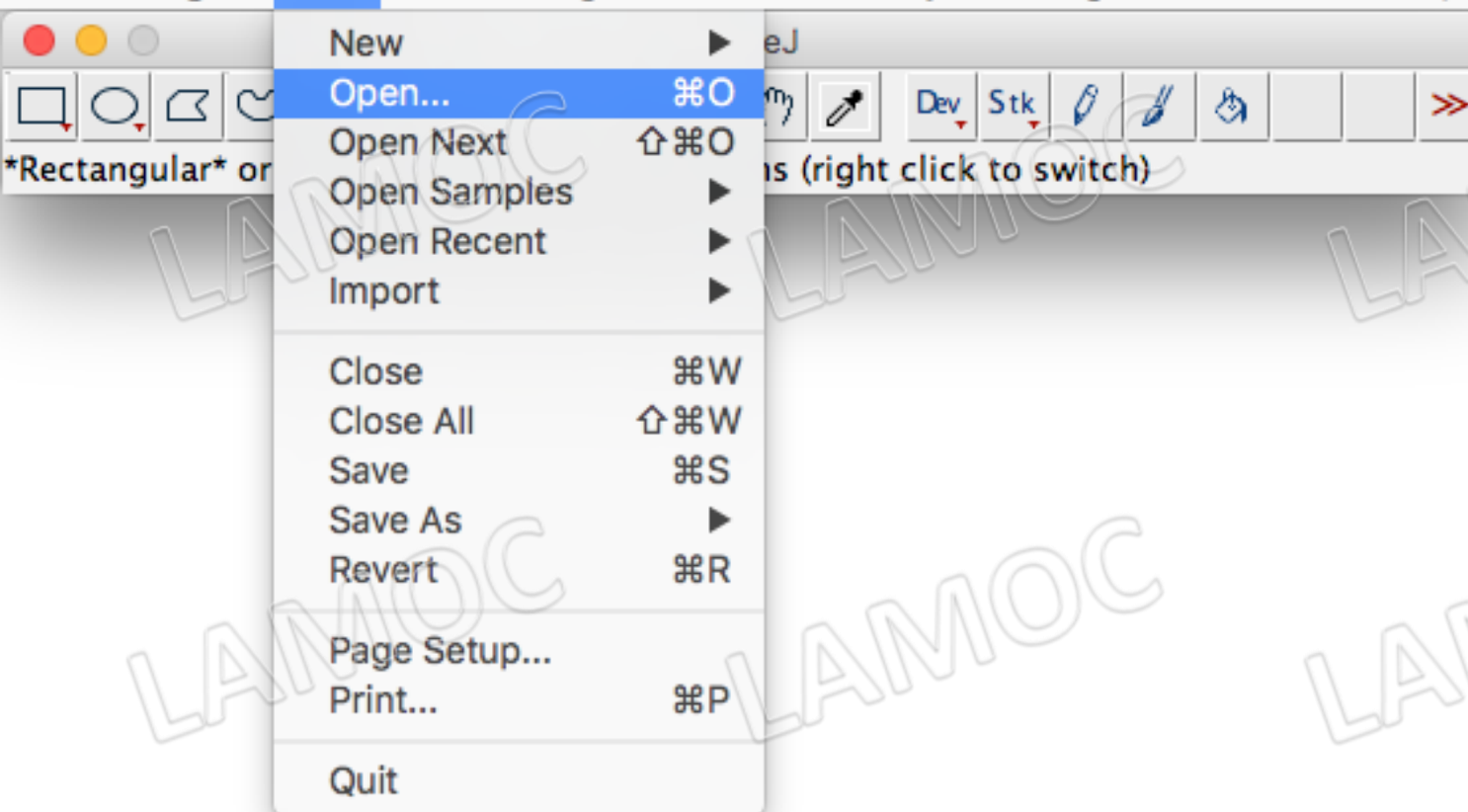
Bio-Formats

Packages

Package	Description
loci.formats	Bio-Formats: a library for reading and writing popular microscopy file formats.
loci.formats.cache	Package containing Bio-Formats caching logic, for managing subsets of large collections of image planes in memory.
loci.formats.codec	
loci.formats.gui	Package containing Bio-Formats graphical user interface code.
loci.formats.in	Package containing Bio-Formats file format readers.
loci.formats.meta	Package containing core Bio-Formats metadata interfaces for the OME data model.
loci.formats.ome	Package containing Bio-Formats OME-related logic for OME-XML metadata, and database import, upload and download.
loci.formats.out	Package containing Bio-Formats file format writers.
loci.formats.services	
loci.formats.tiff	Package containing Bio-Formats TIFF code of general utility.
loci.formats.tools	Package containing utility methods corresponding to the Bio-Formats command line tools.
loci.plugins	Bio-Formats Plugins: a collection of plugins for ImageJ, including the Bio-Formats Importer, Bio-Formats Exporter, Bio-Formats Macro Extensions, Data Browser and Stack Slicer.

Como instalar um plugin





New

Open... ⌘O

Open Next ⇧⌘O

Open Samples ▶

Open Recent ▶

Import ▶

Close ⌘W

Close All ⇧⌘W

Save ⌘S

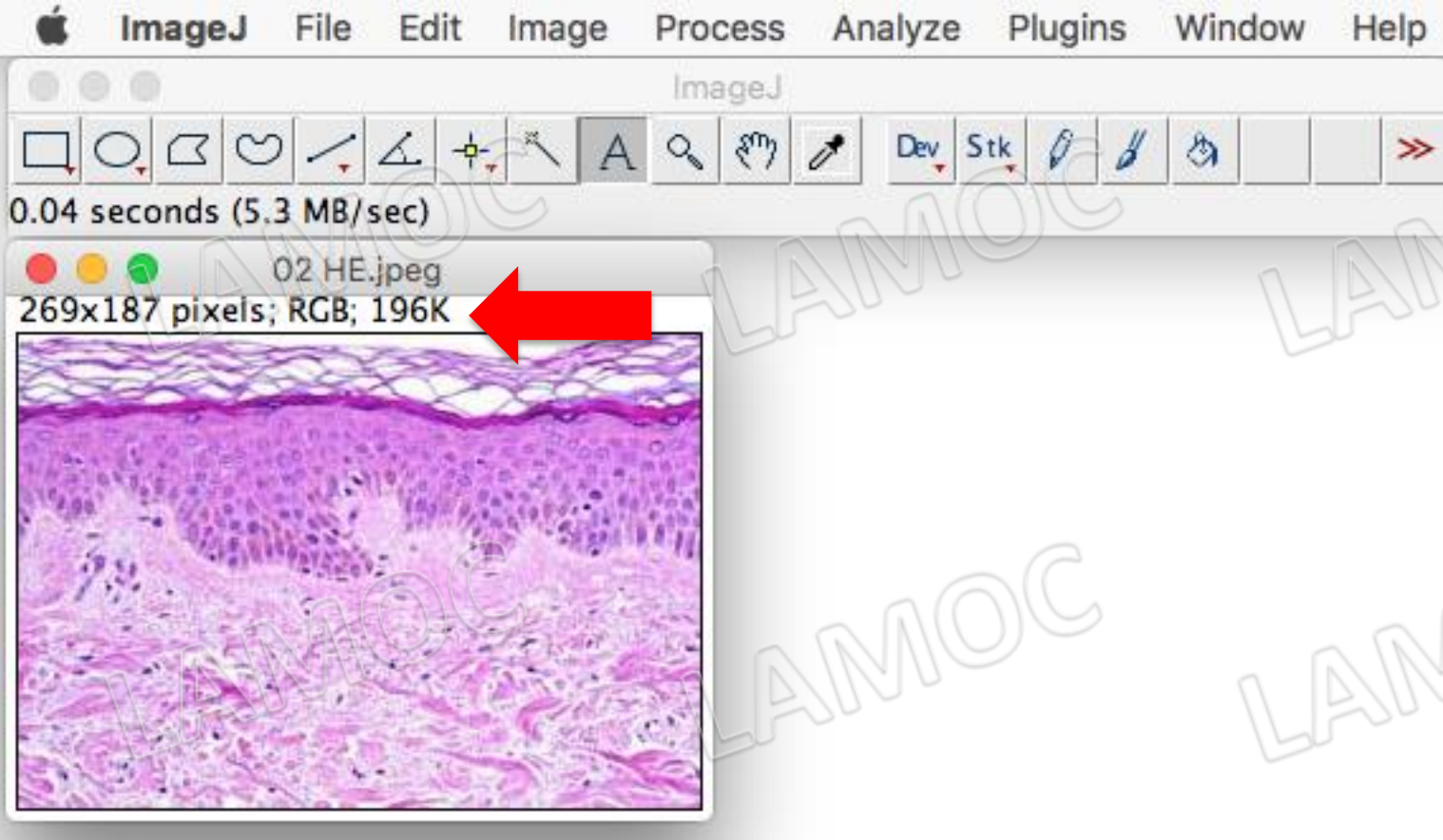
Save As ▶

Revert ⌘R

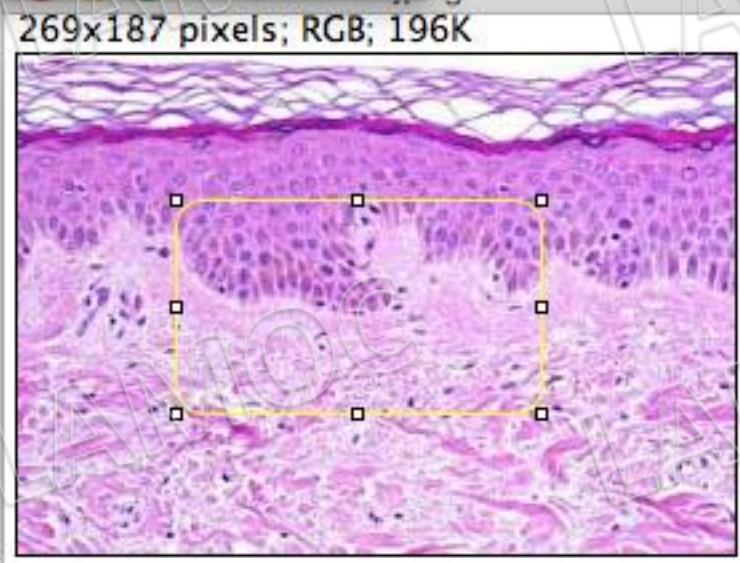
Page Setup...

Print... ⌘P

Quit

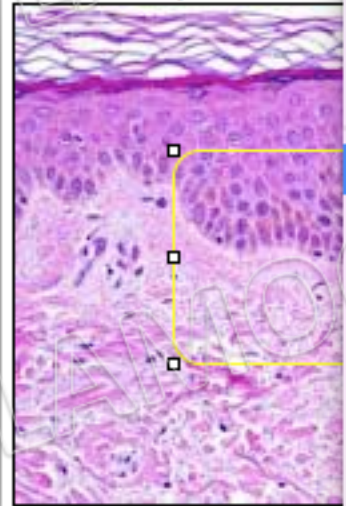


Dica: quando observar uma seta vermelha na figura geométrica, clique o botão direito do mouse para surgir novas ferramentas

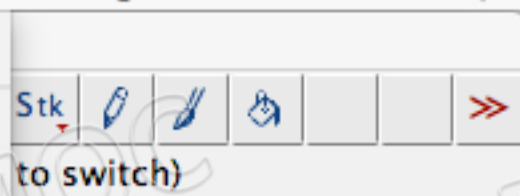


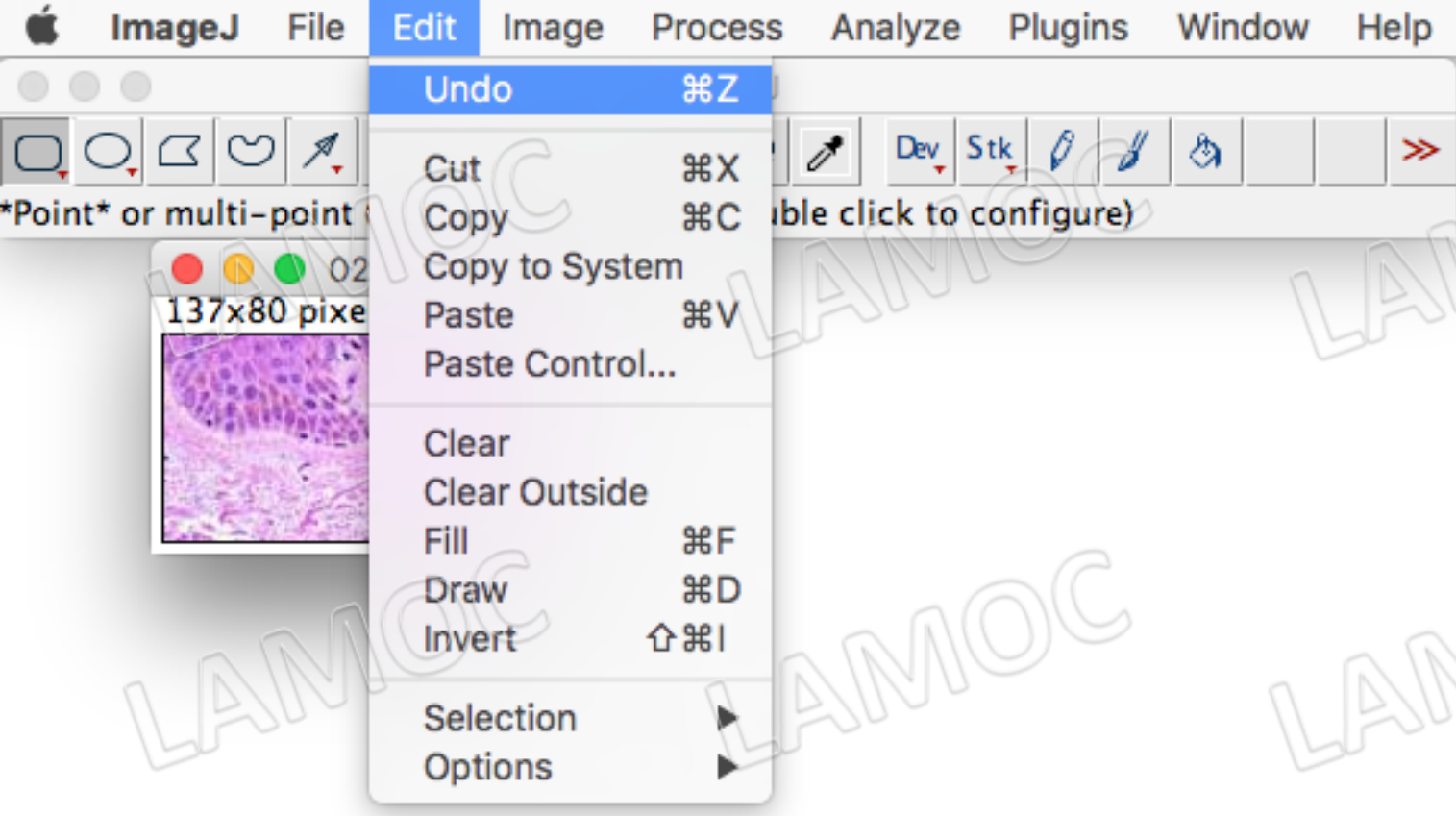


269x187 pixels; RGB

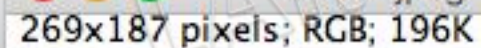


- Type ▶
- Adjust ▶
- Show Info... ⌘I
- Properties... ⌘P
- Color ▶
- Stacks ▶
- Hyperstacks ▶
- Crop ⌘X**
- Duplicate... ⌘D
- Rename...
- Scale... ⌘E
- Transform ▶
- Zoom ▶
- Overlay ▶
- Lookup Tables ▶



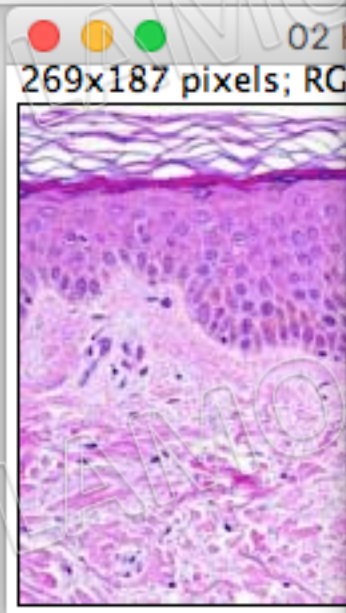


Cuidado: Só é possível desfazer a última ação

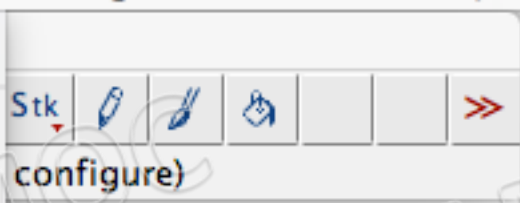




Point* or multi-point (right c

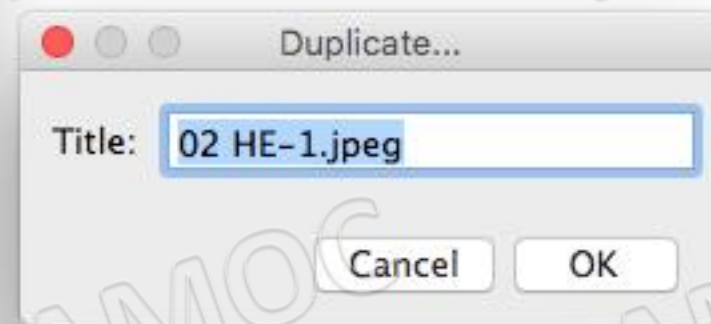
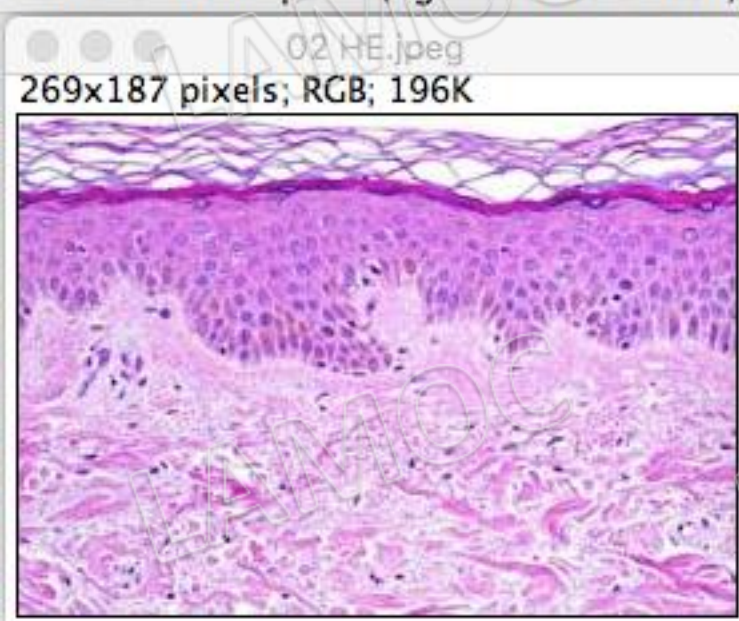


- Type ▶
- Adjust ▶
- Show Info... ⌘I
- Properties... ⇧⌘P
- Color ▶
- Stacks ▶
- Hyperstacks ▶
- Crop ⇧⌘X
- Duplicate... ⇧⌘D**
- Rename...
- Scale... ⌘E
- Transform ▶
- Zoom ▶
- Overlay ▶
- Lookup Tables ▶

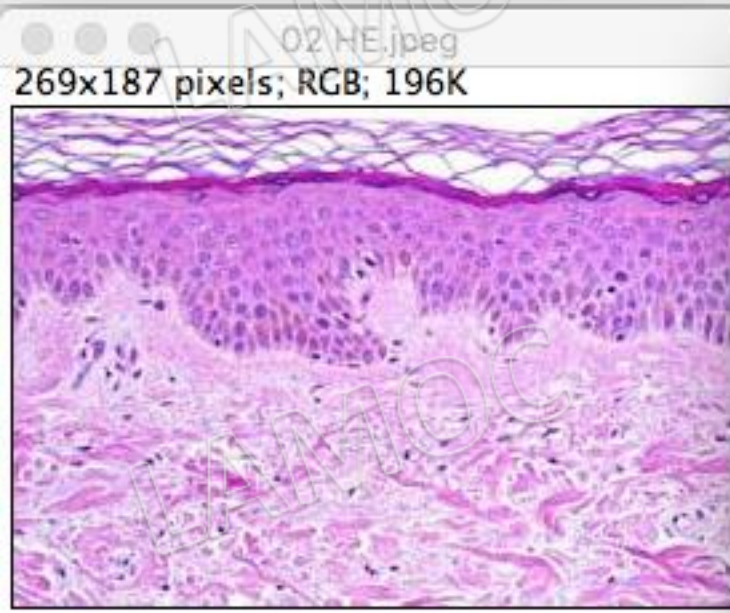




Point or multi-point (right click to switch; double click to configure)

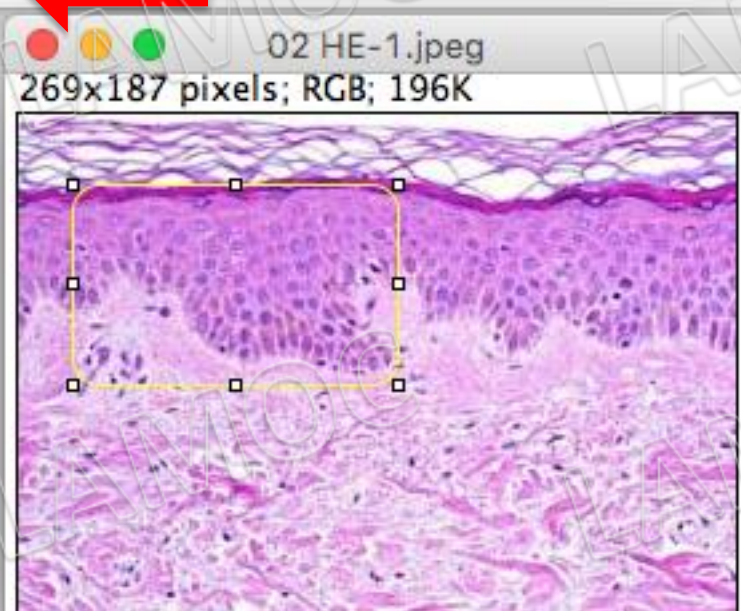
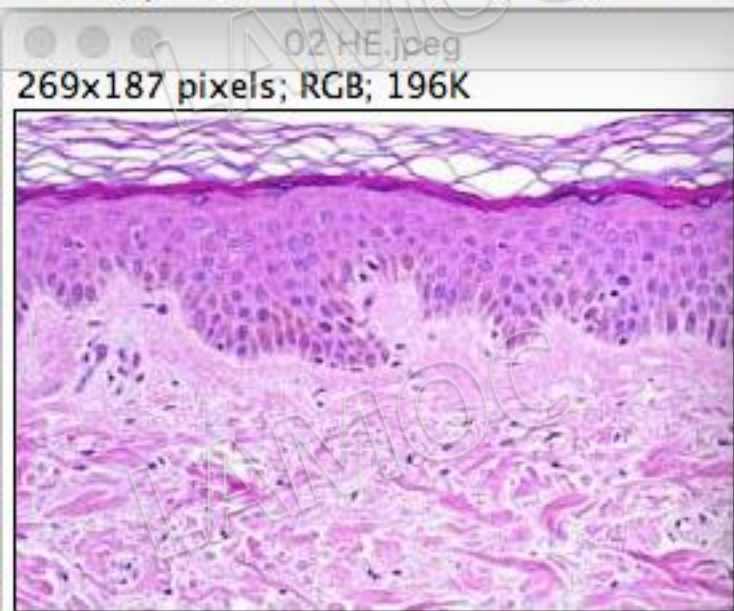


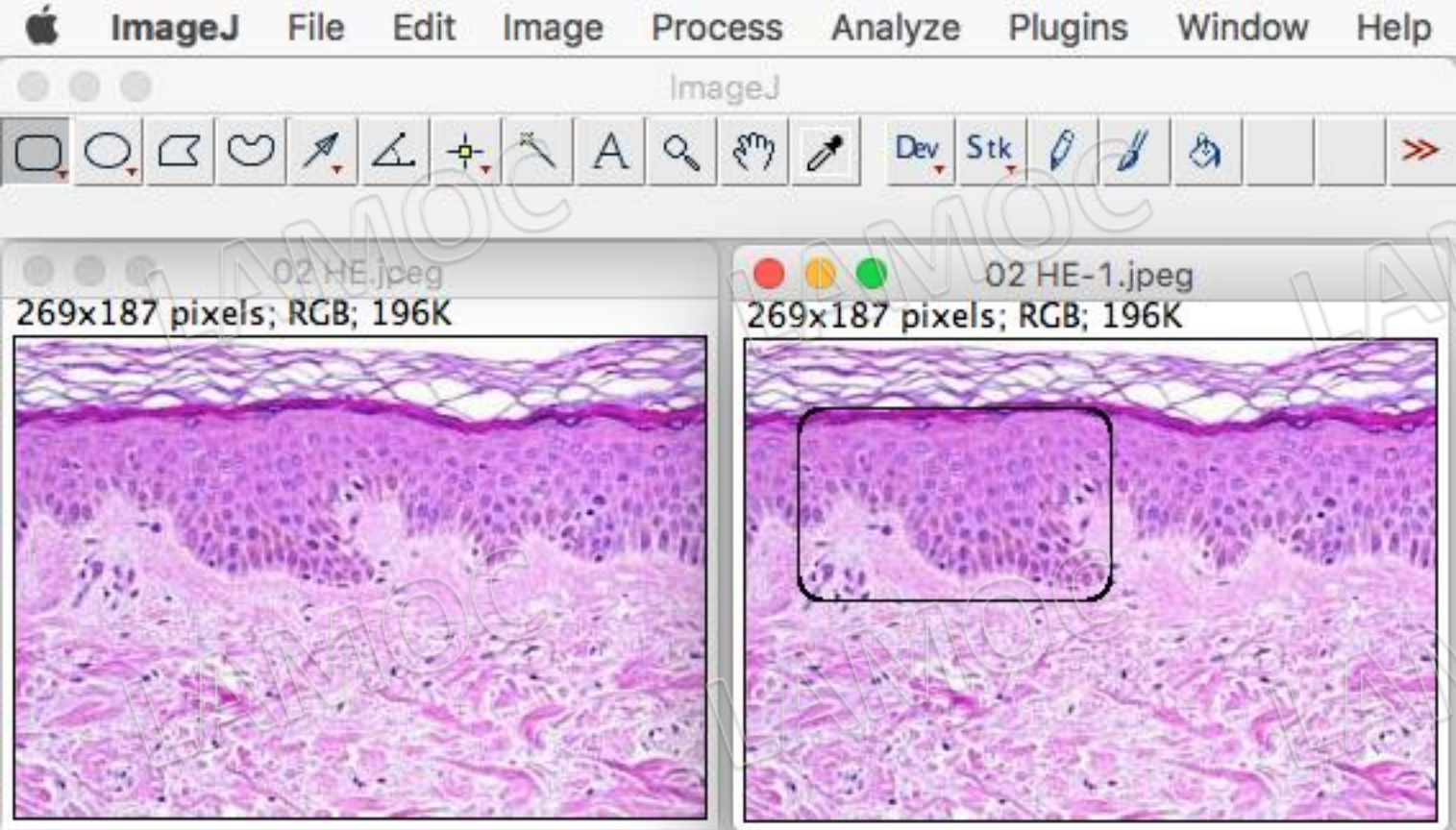
Dica: use cntr+shift+d





x=158, y=62, value=196,126,238 (#c47eee)





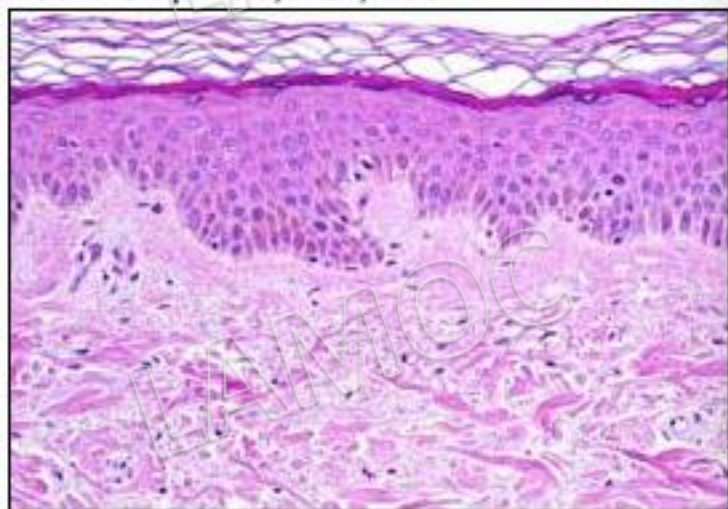
Para manter a figura geométrica, pressione a tecla d



Color picker (0,0,0/255,255,255)

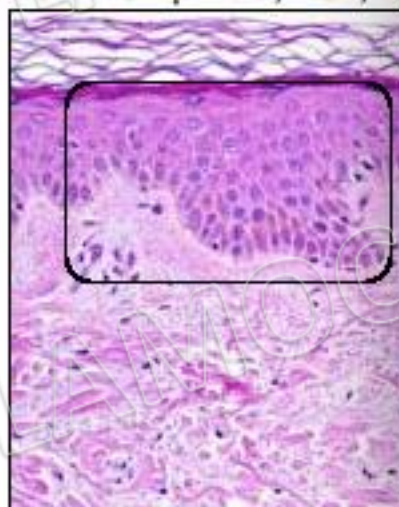
O2 HE.jpeg

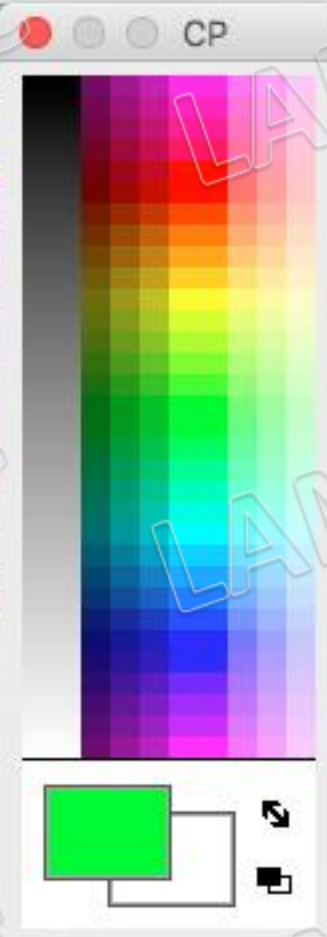
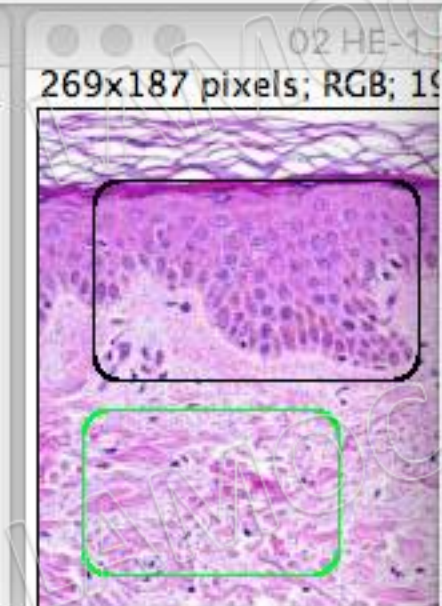
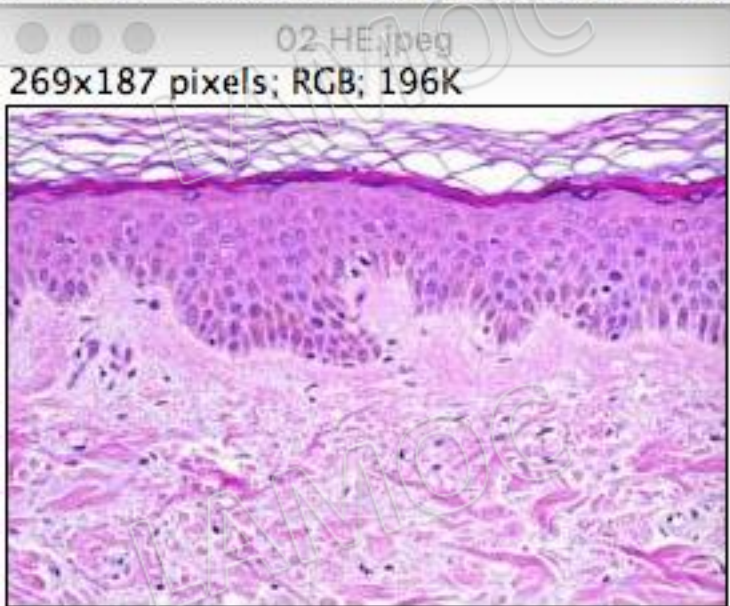
269x187 pixels; RGB; 196K

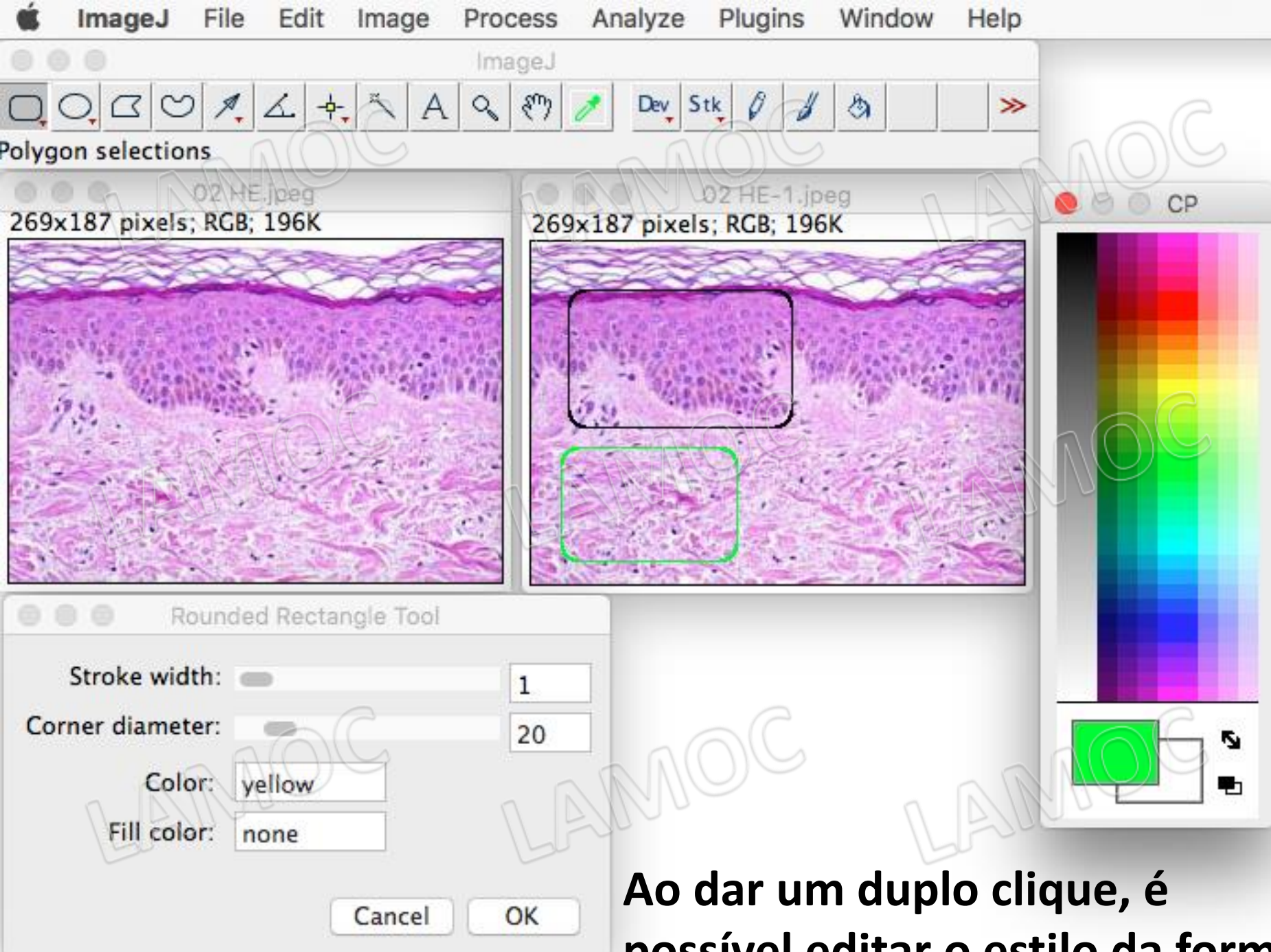


O2 HE-1.

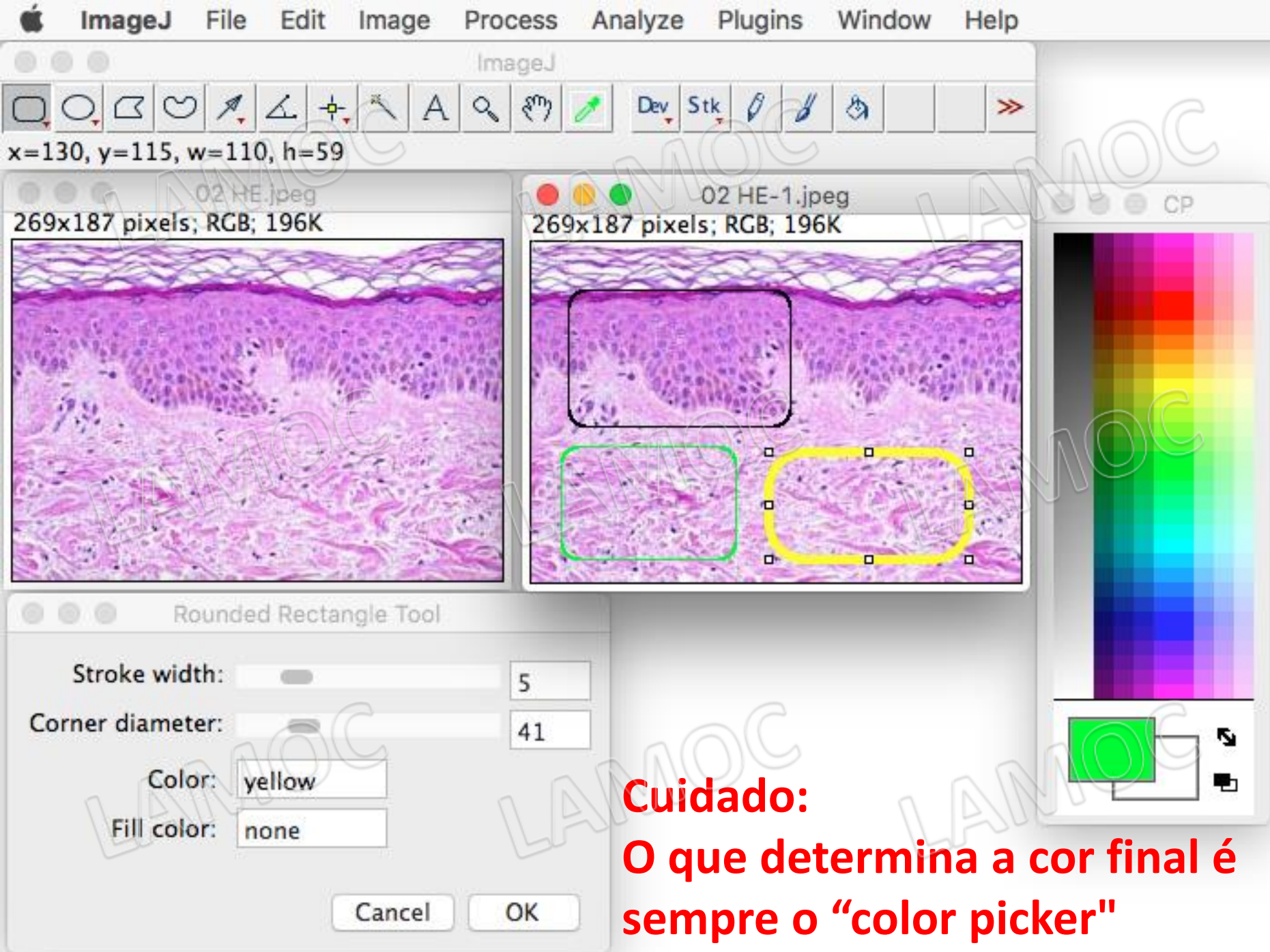
269x187 pixels; RGB; 196K

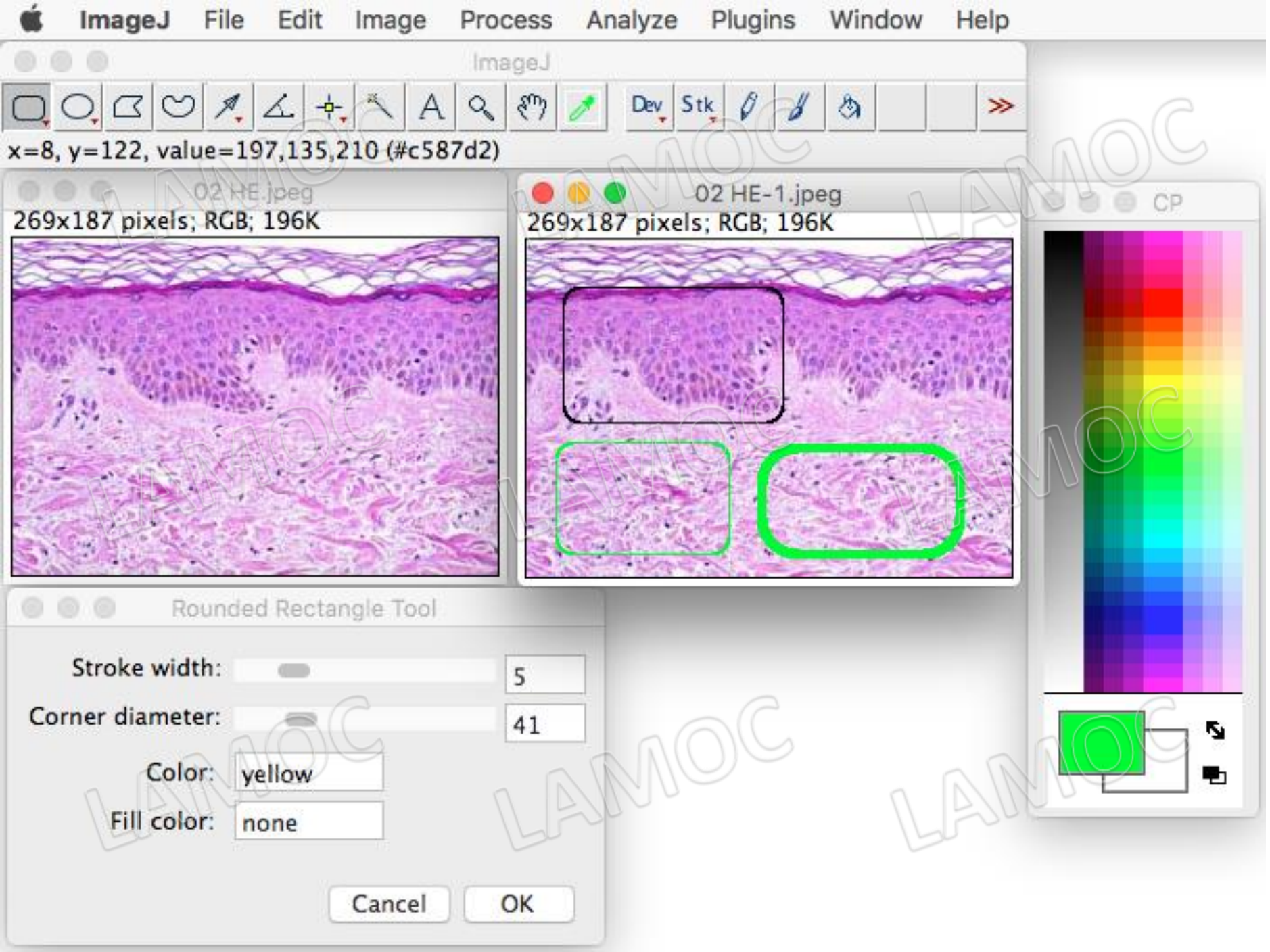






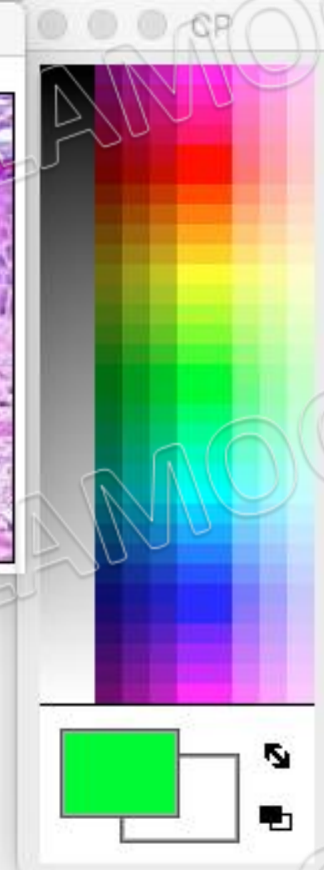
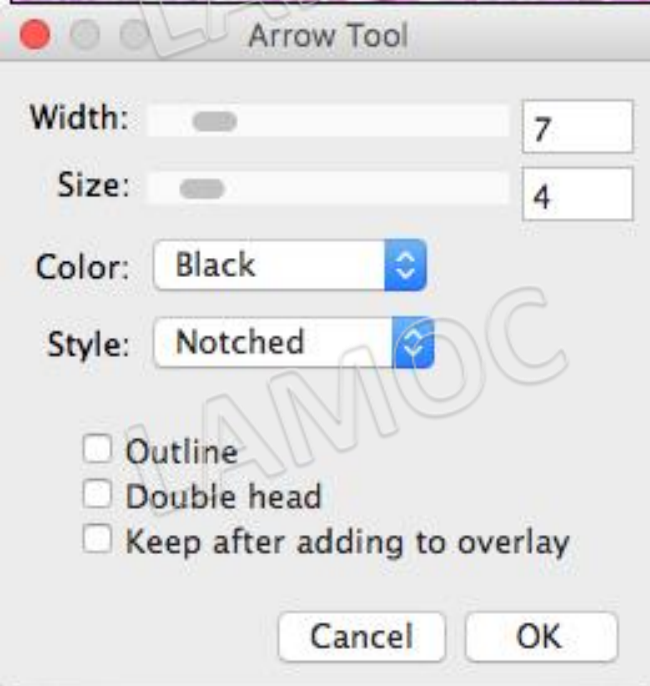
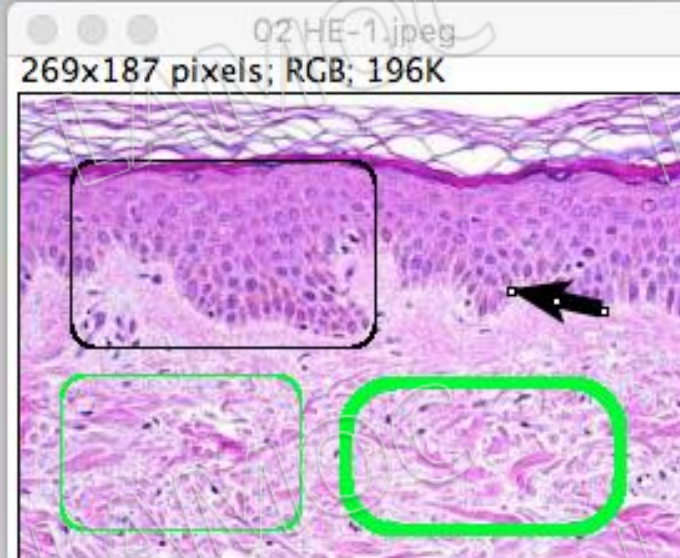
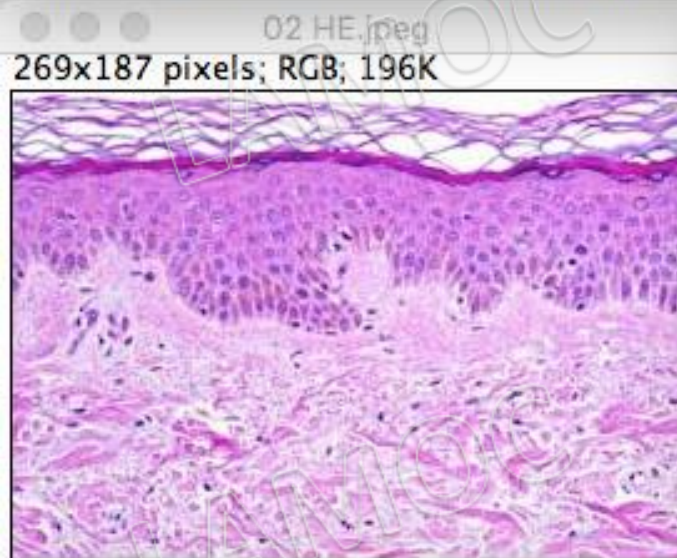
Ao dar um duplo clique, é possível editar o estilo da forma

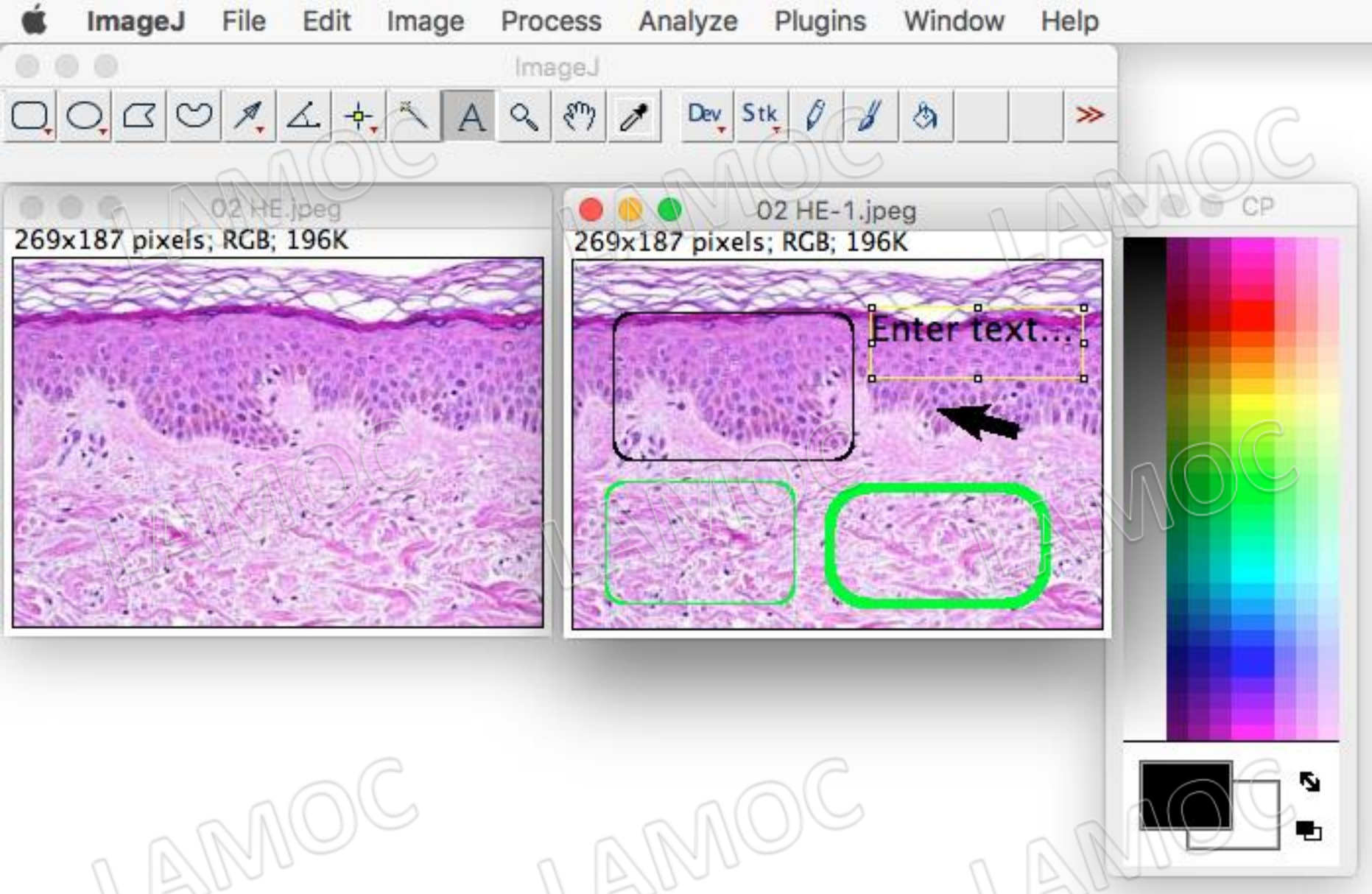


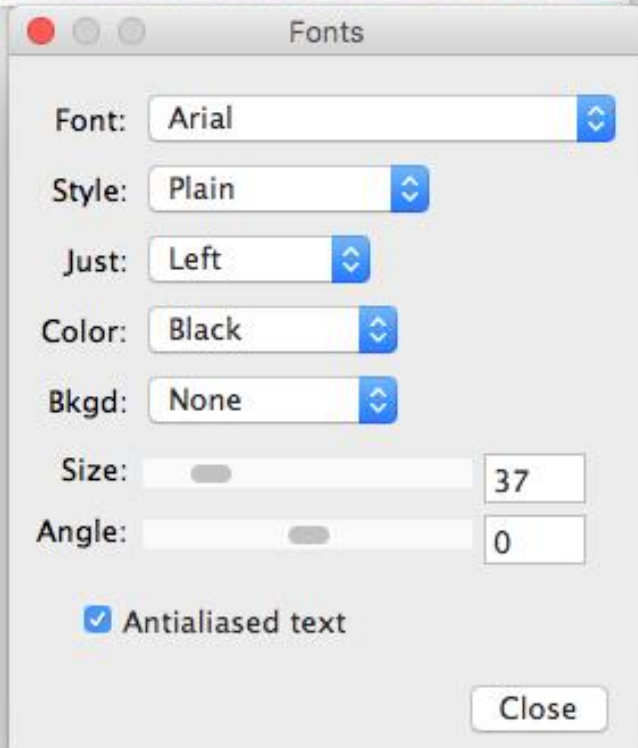
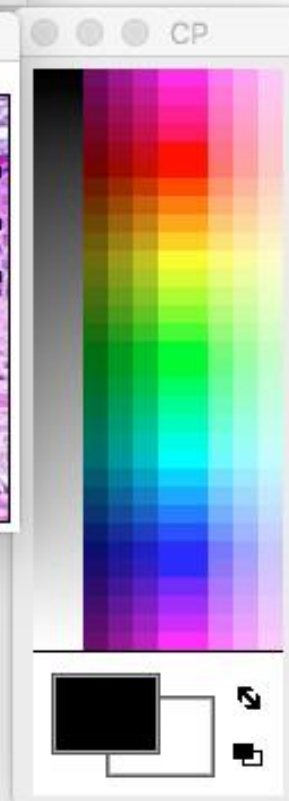
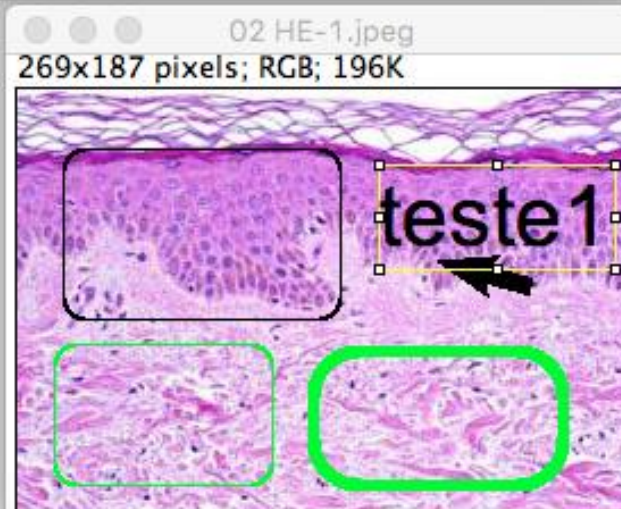
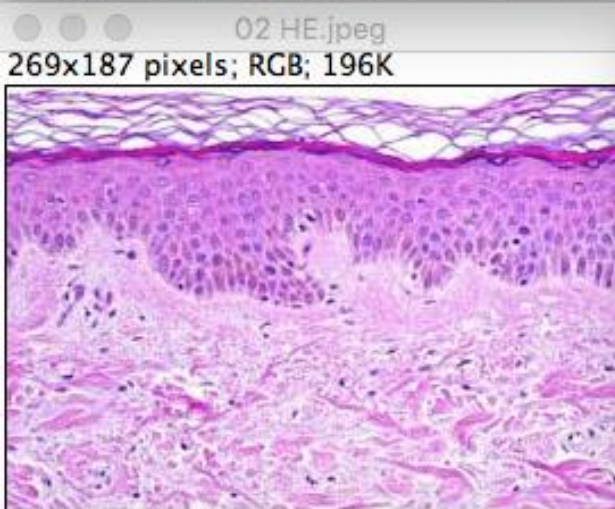




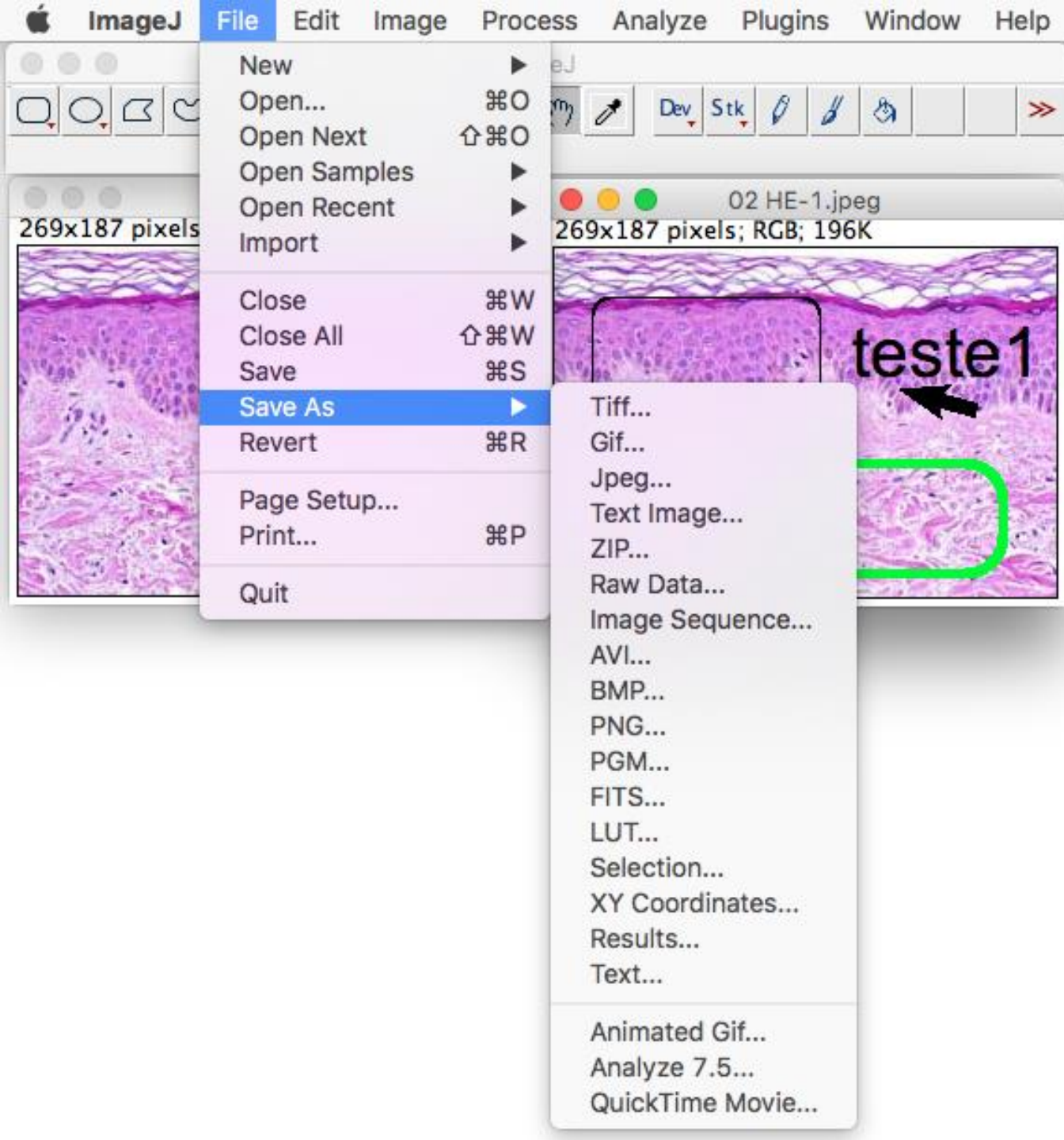
Oval, elliptical or brush selections (right click to switch)

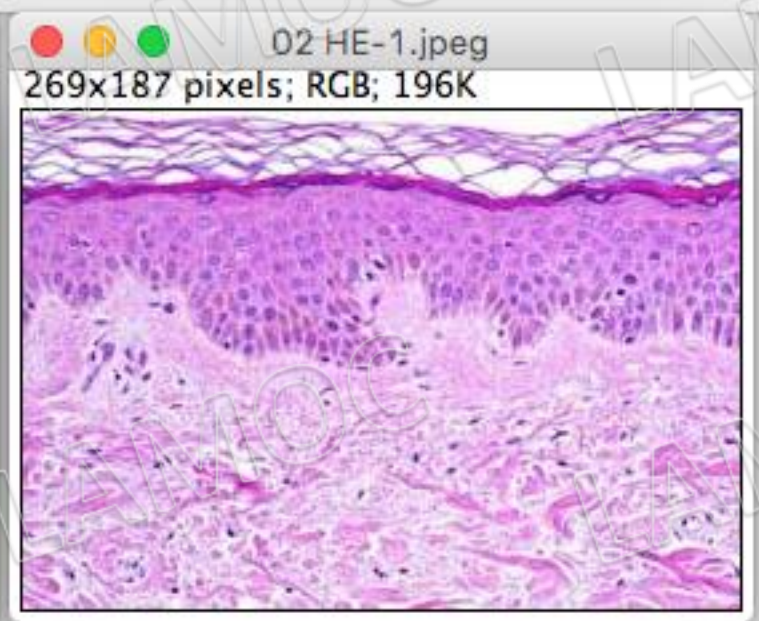
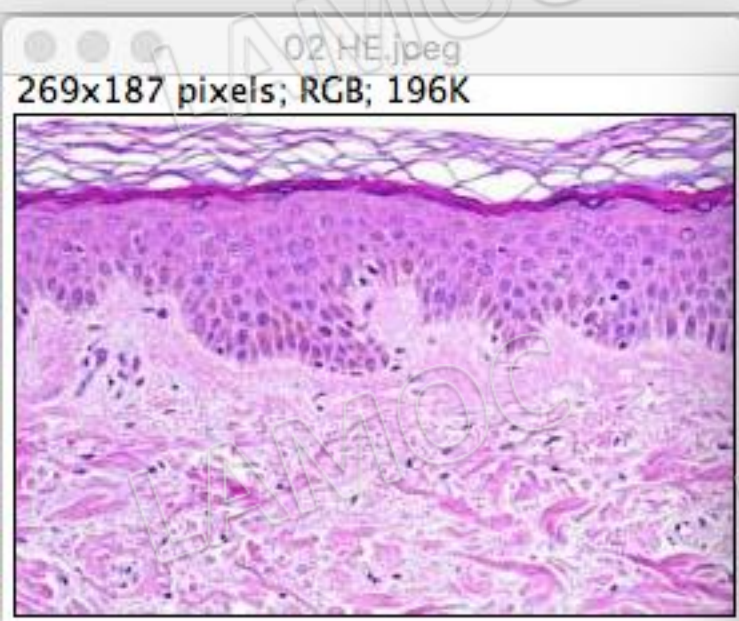


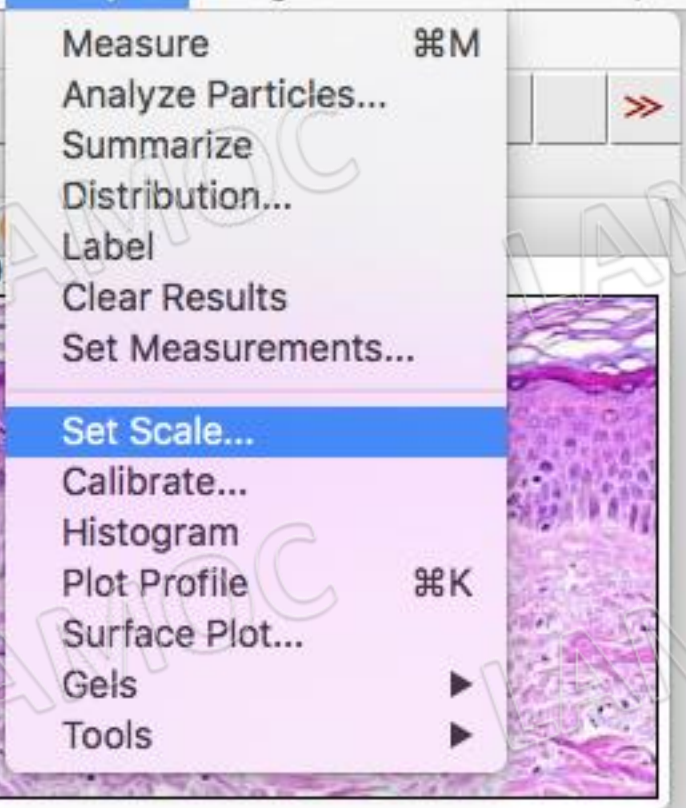
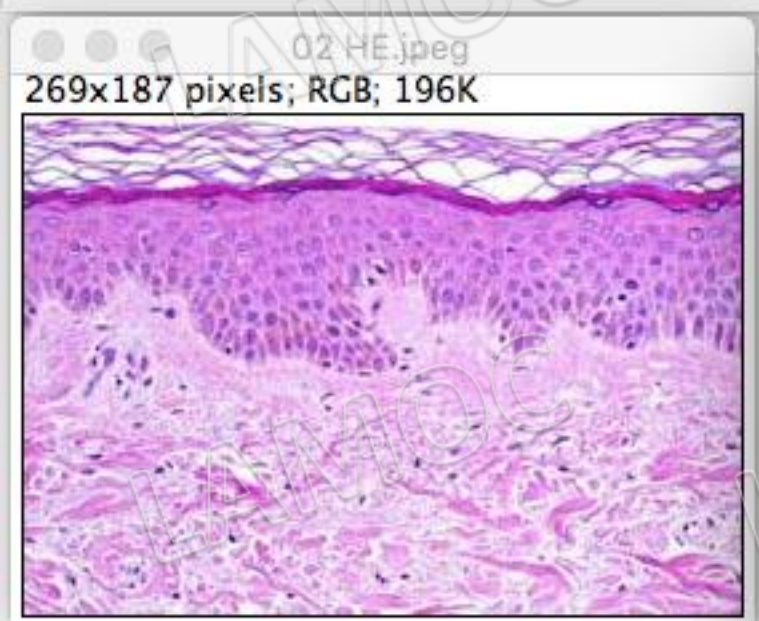


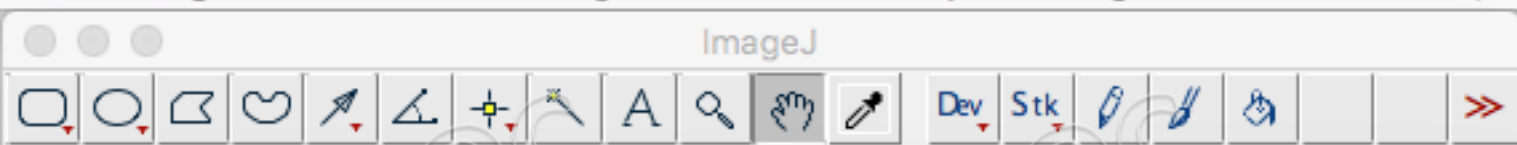


Cuidado:
Para manter o texto, use a função
Ctrl+b

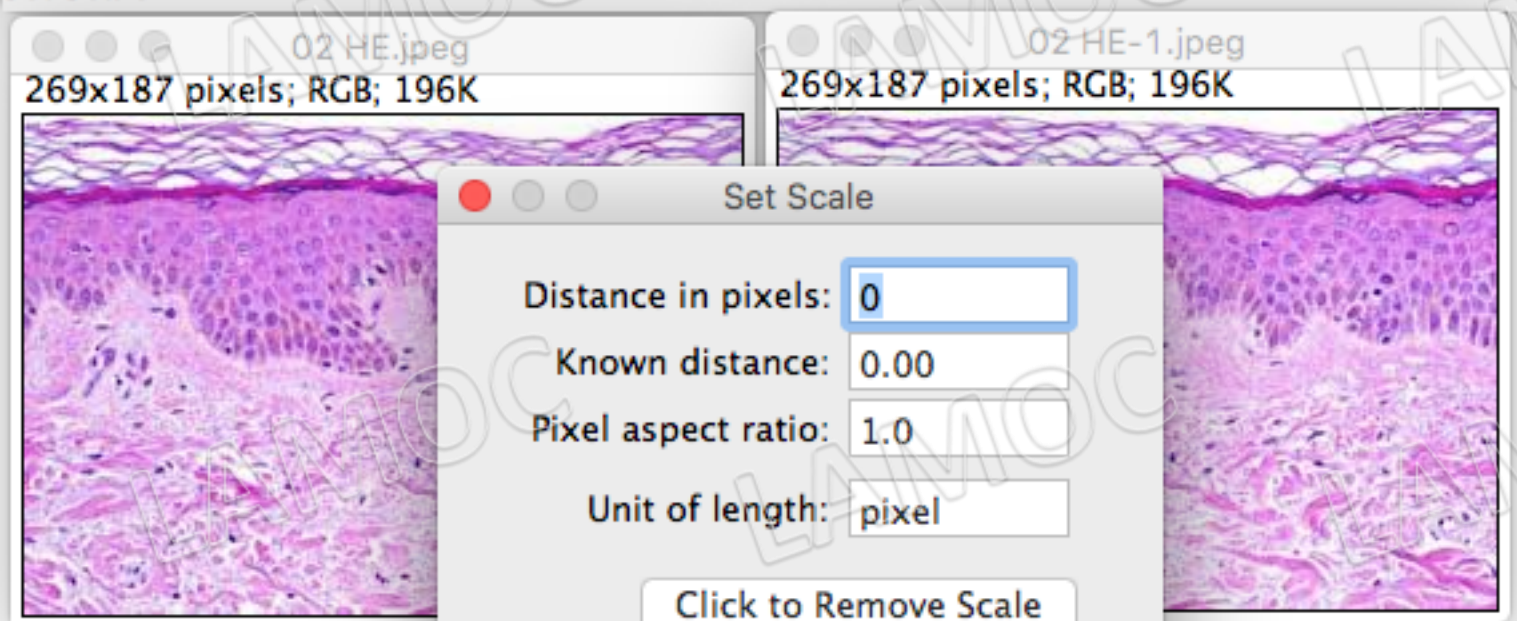








Set Scale.....



Set Scale

Distance in pixels:

Known distance:

Pixel aspect ratio:

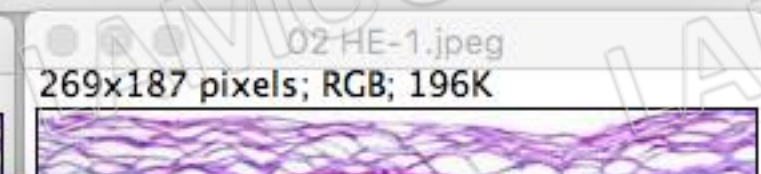
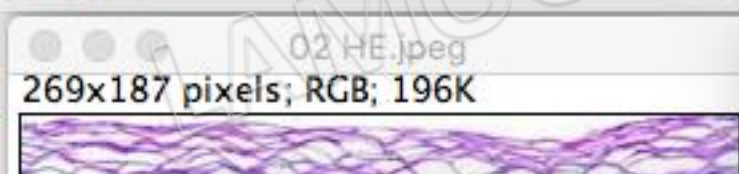
Unit of length:

☐ Global

Scale: <no scale>



Set Scale.....



Set Scale

Distance in pixels:

Known distance:

Pixel aspect ratio:

Unit of length:

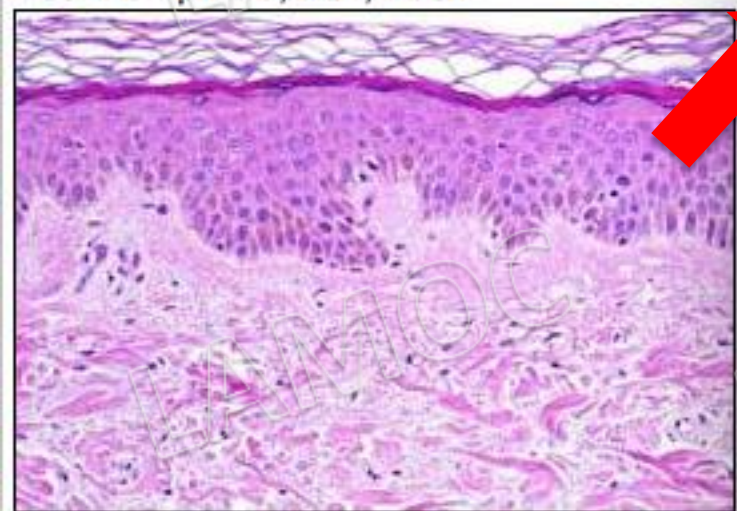
☐ Global

Scale: 4 pixels/um

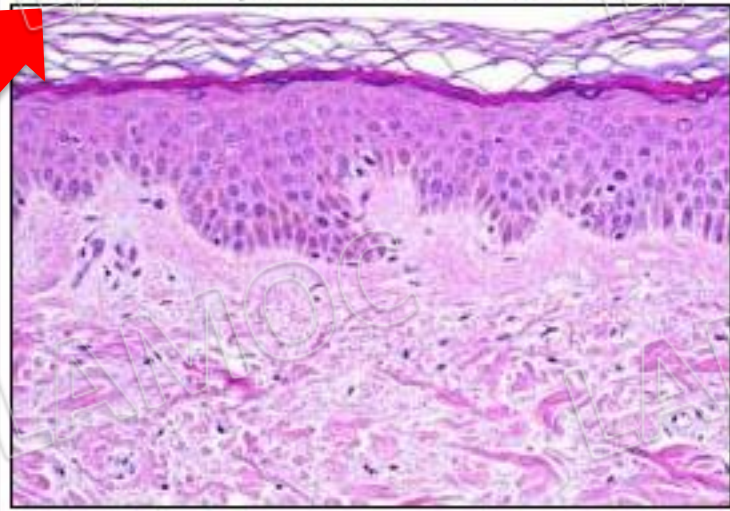


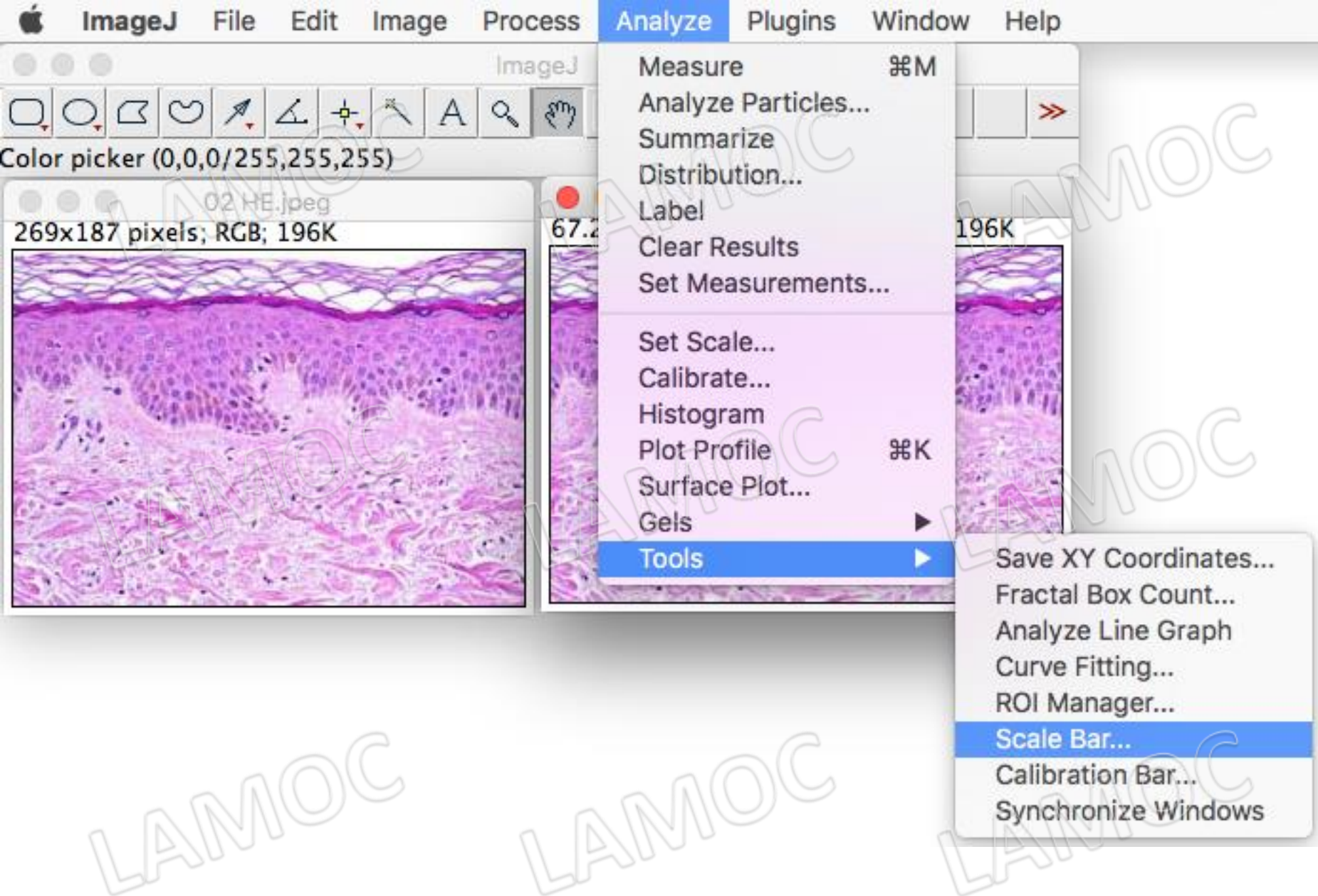
x=27, y=65, value=151,073,172 (#9749ac)

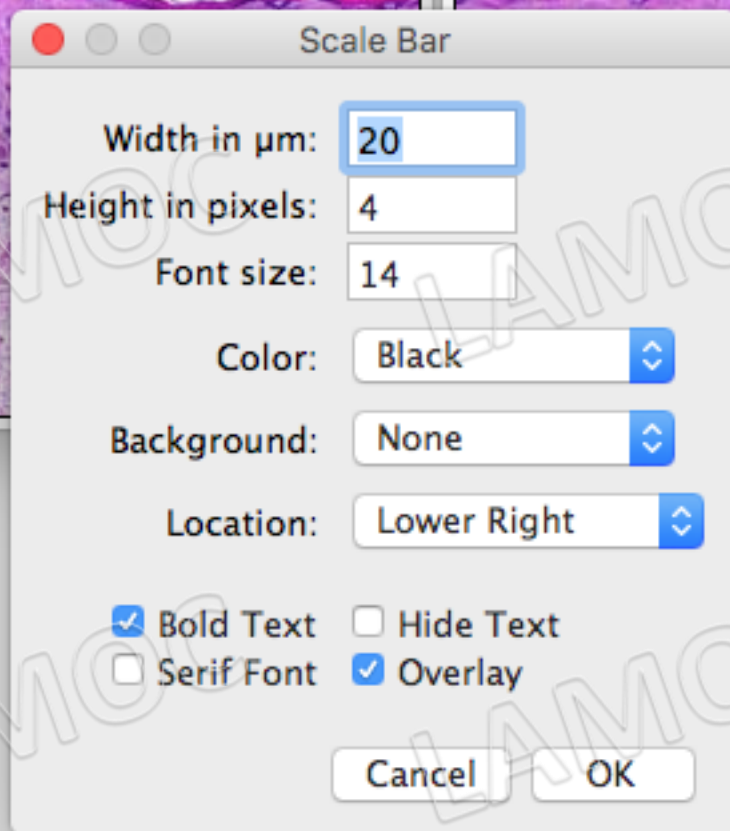
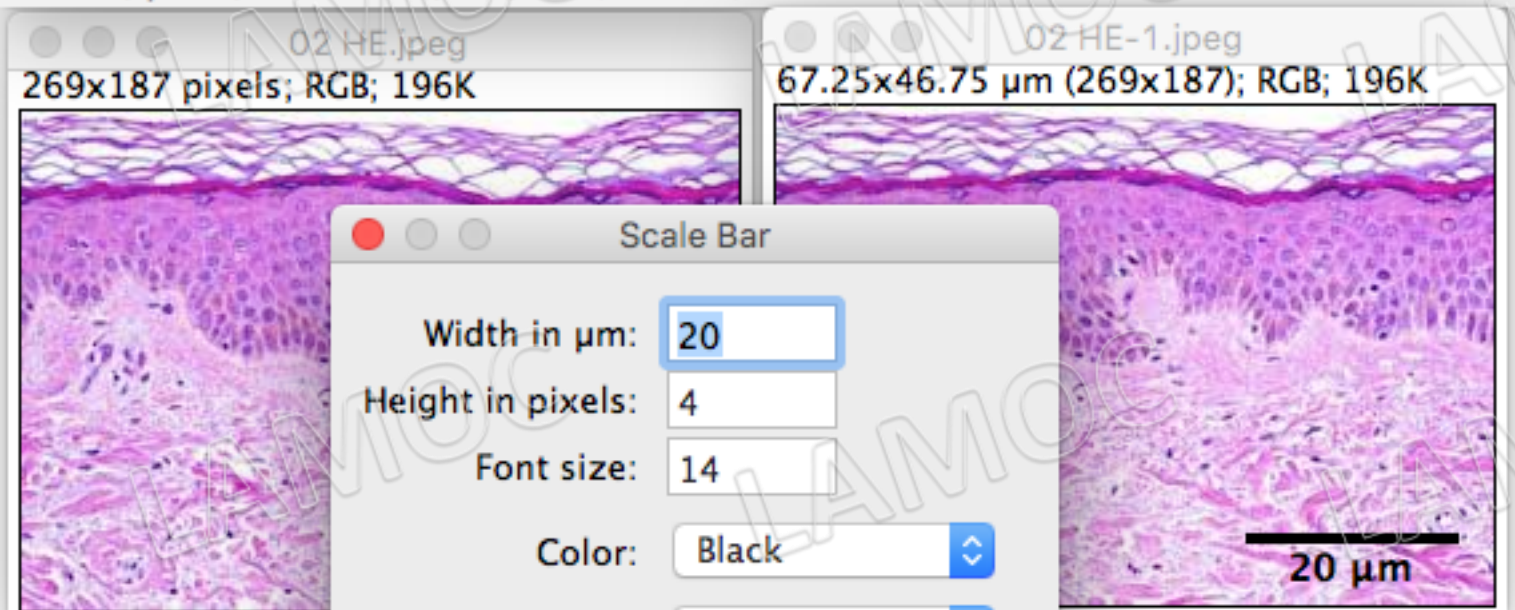
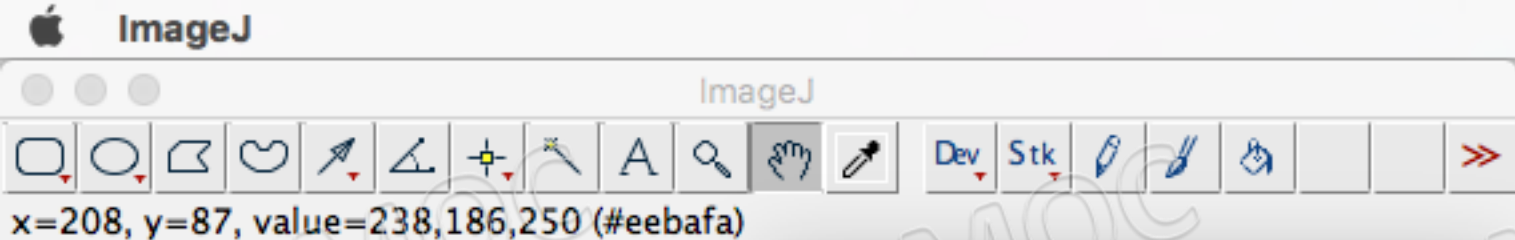
02 HE.jpeg
269x187 pixels; RGB; 196K



02 HE-1.jpeg
67.25x46.75 μ m (269x187); RGB; 196K

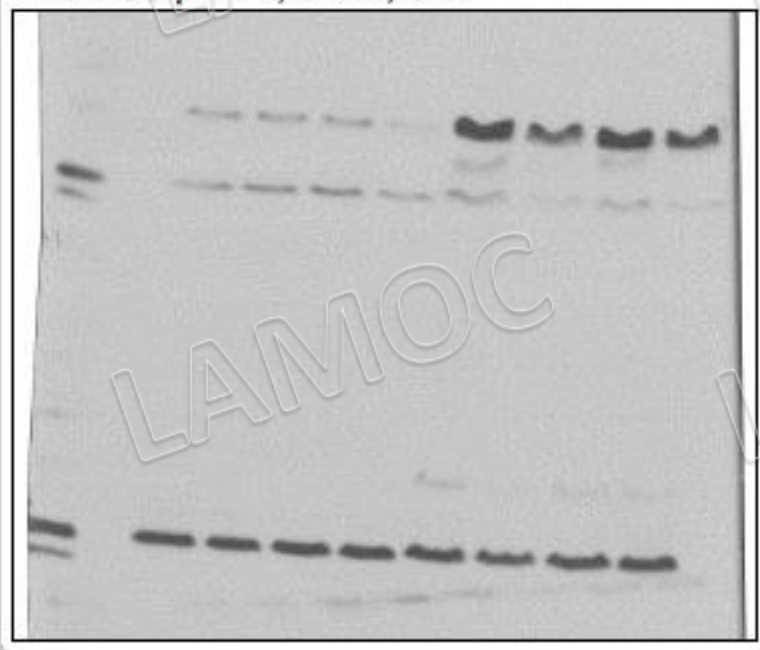


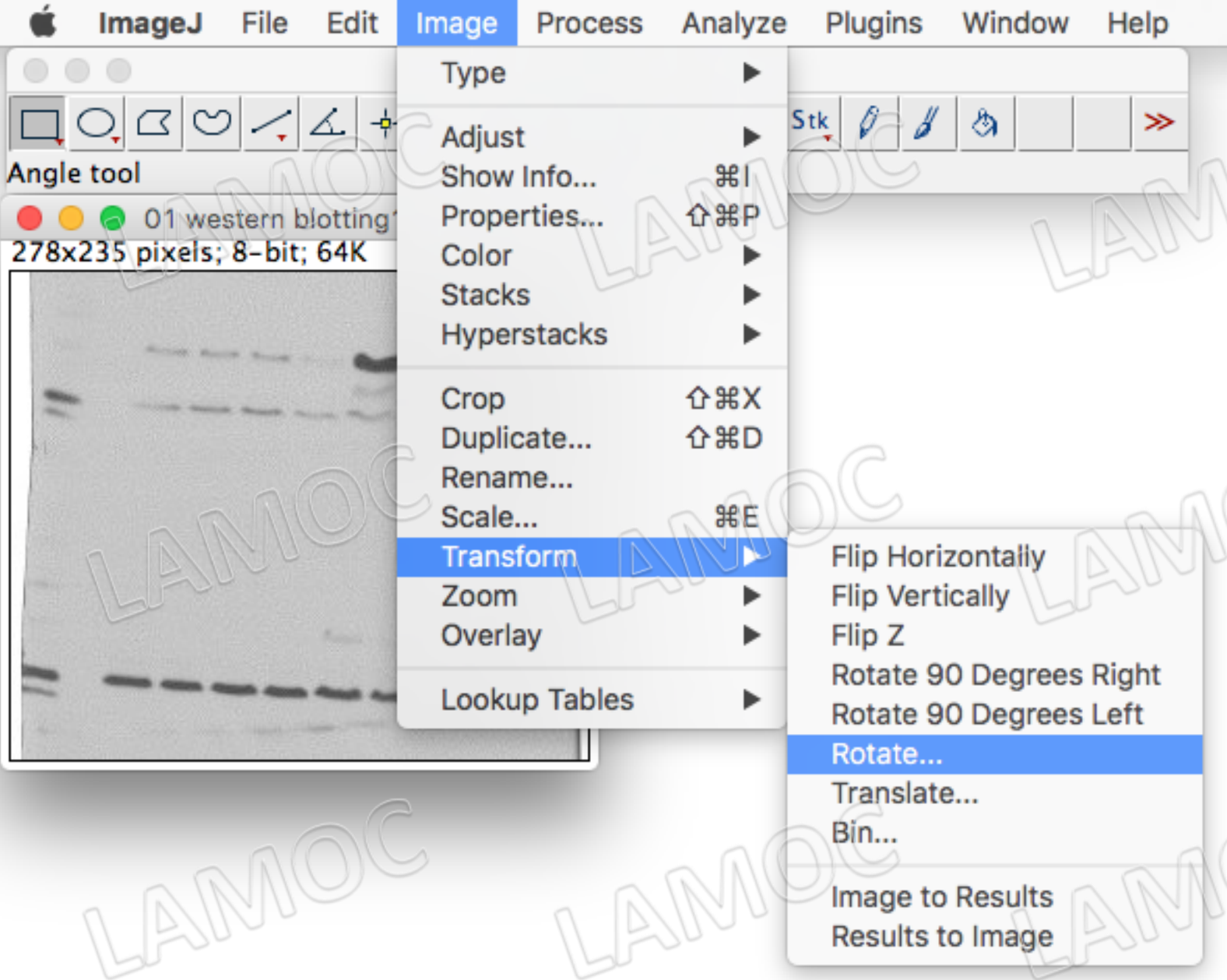






01 western blotting1.jpg
278x235 pixels; 8-bit; 64K

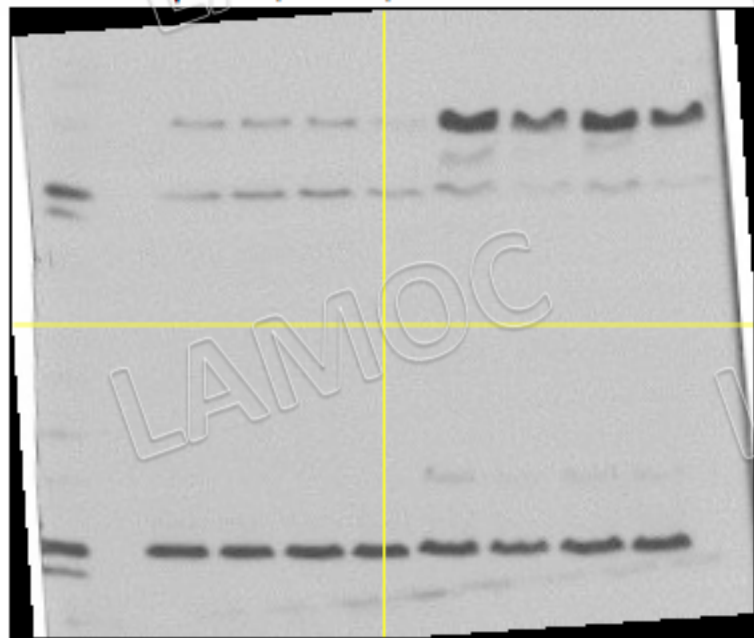






01_western blotting1.jpg

278x235 pixels; 8-bit; 64K



Rotate

Angle (degrees):

-4

Grid Lines:

1

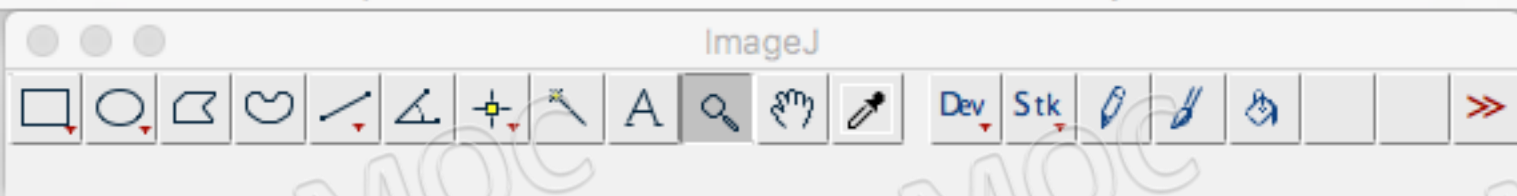
Interpolation:

Bilinear

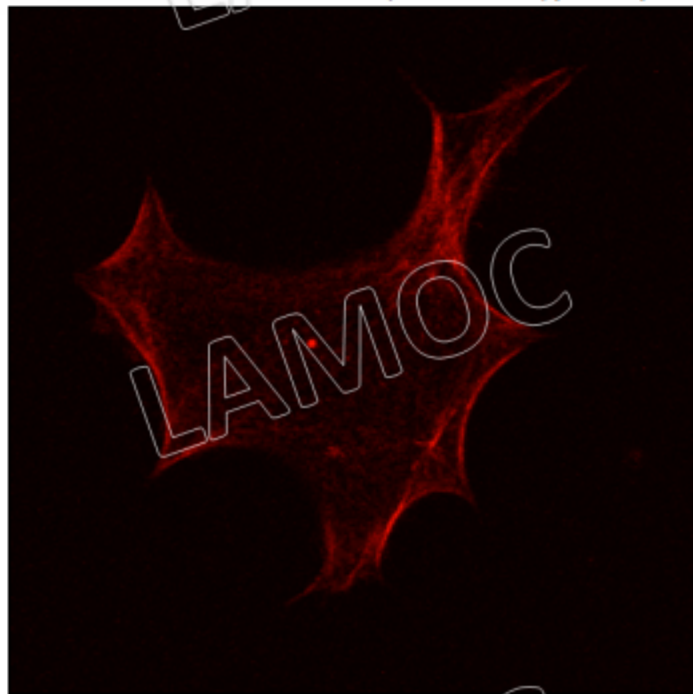
- ☐ Fill with Background Color
- ☐ Enlarge Image to Fit Result
- ☒ Preview

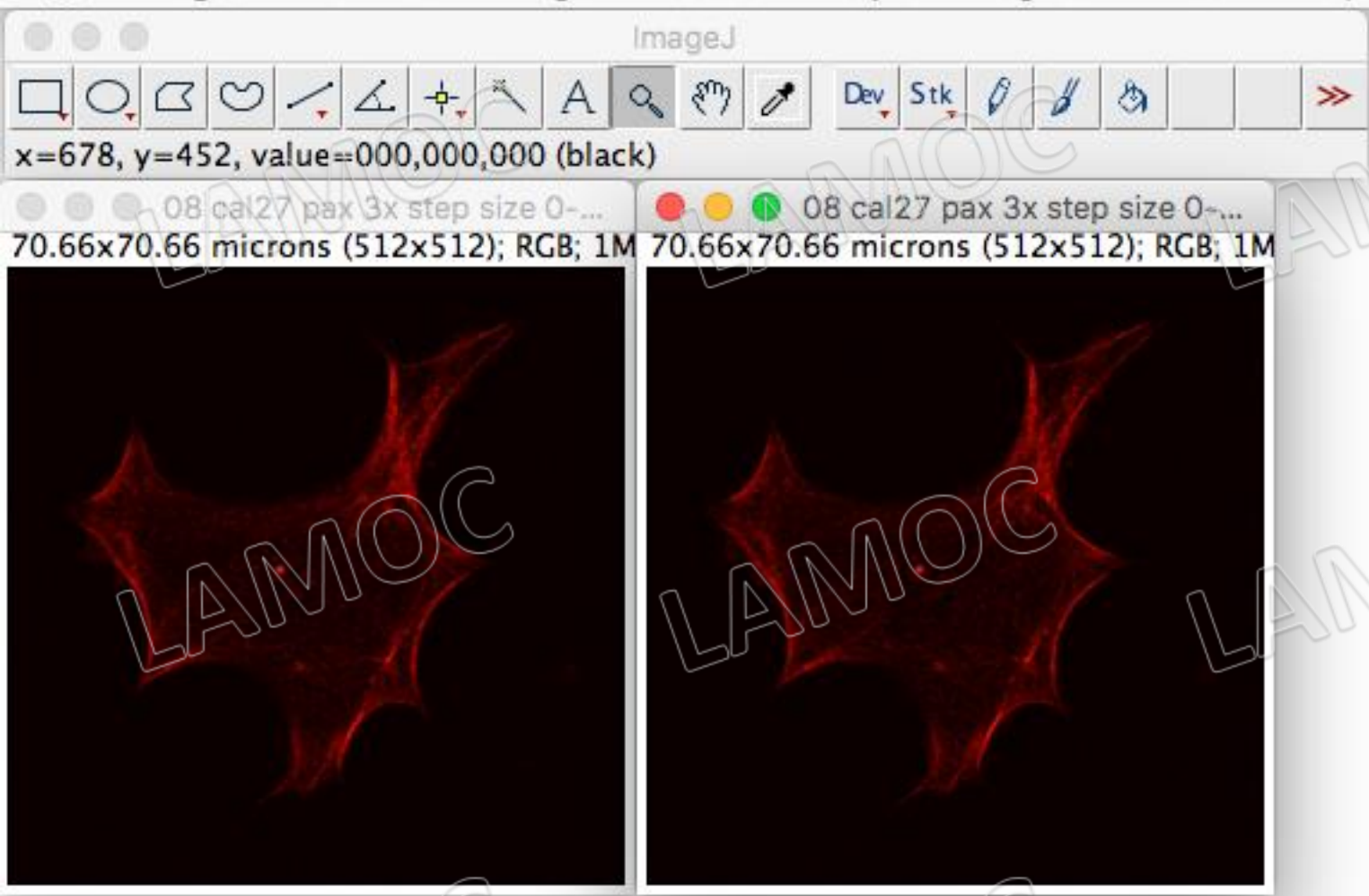
Cancel

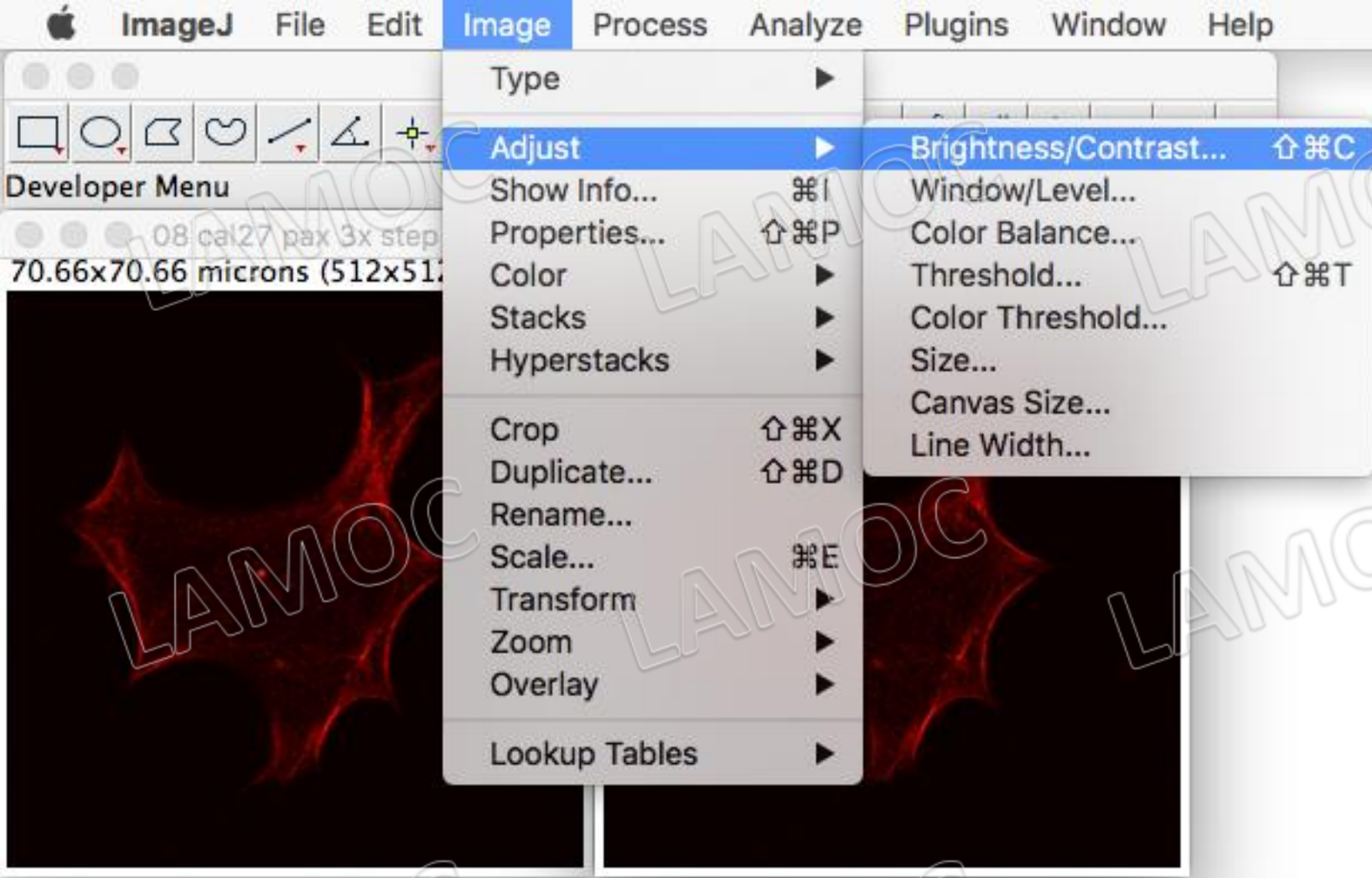
OK

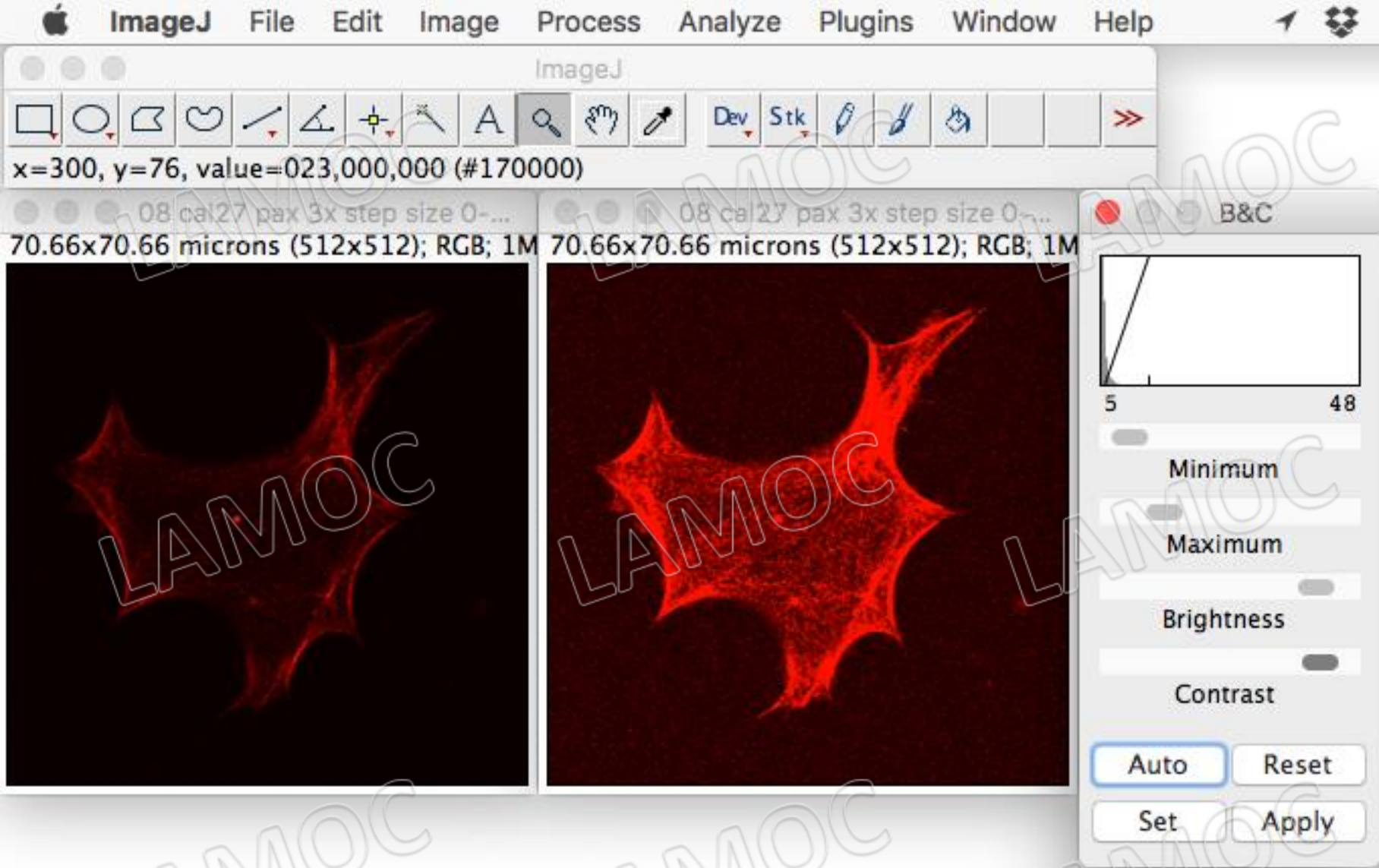


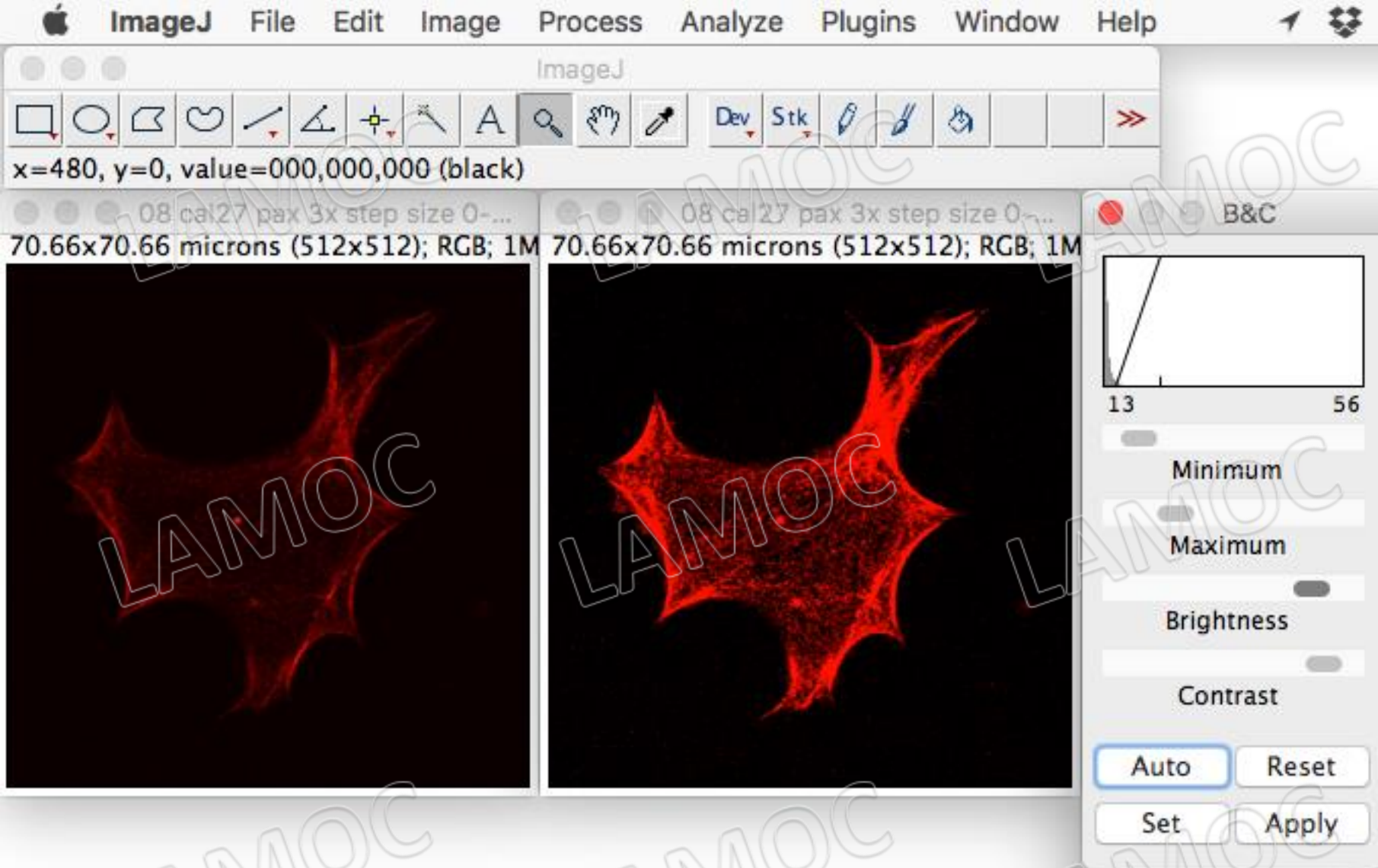
08 cal27 pax 3x step size 0-...
70.66x70.66 microns (512x512); RGB; 1M







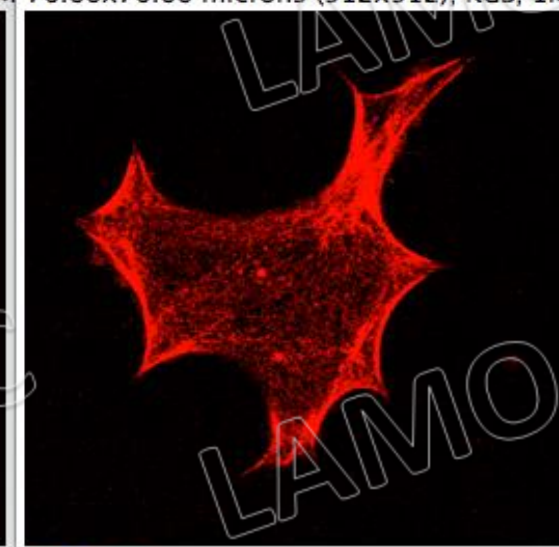
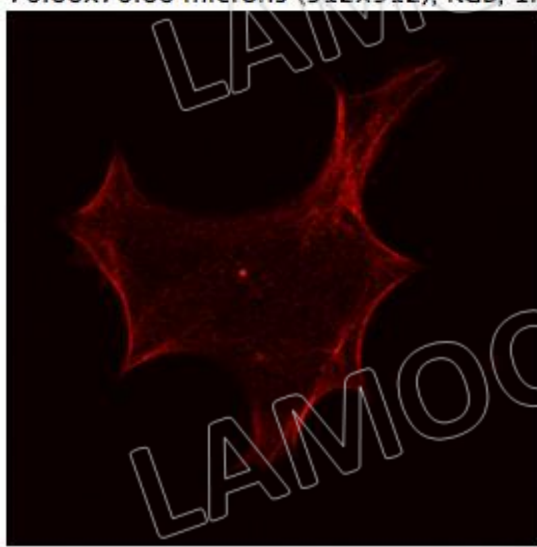




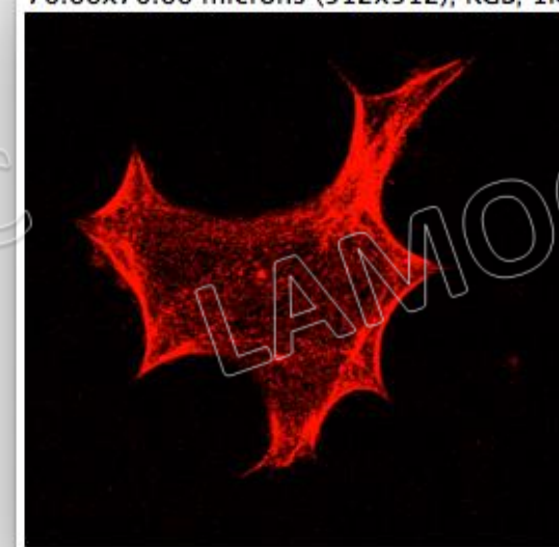


08 cal27 pax 3x step size 0-... 70.66x70.66 microns (512x512); RGB; 1M

08 cal27 pax 3x step size 0-... 70.66x70.66 microns (512x512); RGB; 1M



08 cal27 pax 3x step size 0-... 70.66x70.66 microns (512x512); RGB; 1M



B&C

13 56

Minimum

Maximum

Brightness

Contrast

Auto Reset

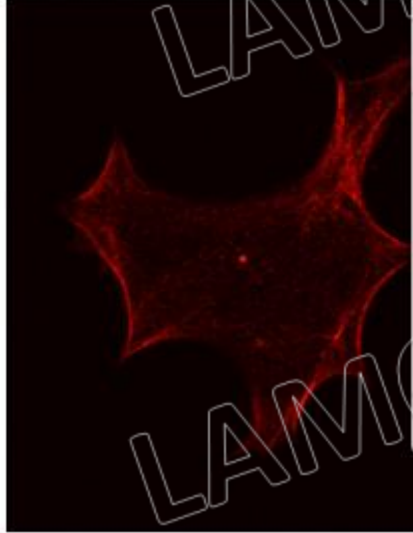
Set Apply



Text tool (double-click to conf

08 cal27 pax 3x step

70.66x70.66 microns (512x512)



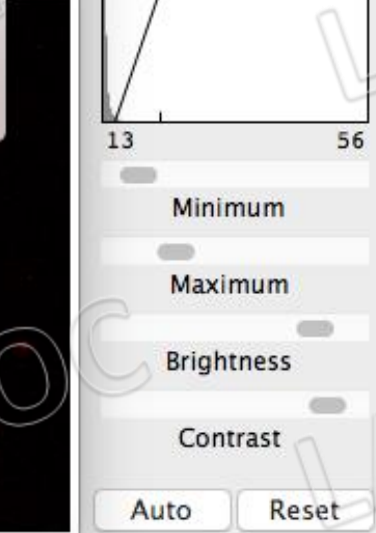
- Type
- Adjust
- Show Info... ⌘I
- Properties... ⌘P
- Color
- Stacks
- Hyperstacks
- Crop ⌘X
- Duplicate... ⌘D
- Rename...
- Scale... ⌘E
- Transform
- Zoom
- Overlay
- Lookup Tables

- 8-bit
- 16-bit
- 32-bit
- 8-bit Color
- ✓ RGB Color
- RGB Stack
- HSB Stack
- Lab Stack



08 cal27 pax 3x step

70.66x70.66 microns (512x512); RGB; 1M



B&C

13 56

Minimum

Maximum

Brightness

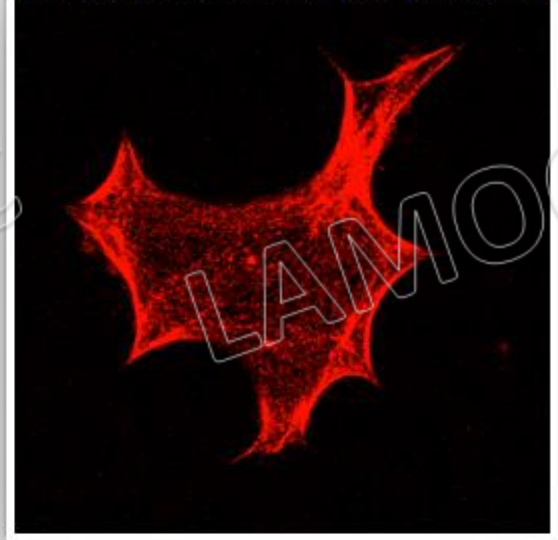
Contrast

Auto Reset

Set Apply

08 cal27 pax 3x step size 0-...

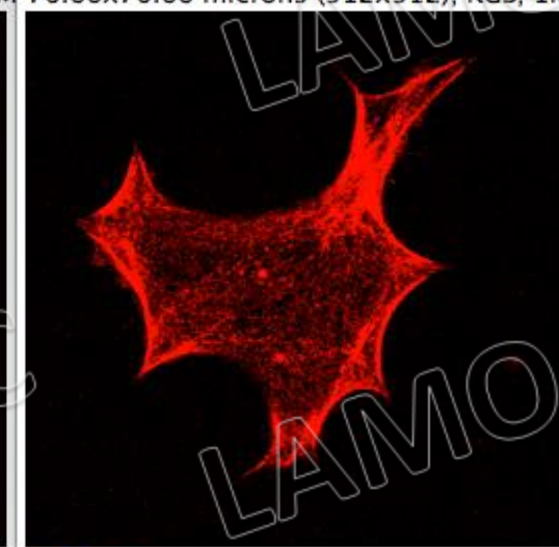
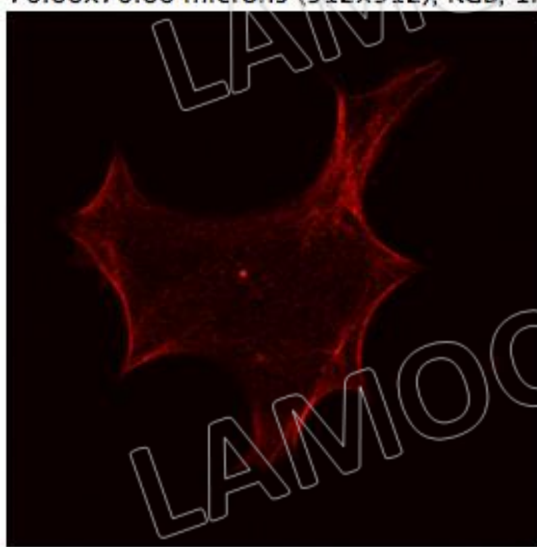
70.66x70.66 microns (512x512); RGB; 1M





08 cal27 pax 3x step size 0-... 70.66x70.66 microns (512x512); RGB; 1M

08 cal27 pax 3x step size 0-... 70.66x70.66 microns (512x512); RGB; 1M



B&C

13 56

Minimum

Maximum

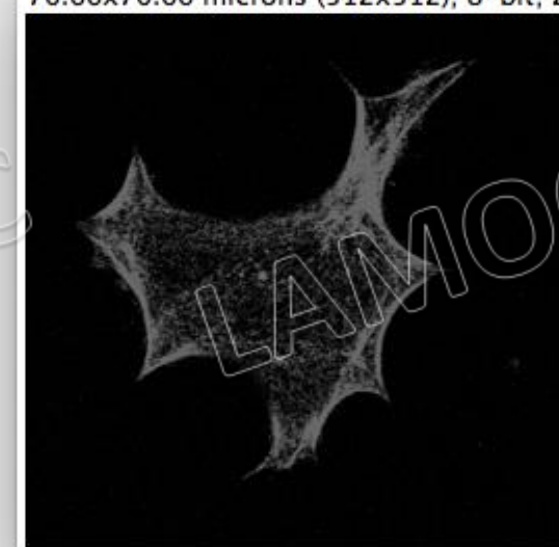
Brightness

Contrast

Auto Reset

Set Apply

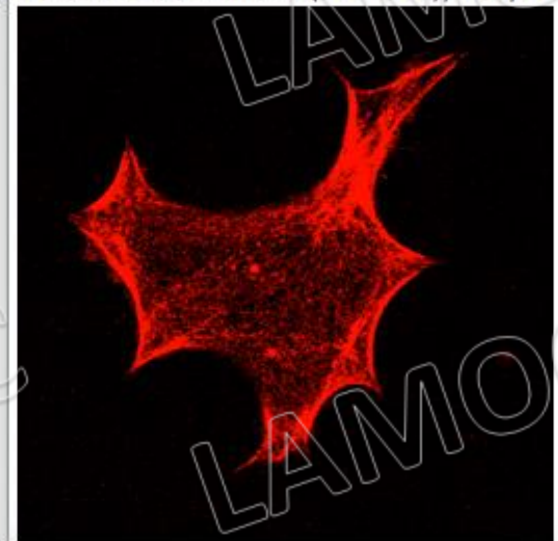
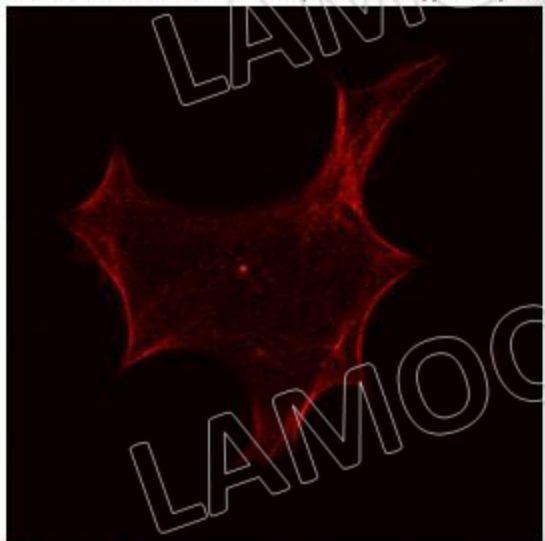
08 cal27 pax 3x step size 0-... 70.66x70.66 microns (512x512); 8-bit; 2



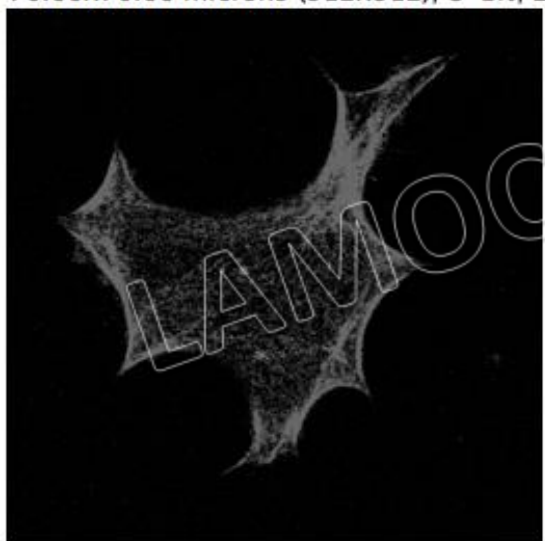


x=492, y=2, value=0

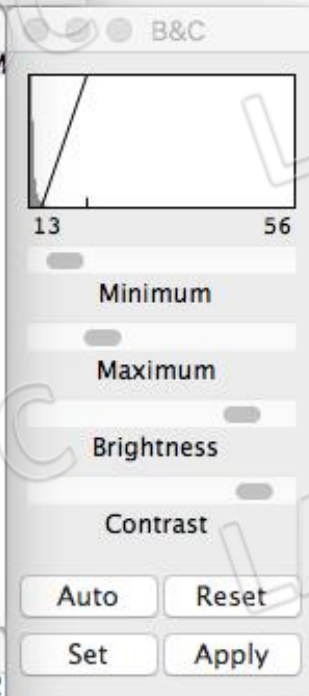
08 cal27 pax 3x step size 0-... 70.66x70.66 microns (512x512); RGB; 1M
 08 cal27 pax 3x step size 0-... 70.66x70.66 microns (512x512); RGB; 1M

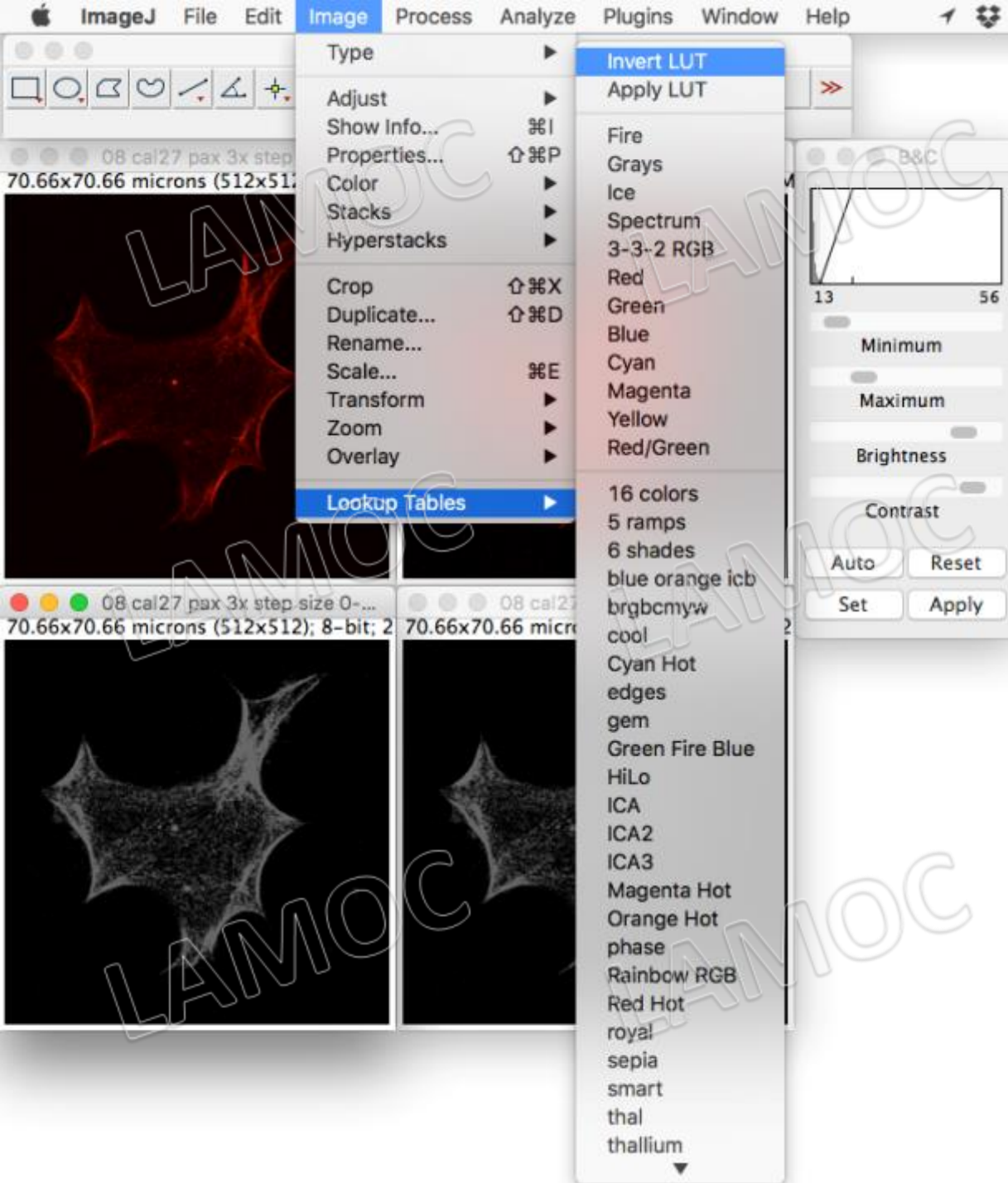


08 cal27 pax 3x step size 0-... 70.66x70.66 microns (512x512); 8-bit; 2



08 cal27 pax 3x step size 0-... 70.66x70.66 microns (512x512); 8-bit; 2



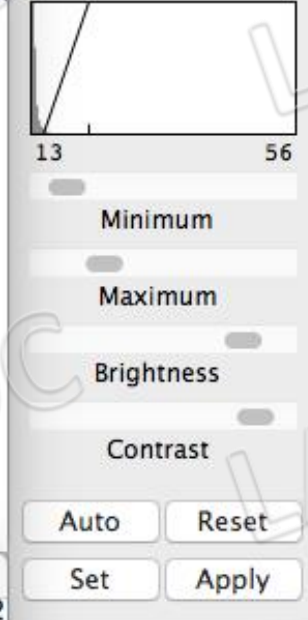
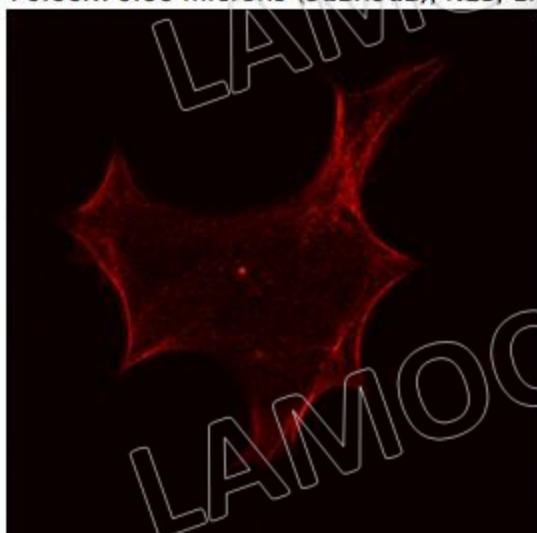




x=492, y=2, value=0

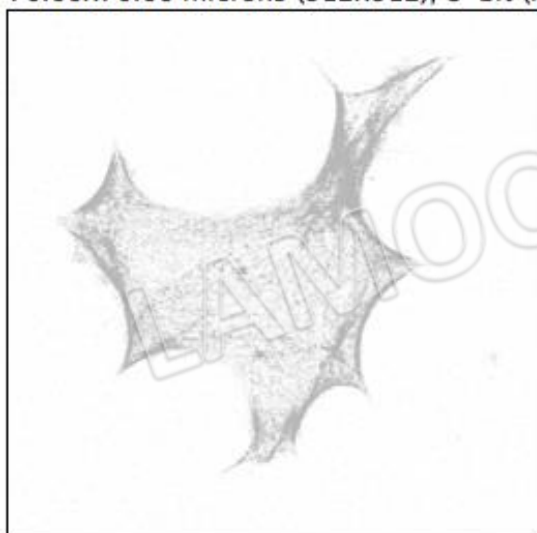
08 cal27 pax 3x step size 0-... 08 cal27 pax 3x step size 0-... B&C

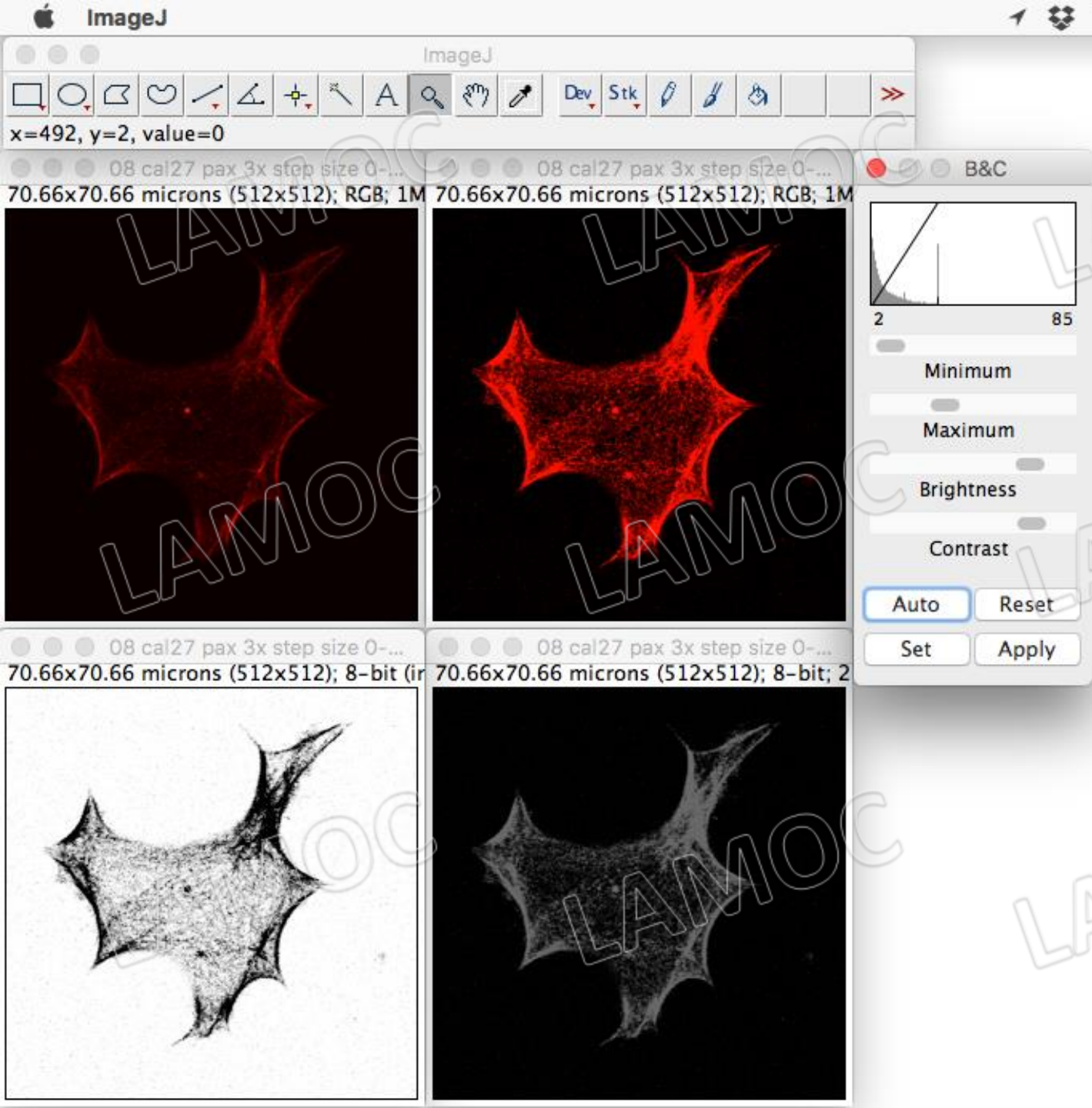
70.66x70.66 microns (512x512); RGB; 1M 70.66x70.66 microns (512x512); RGB; 1M

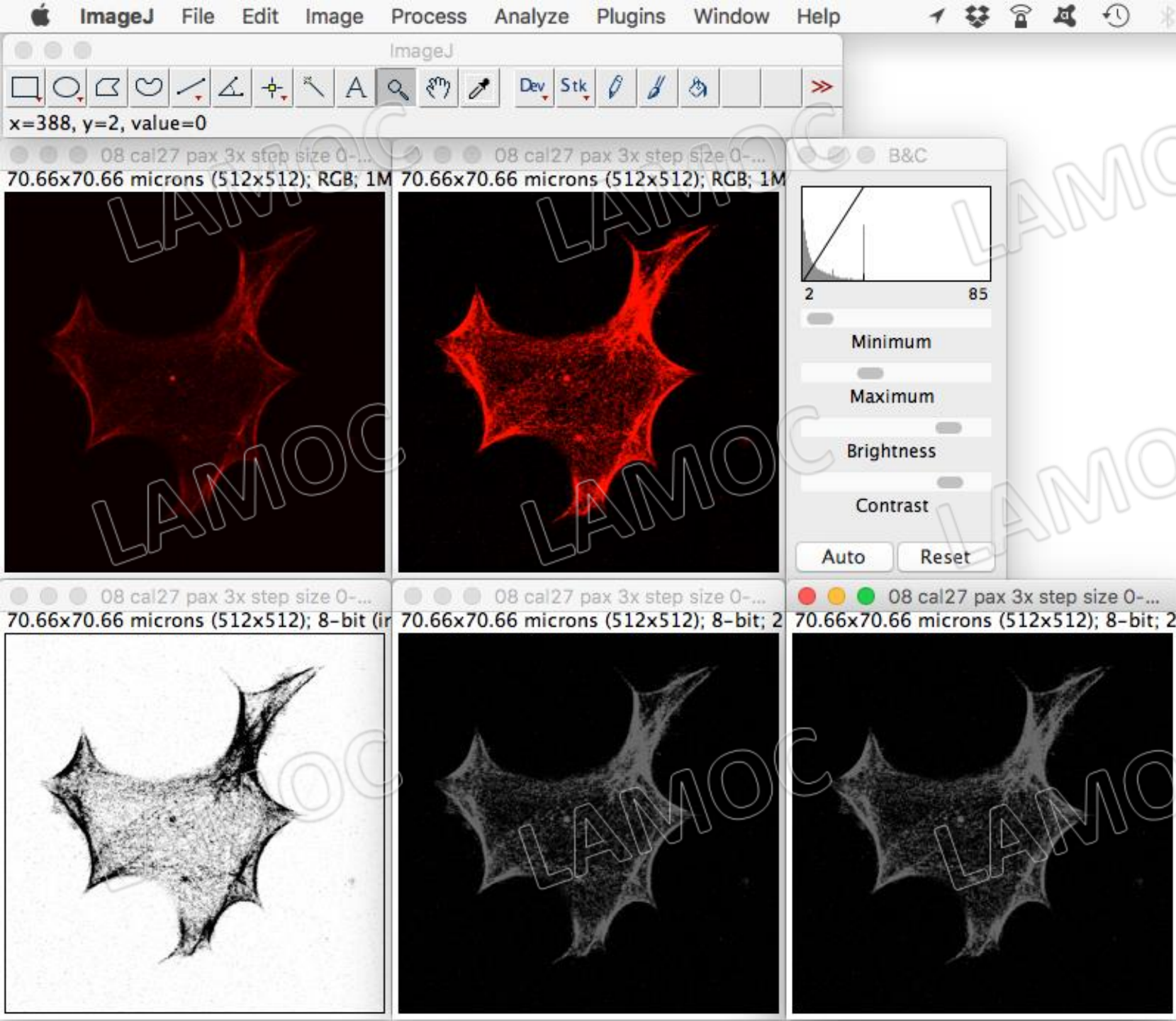


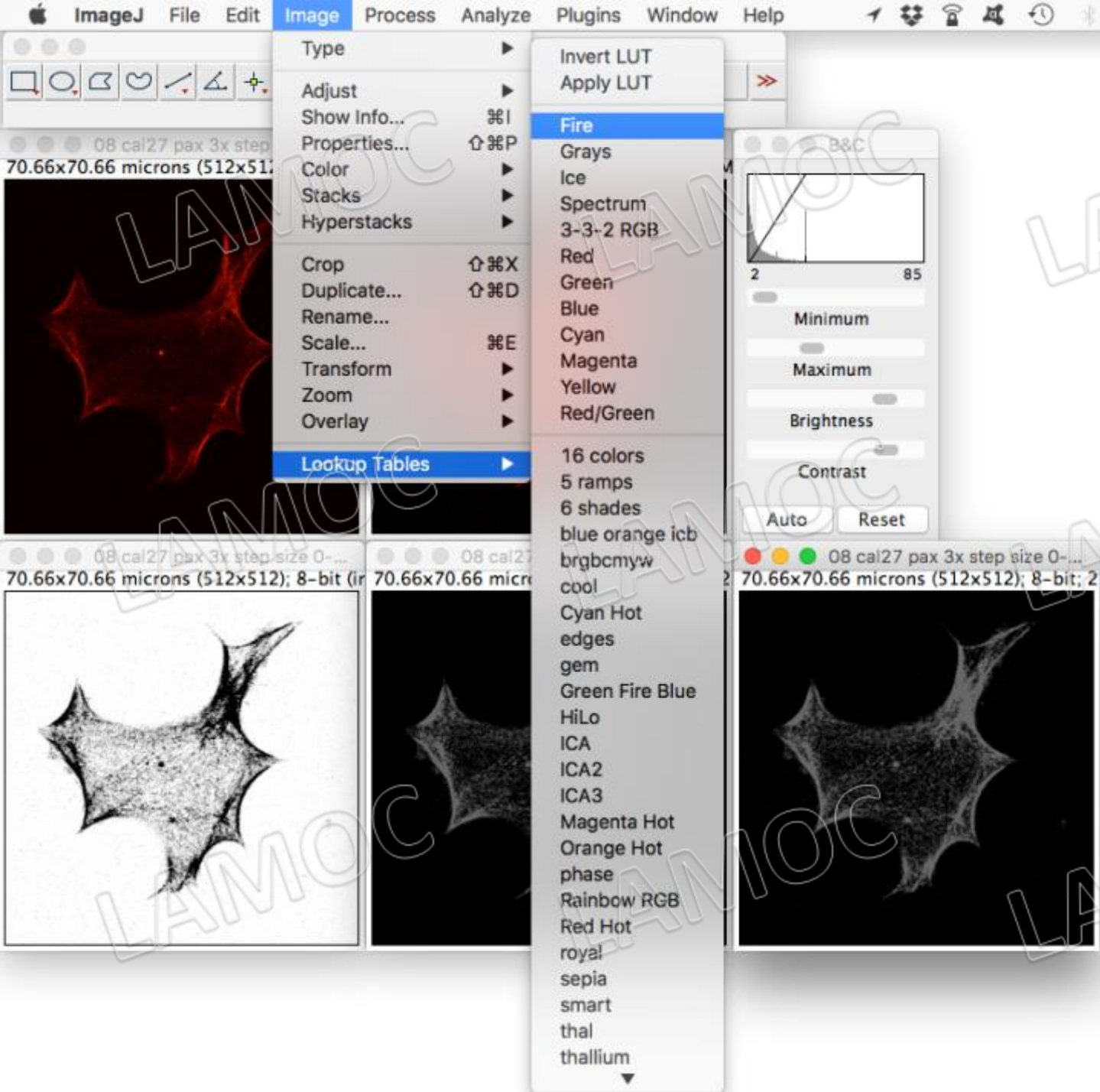
08 cal27 pax 3x step size 0-... 08 cal27 pax 3x step size 0-...

70.66x70.66 microns (512x512); 8-bit (ir 70.66x70.66 microns (512x512); 8-bit; 2





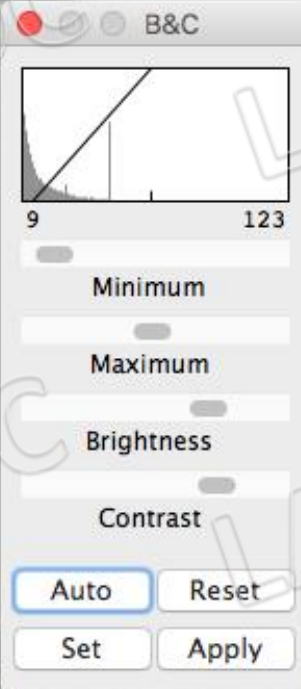
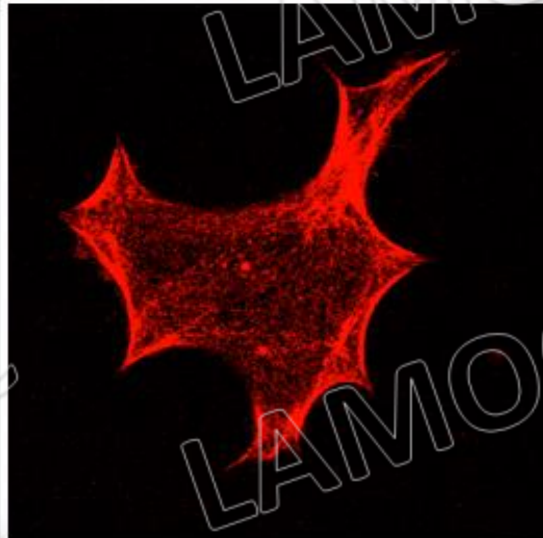
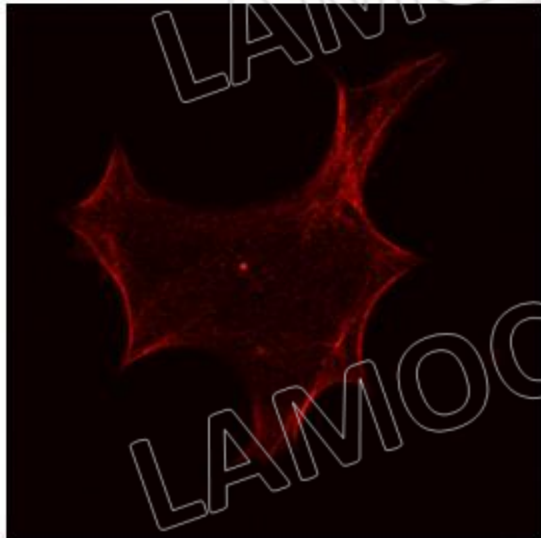




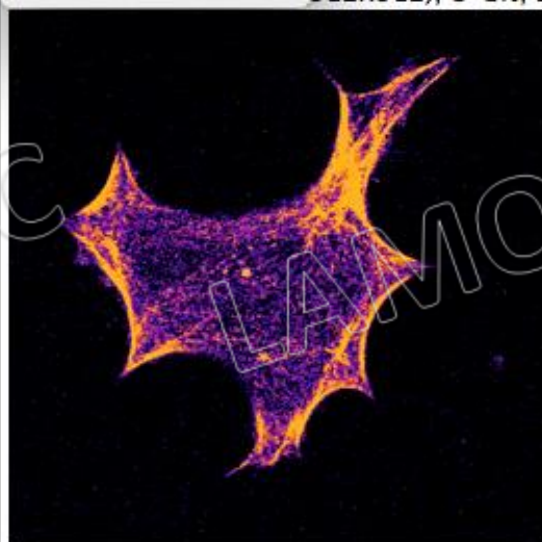
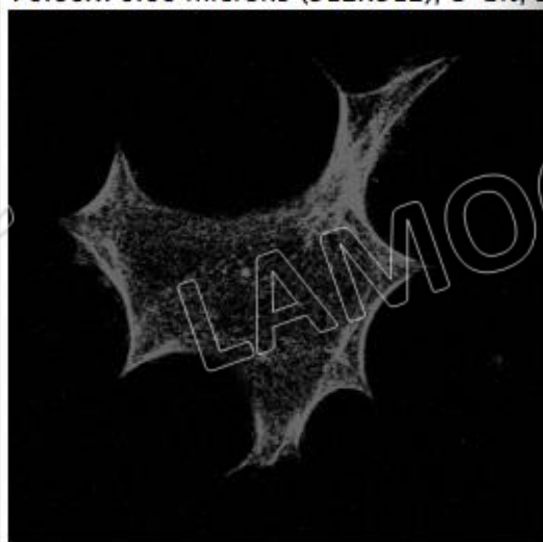
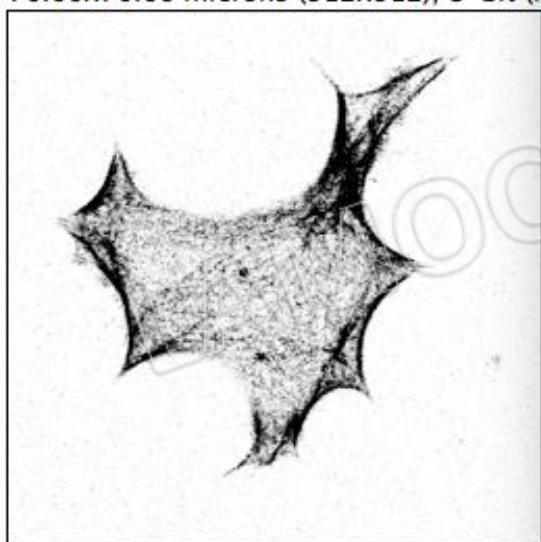


x=8, y=106, value=015,000,000 (#0f0000)

08 cal27 pax 3x step size 0-... 08 cal27 pax 3x step size 0-...
70.66x70.66 microns (512x512); RGB; 1M 70.66x70.66 microns (512x512); RGB; 1M



08 cal27 pax 3x step size 0-... 08 cal27 pax 3x step size 0-...
70.66x70.66 microns (512x512); 8-bit (ir 70.66x70.66 microns (512x512); 8-bit; 2



Transform (FFT, FFT), 2D and 3D Deconvolution, Diffraction PSF 3D
3D Local Thickness (3D Distance Map), MicroArray Profile, Label Image

Jeff Hardin

QuickTime Movie Player, Concatenate Movies, QT4D Player,
QT4D Writer, Acquire4D, Rename Perkin-Elmer Files

Per Christian Henden

Orientation Measurement, Fractal Estimation, Susan Smoothing
(2D&3D), Isolated Pixel Removal (2D&3D), Small Region Removal,
Adaptive 3D Threshold, Semi Band-threshold, 3D Otsu Thresholding,
3D Discrete Distance Transform, Extrude Map, Gaussian Noise

Frederick Hessman

Anaglyph, Astronomy Plugin Package, Directory Watcher,
Figure Calibration, Image Padder, Paint by Number,
RGB Composer, Telescope Tracking Package, SVD Analysis

Gregory Jefferis

Biorad Reader, BioRad Writer, Amira Reader
Amira Writer, IGS Raw Reader (gzip)

Gabriel Landini

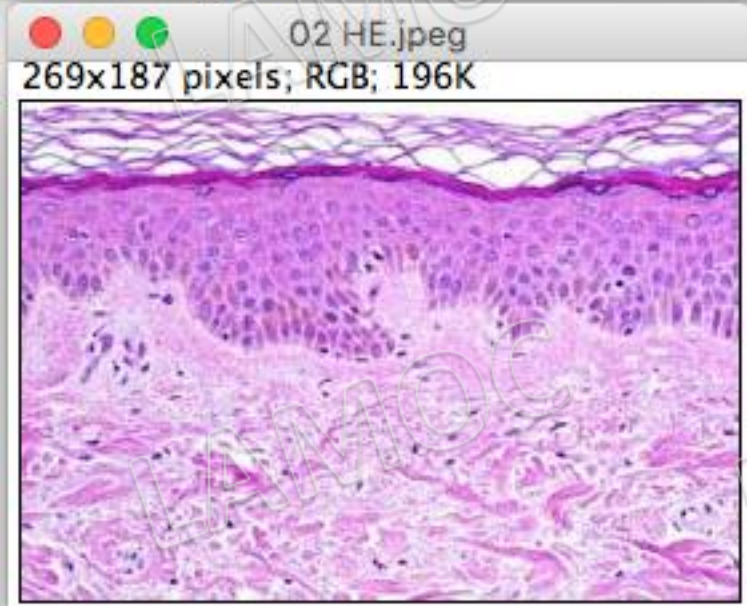
Convolution filters, game of life, contour lines , morphological
operators, dilation, erosion, 4- and 8-connected particle analysis
color thresholding, color deconvolution (stain separation)

Mark Longair

Simple Neurite Tracer, Three Pane Crop, Unpack To PNG,
Quantile Based Normalization, Find Connected Regions,
Mask Of Nearby Points, "Tubeness" (useful for tracing
neurons or blood vessels)



Wand (tracing) tool



- Macros ▶
- Shortcuts ▶
- Utilities ▶
- New ▶
- Compile and Run...
- Install... ⌘ ⌘ M

- 3D ▶
- Analyze ▶

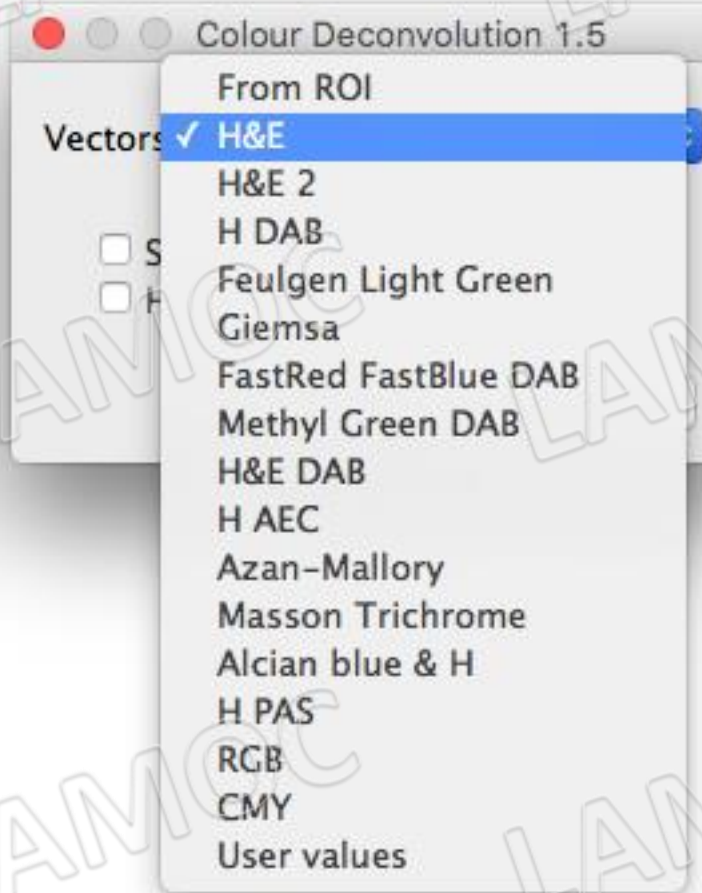
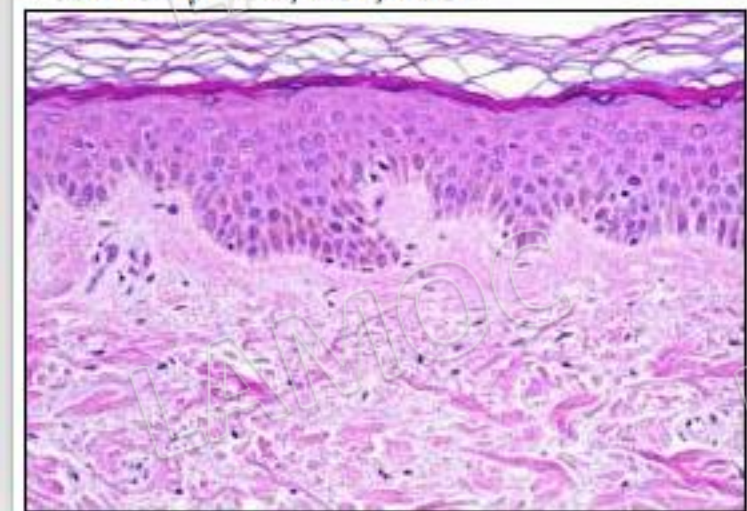
Colour Deconvolution

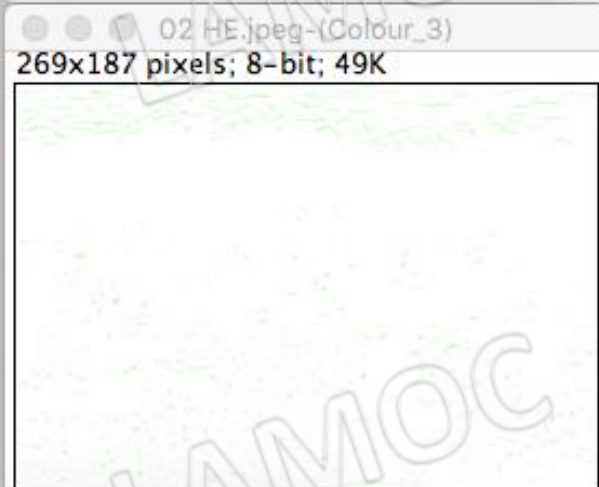
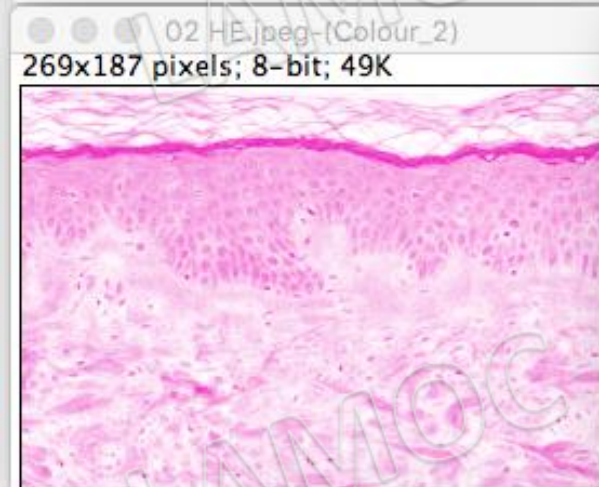
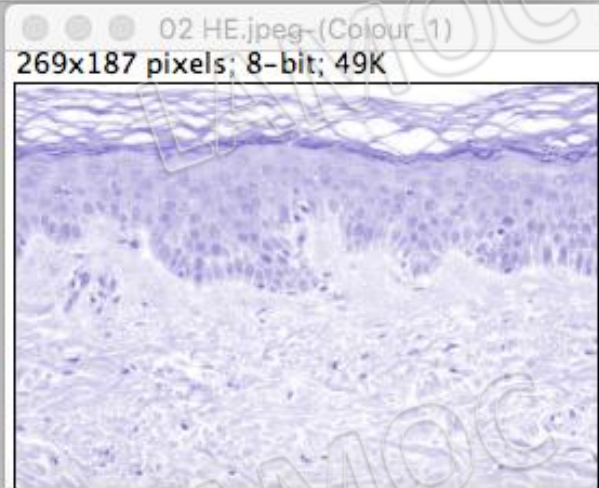
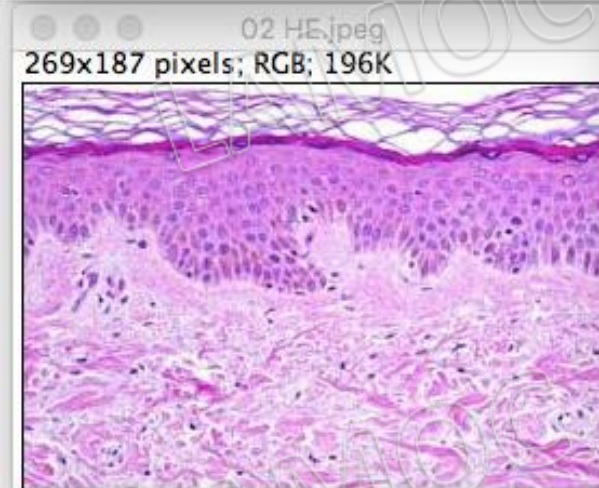
- Examples ▶
- Filters ▶
- Graphics ▶
- Input-Output ▶
- LOCI ▶
- MBF_ImageJ ▶
- Macros ▶
- Manual Tracking
- OME ▶
- Process ▶
- Stacks ▶
- Tools ▶
- kymographs ▶



Wand (tracing) tool

02 HE.jpeg
269x187 pixels; RGB; 196K





Colour Deconvolution

350x65 pixels; RGB; 89K

Colour deconvolution: H&E

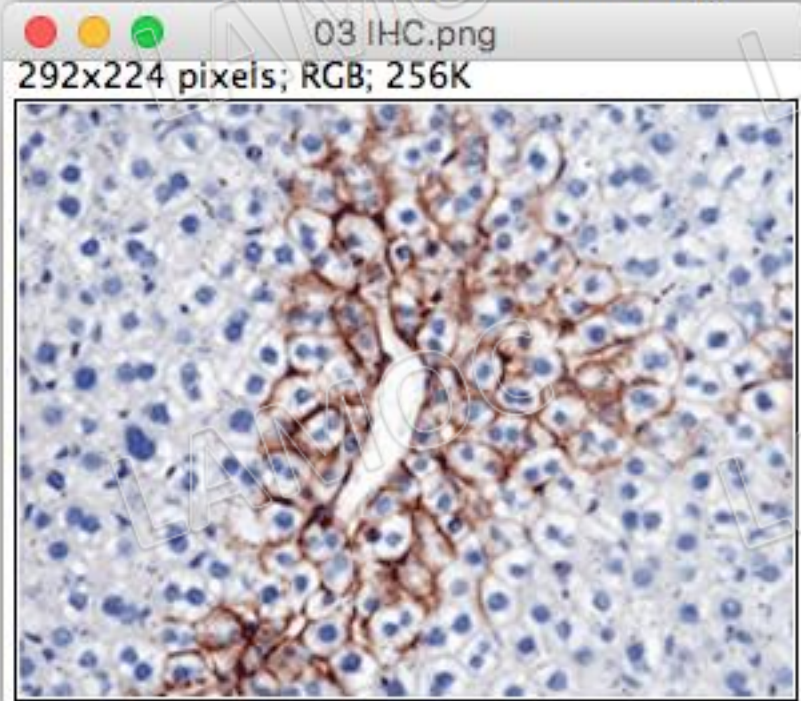
Colour_1 R:0.6443186, G:0.7166757, B:0.26688856

Colour_2 R:0.09283128, G:0.9545457, B:0.28324

Colour_3 R:0.63595444, G:0.0010, B:0.7717266



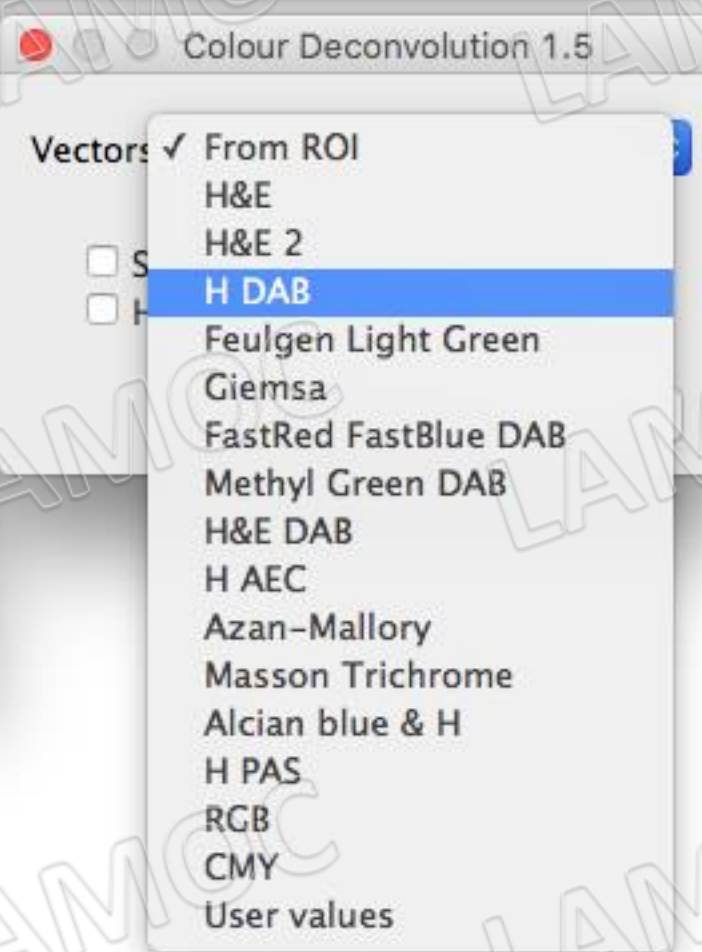
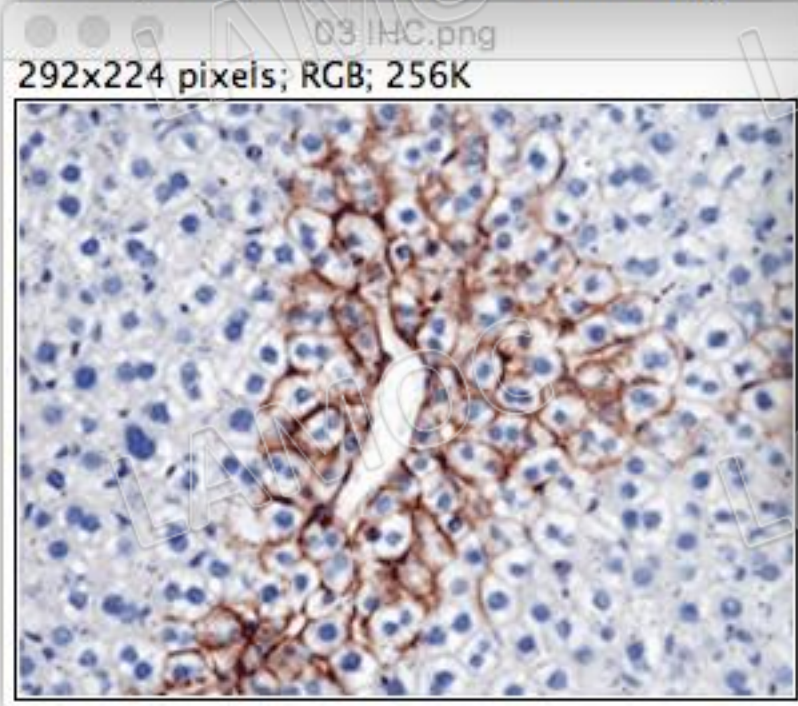
Scrolling tool (or press space bar and drag)

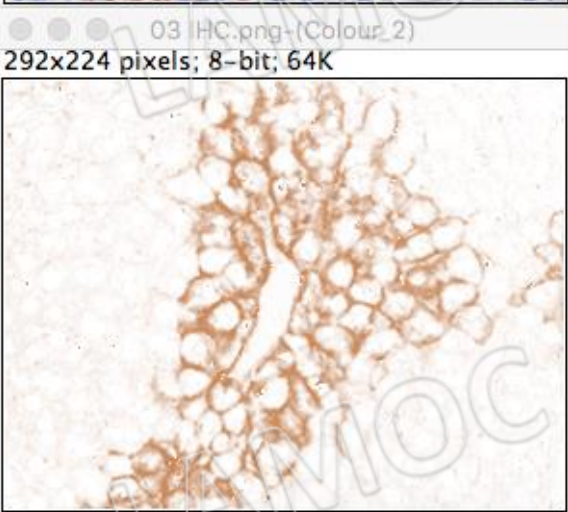
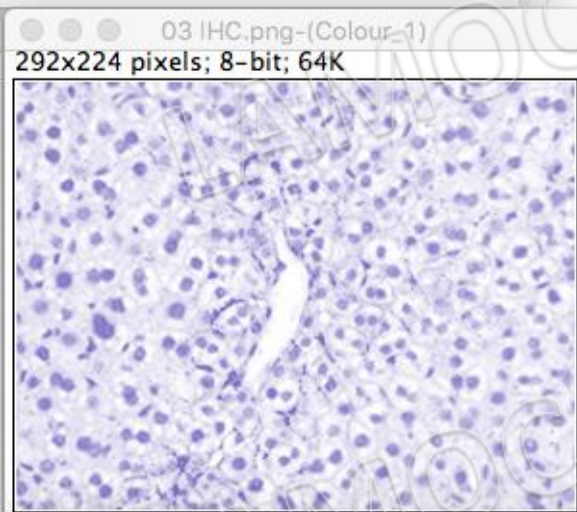
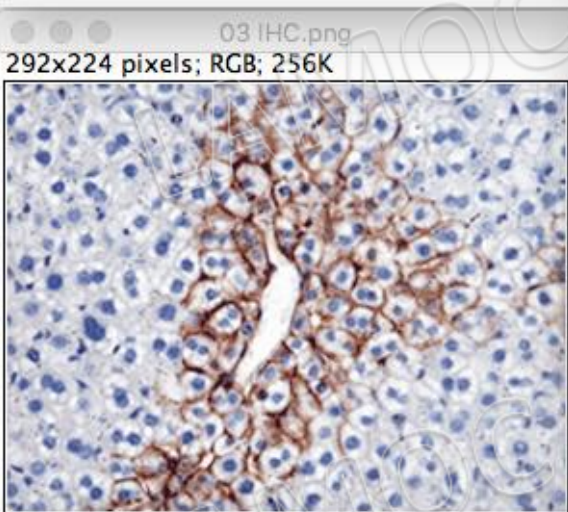


- Macros ▶
- Shortcuts ▶
- Utilities ▶
- New ▶
- Compile and Run...
- Install... ⌘M
- 3D ▶
- Analyze ▶
- Colour Deconvolution**
- Examples ▶
- Filters ▶
- Graphics ▶
- Input-Output ▶
- LOCI ▶
- MBF_ImageJ ▶
- Macros ▶
- Manual Tracking
- OME ▶
- Process ▶
- Stacks ▶
- Tools ▶
- kymographs ▶



Scrolling tool (or press space bar and drag)





Colour Deconvolution
350x65 pixels; RGB; 89K

Colour deconvolution: H DAB

Colour_1	R:0.6500286, G:0.704031, B:0.2860126
Colour_2	R:0.26814753, G:0.57031375, B:0.77642715
Colour_3	R:0.7110272, G:0.42318153, B:0.5615672

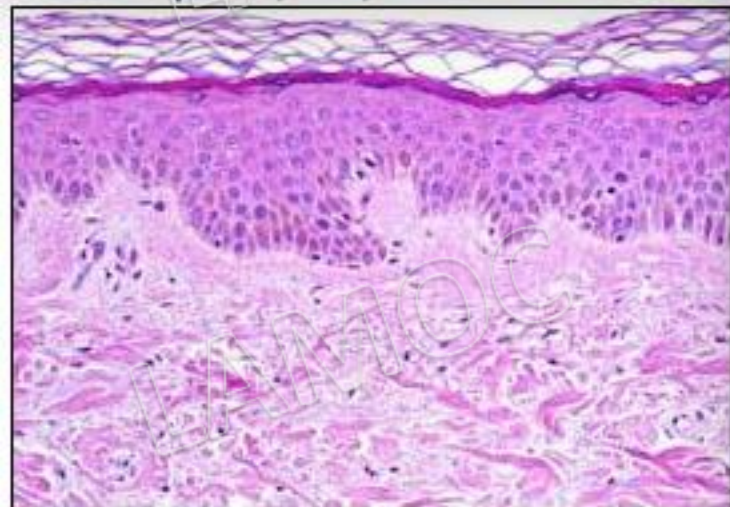




x=199, y=186, value=215,168,222 (#d7a8de)

02 HE.jpeg

269x187 pixels; RGB; 196K



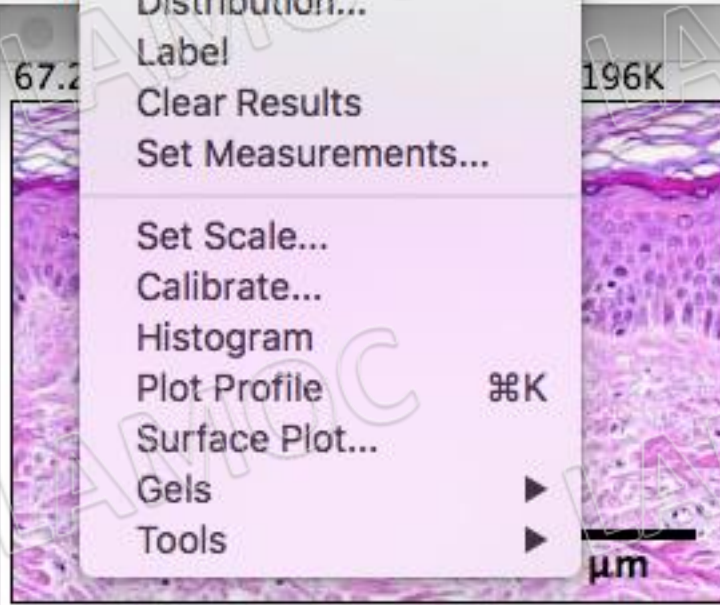
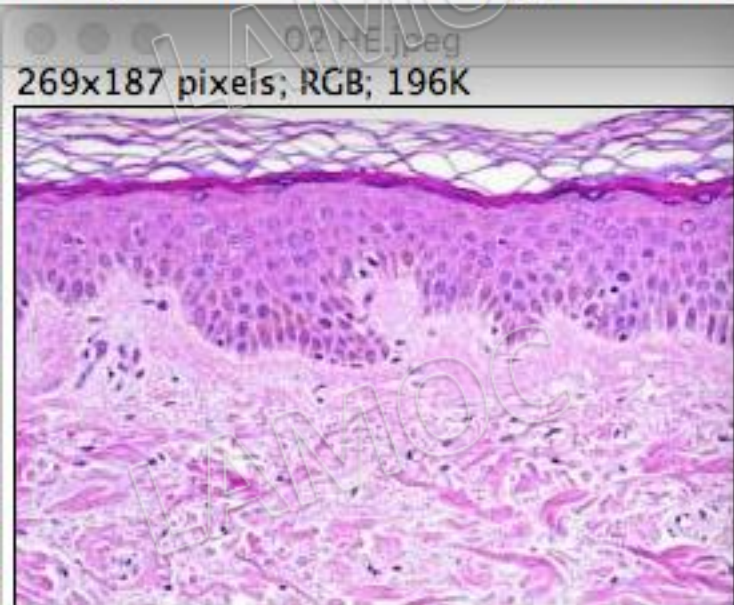
02 HE-1.jpeg

67.25x46.75 μ m (269x187); RGB; 196K





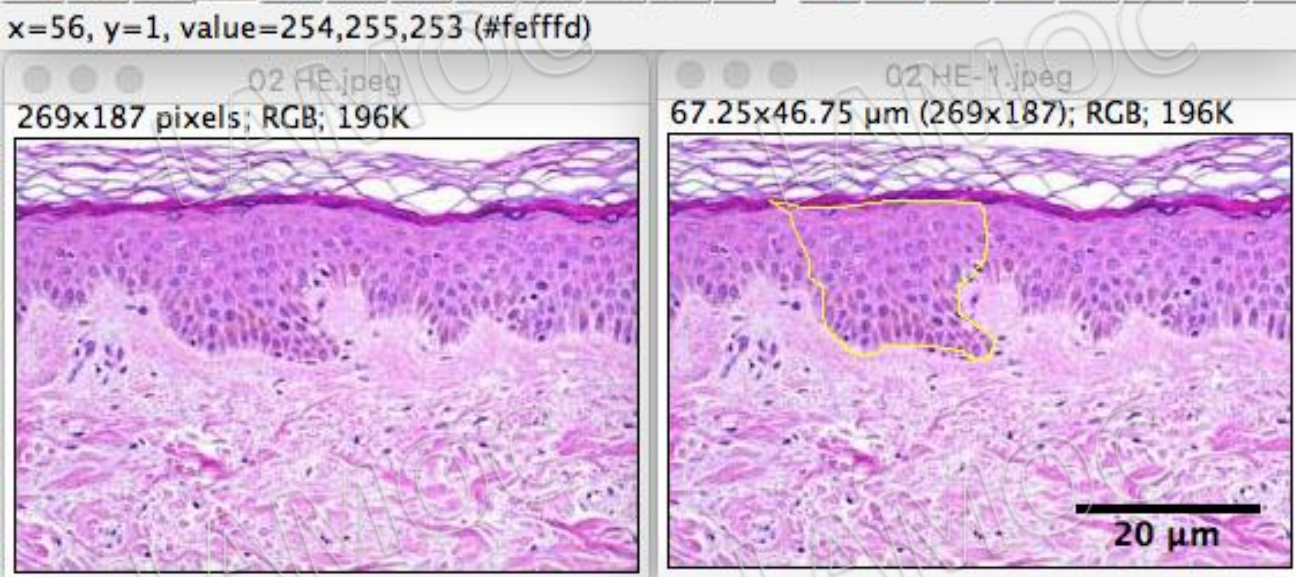
Rectangular or *rounded rectangular* selections (r



Measure ⌘M

Analyze Particles...
Summarize
Distribution...
Label
Clear Results
Set Measurements...

Set Scale...
Calibrate...
Histogram
Plot Profile ⌘K
Surface Plot...
Gels ▶
Tools ▶



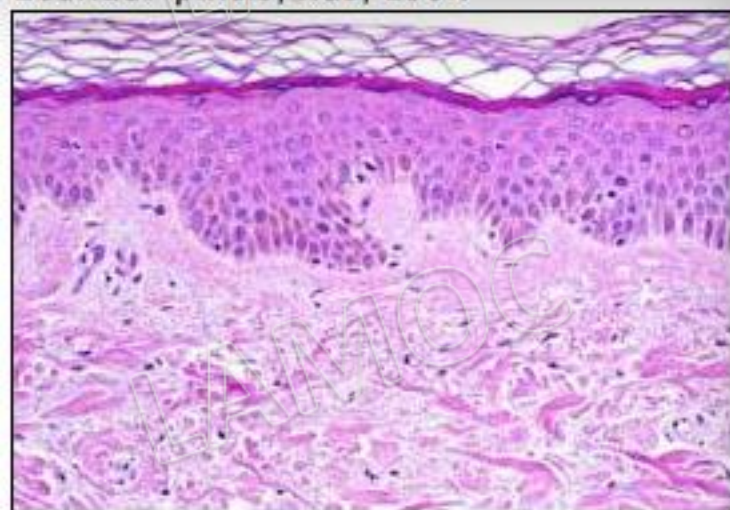
Results

	Area	Mean	Min	Max
1	284.625	172.305	51	241

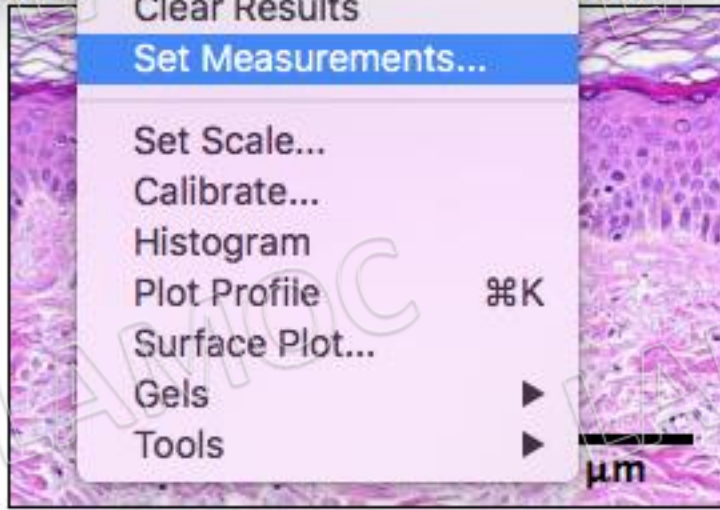


Pencil Tool

02-NE.jpg
269x187 pixels; RGB; 196K



67.2



Measure ⌘M

Analyze Particles...

Summarize

Distribution...

Label

Clear Results

Set Measurements...

Set Scale...

Calibrate...

Histogram

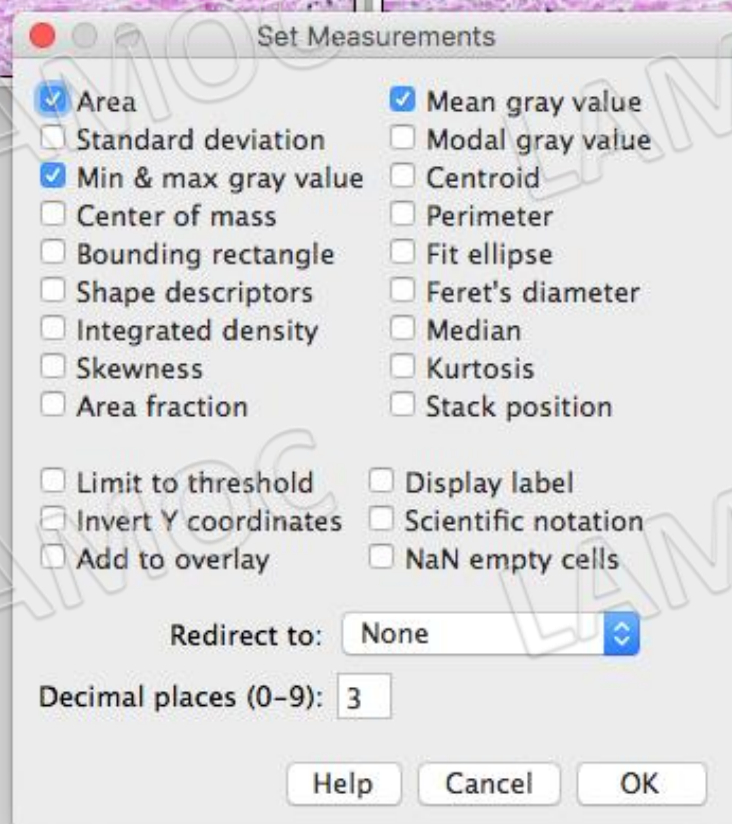
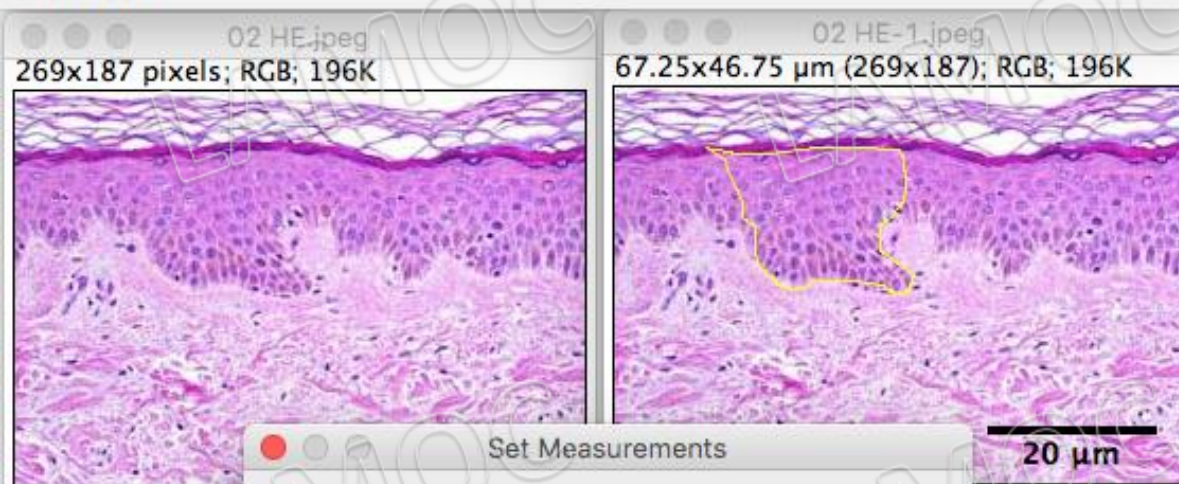
Plot Profile ⌘K

Surface Plot...

Gels ▶

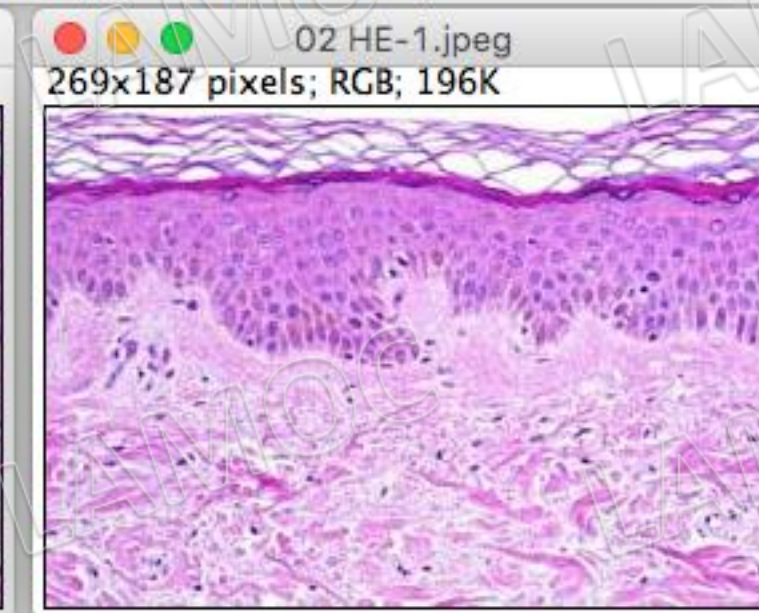
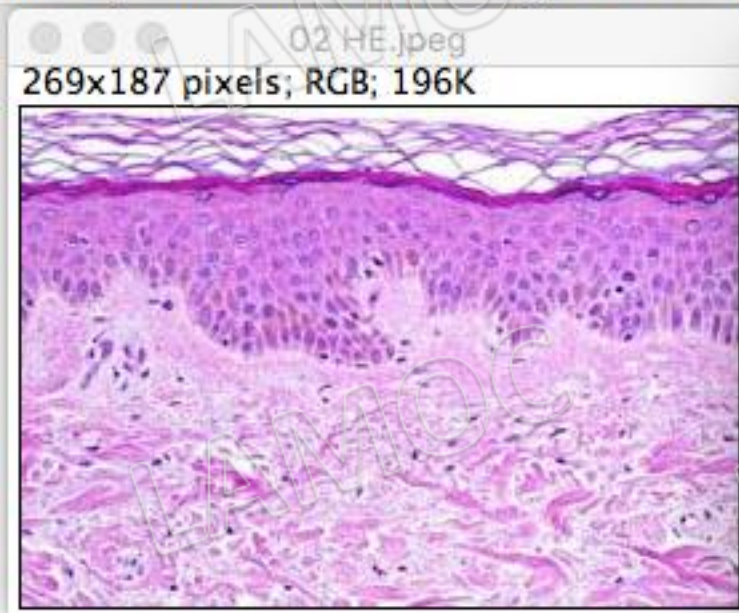
Tools ▶

μm



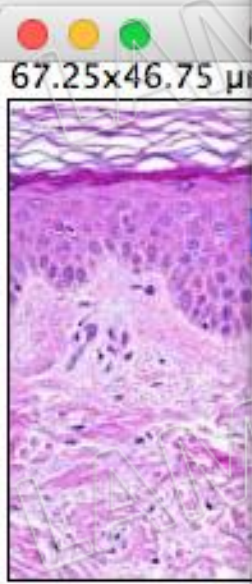
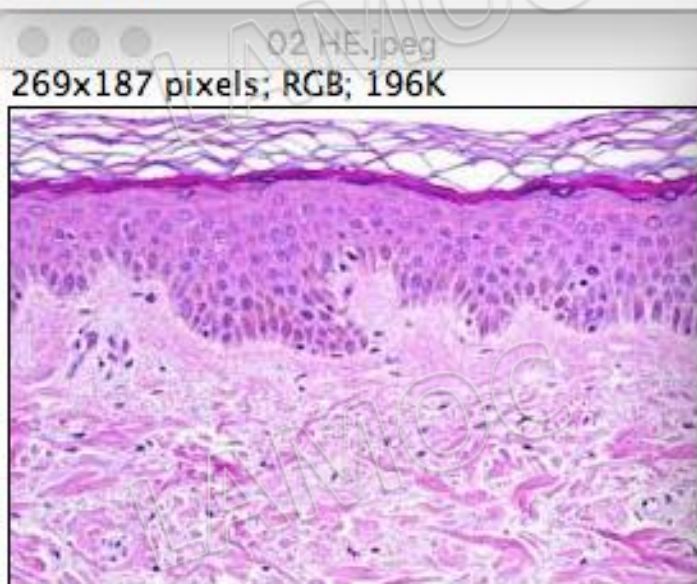


Rectangular or *rounded rectangular* selections (right click to switch)



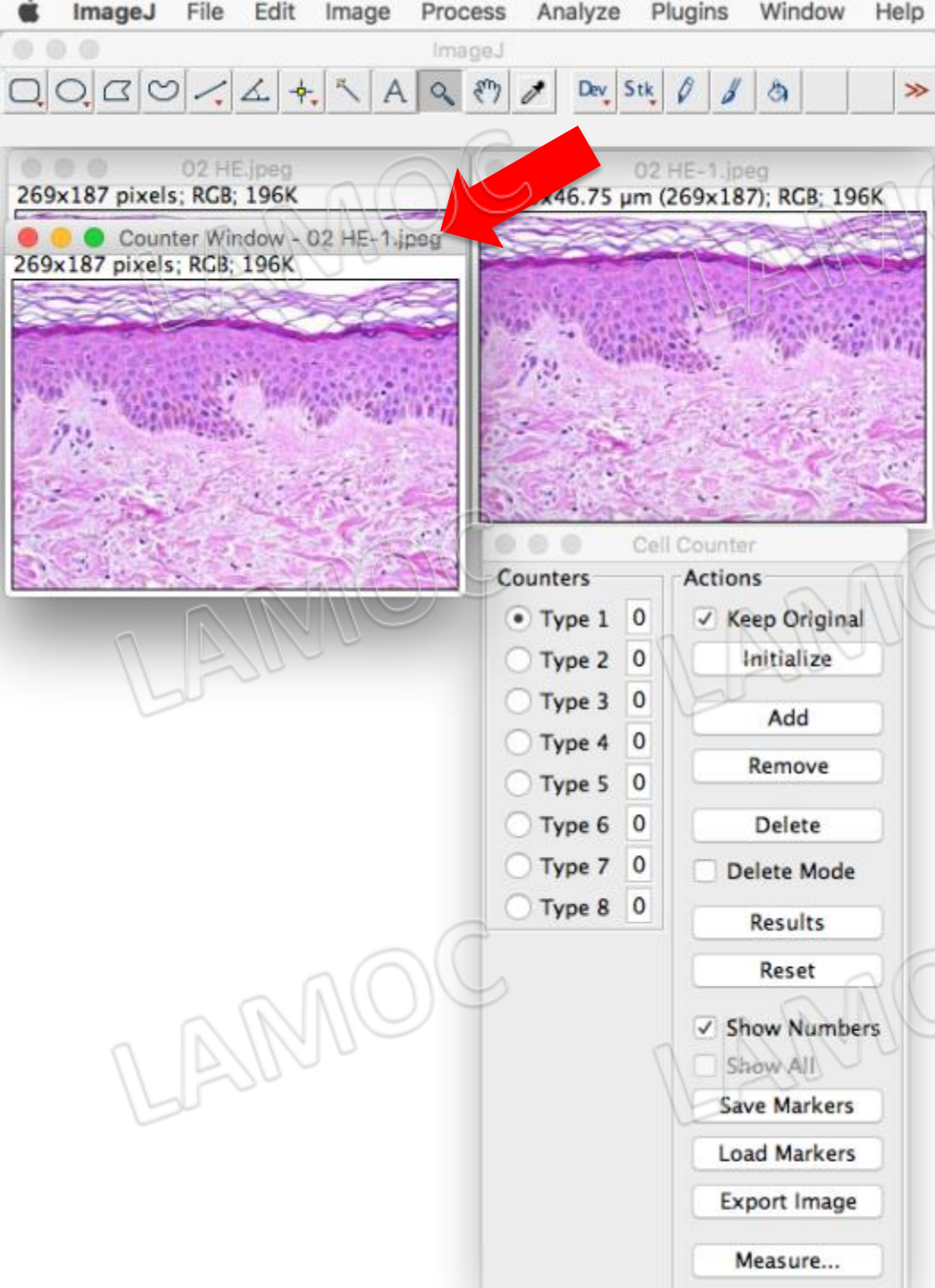


Pencil Tool



- Macros ▶
- Shortcuts ▶
- Utilities ▶
- New ▶
- Compile and Run... ▶
- Install... ⌘M
- 3D ▶
- Analyze ▶**
- Color ▶
- Examples ▶
- Filters ▶
- Graphics ▶
- Input-Output ▶
- LOCI ▶
- MBF_ImageJ ▶
- Macros ▶
- Manual Tracking ▶
- OME ▶
- Process ▶
- Stacks ▶
- Tools ▶
- kymographs ▶

- Batch Measure
- Cell Counter**
- Grid
- Measure And Label
- Measure And Set Label
- Measure RGB

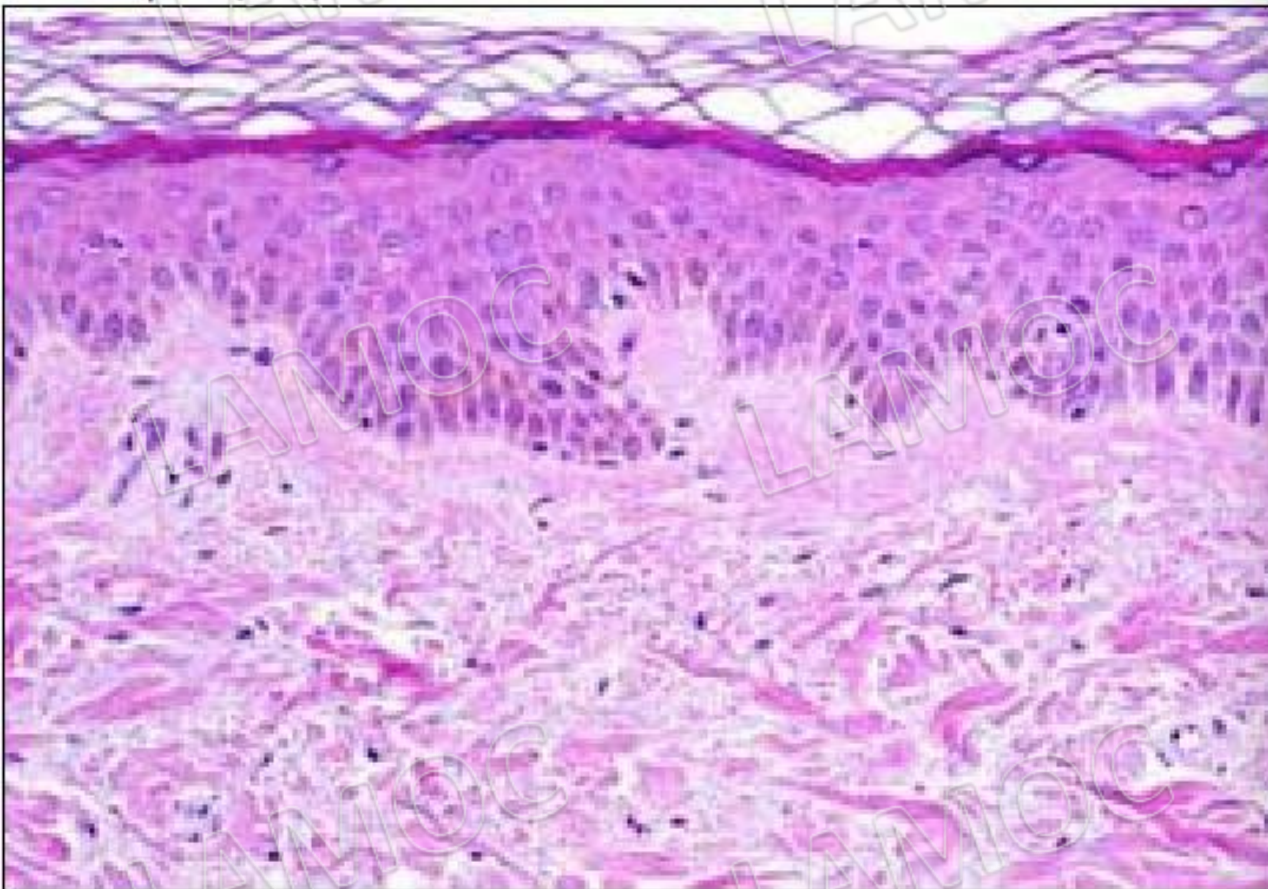




x=62, y=15, value=221,124,240 (#dd7cf0)

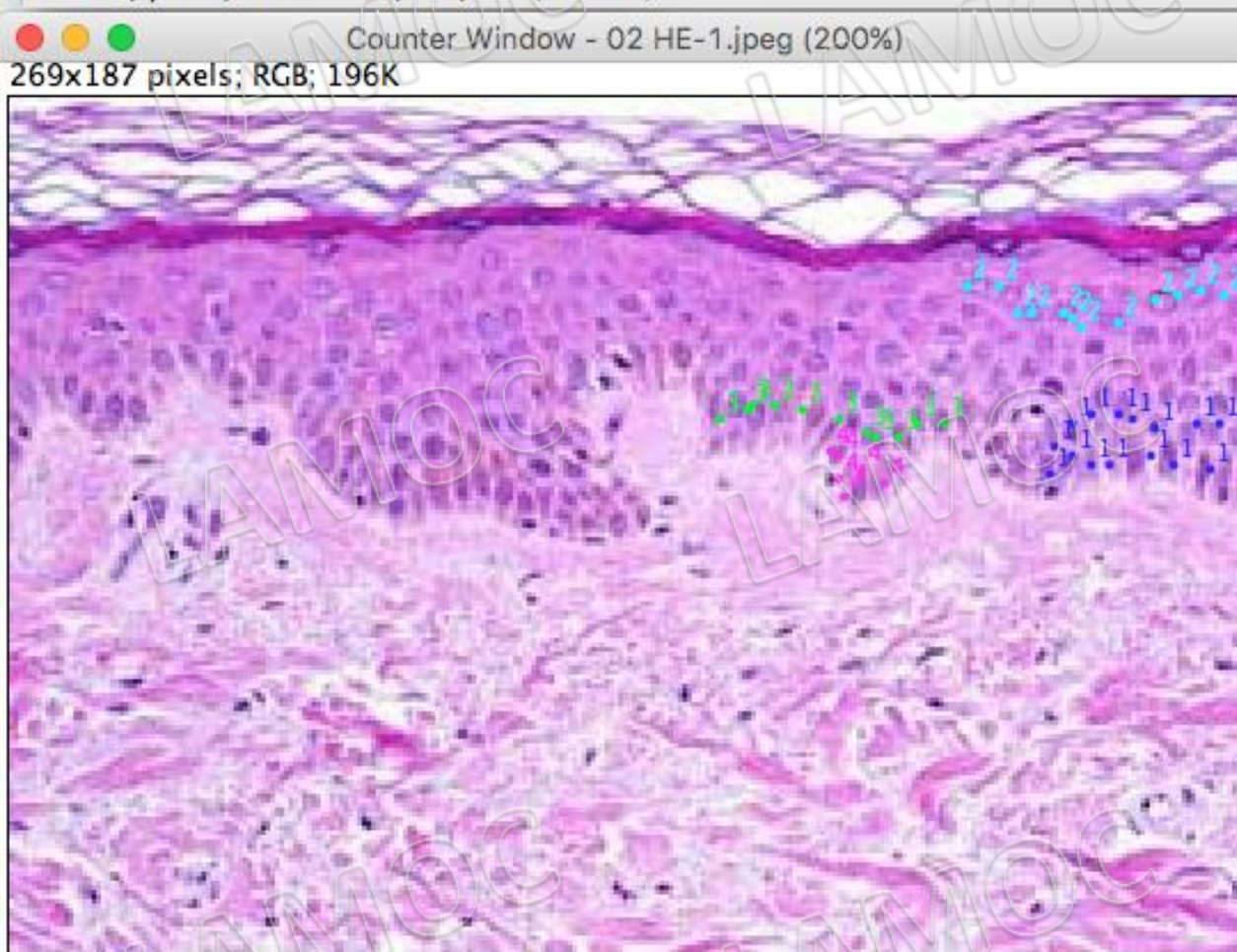
Counter Window - 02 HE-1.jpeg (200%)

269x187 pixels; RGB; 196K



Cell Counter

Counters		Actions
☒ Type 1	0	☒ Keep Original
☐ Type 2	0	Initialize
☐ Type 3	0	Add
☐ Type 4	0	Remove
☐ Type 5	0	Delete
☐ Type 6	0	☐ Delete Mode
☐ Type 7	0	Results
☐ Type 8	0	Reset
		☒ Show Numbers
		☐ Show All
		Save Markers
		Load Markers
		Export Image
		Measure...

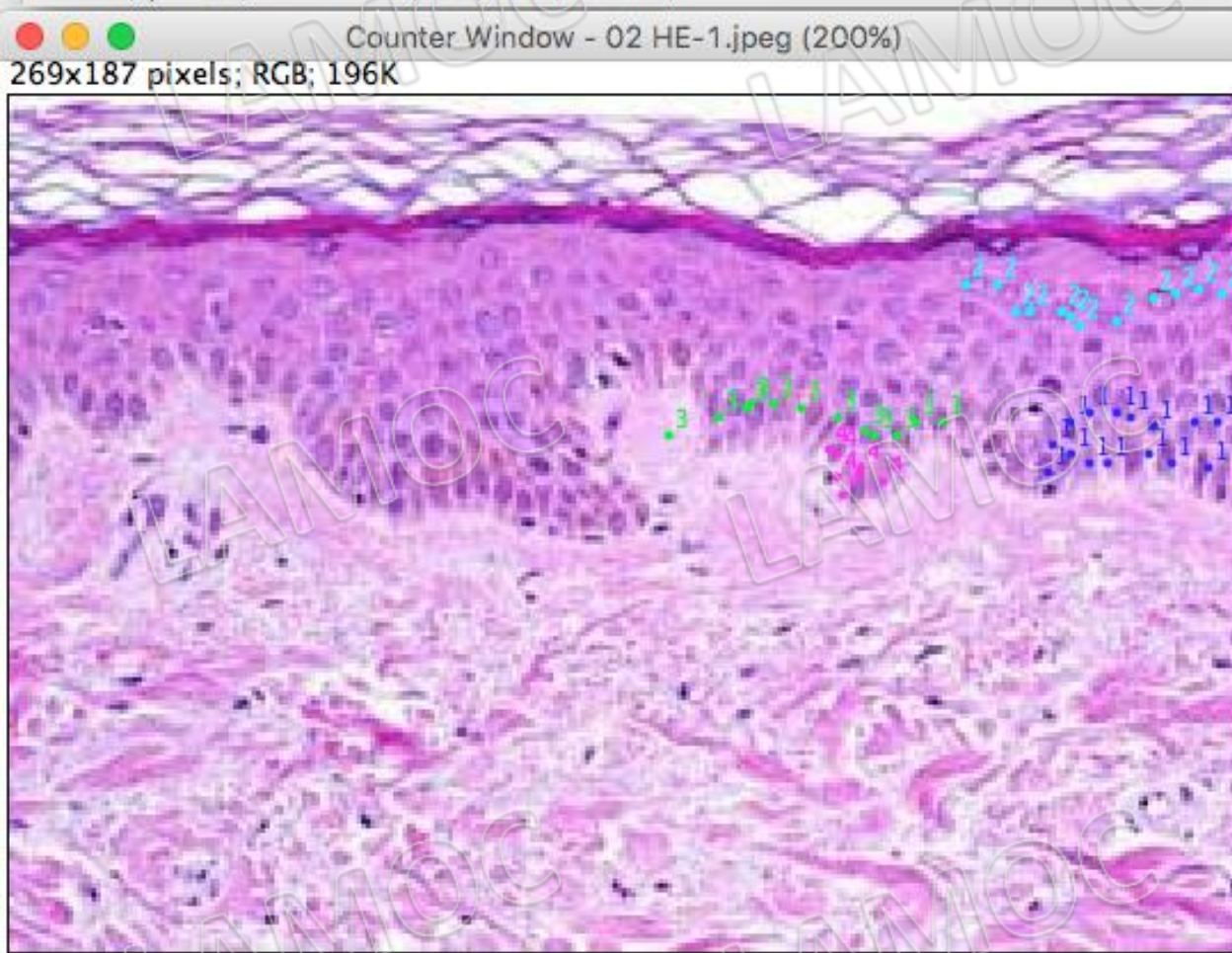


Cell Counter

Counters		Actions	
☐ Type 1	15	☒ Keep Original	Initialize
☐ Type 2	12		Add
☒ Type 3	11		Remove
☐ Type 4	6		Delete
☐ Type 5	0	☐ Delete Mode	Results
☐ Type 6	0		Reset
☐ Type 7	0	☒ Show Numbers	
☐ Type 8	0	☐ Show All	Save Markers
			Load Markers
			Export Image
			Measure...



x=133, y=139, value=246,198,248 (#f6c6f8)



Counters

☐ Type 1	15
☐ Type 2	12
☒ Type 3	12
☐ Type 4	6
☐ Type 5	0
☐ Type 6	0
☐ Type 7	0
☐ Type 8	0

Actions

☒ Keep Original

Initialize

Add

Remove

Delete

☐ Delete Mode

Results

Reset

☒ Show Numbers

☐ Show All

Save Markers

Load Markers

Export Image

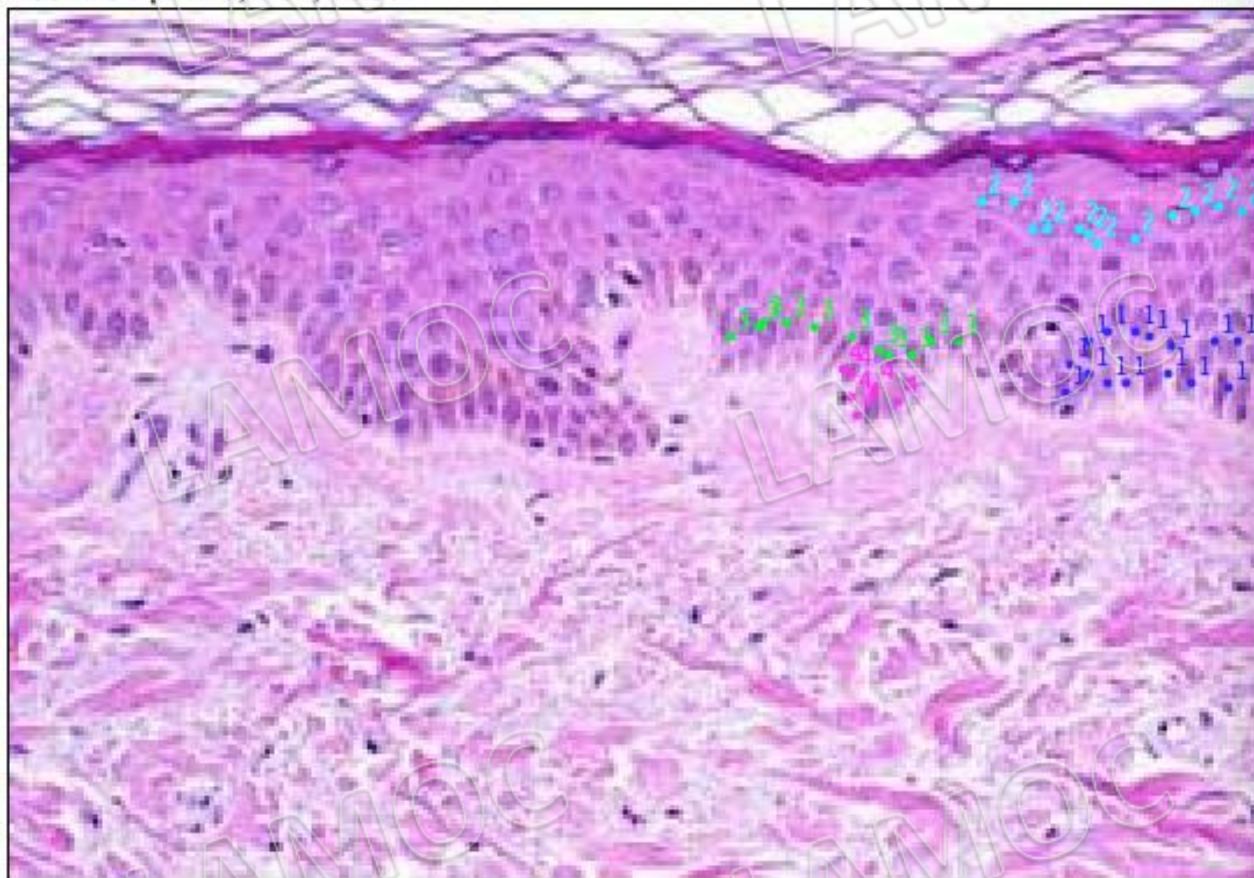
Measure...

ImageJ



Counter Window - 02 HE-1.jpeg (200%)

269x187 pixels; RGB; 196K



Cell Counter

Counters

☐ Type 1	15
☐ Type 2	12
☒ Type 3	11
☐ Type 4	6
☐ Type 5	0
☐ Type 6	0
☐ Type 7	0
☐ Type 8	0

Actions

☒ Keep Original

Initialize

Add

Remove

Delete

☐ Delete Mode

Results

Reset

☒ Show Numbers

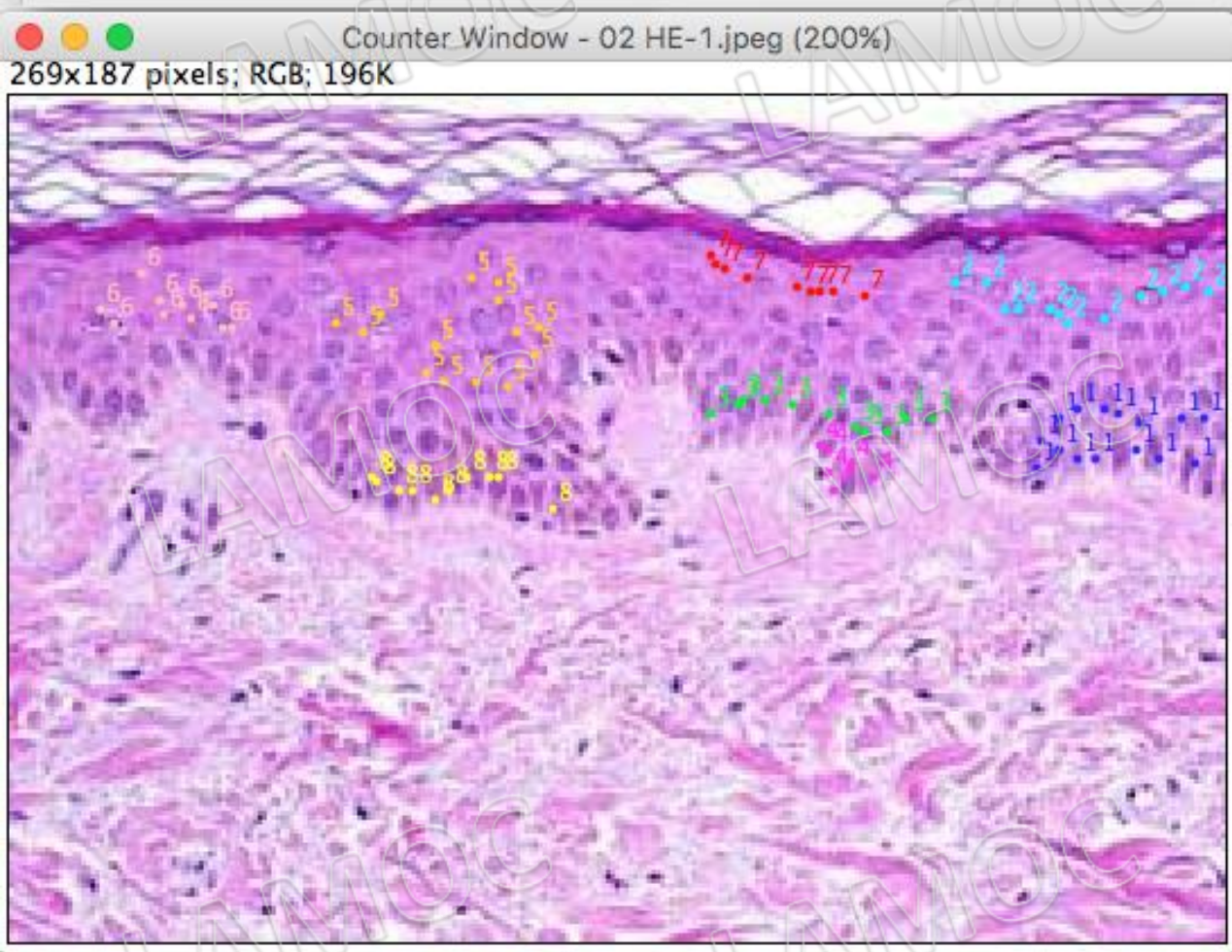
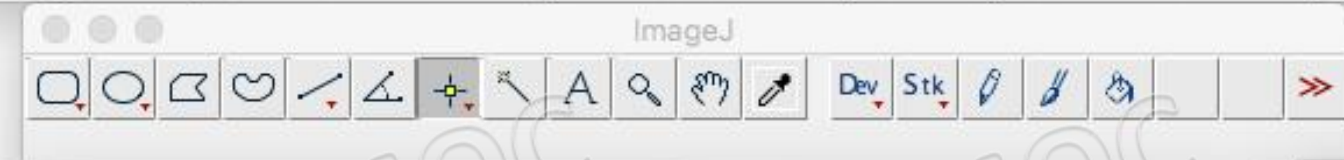
☐ Show All

Save Markers

Load Markers

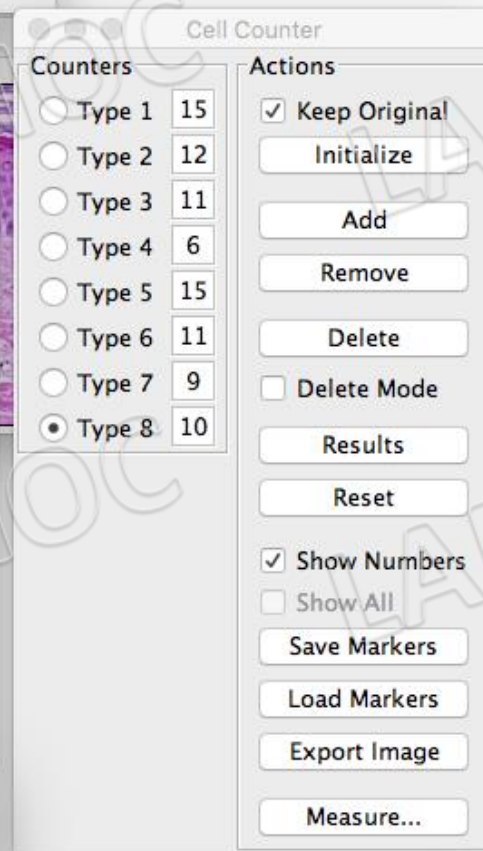
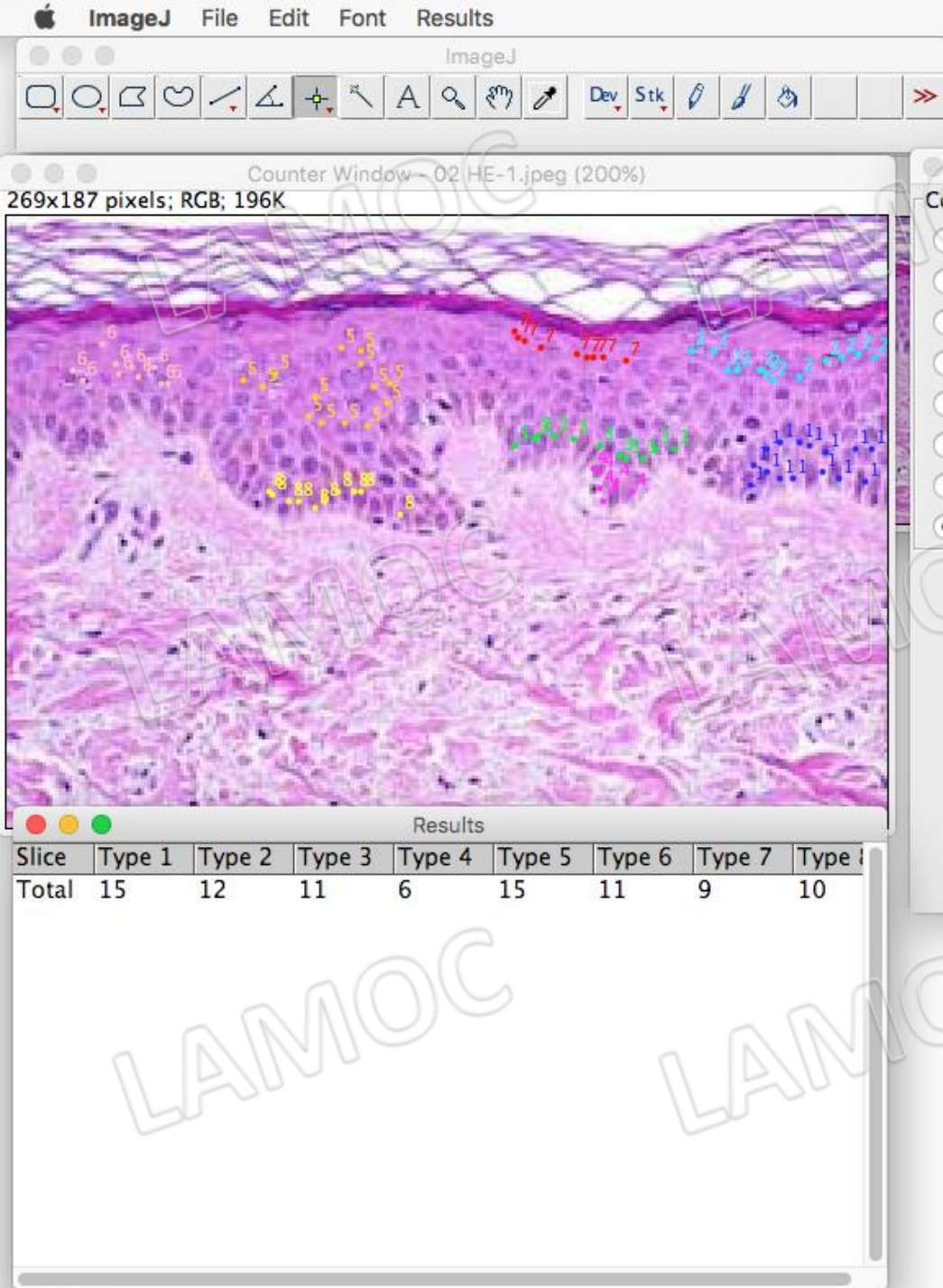
Export Image

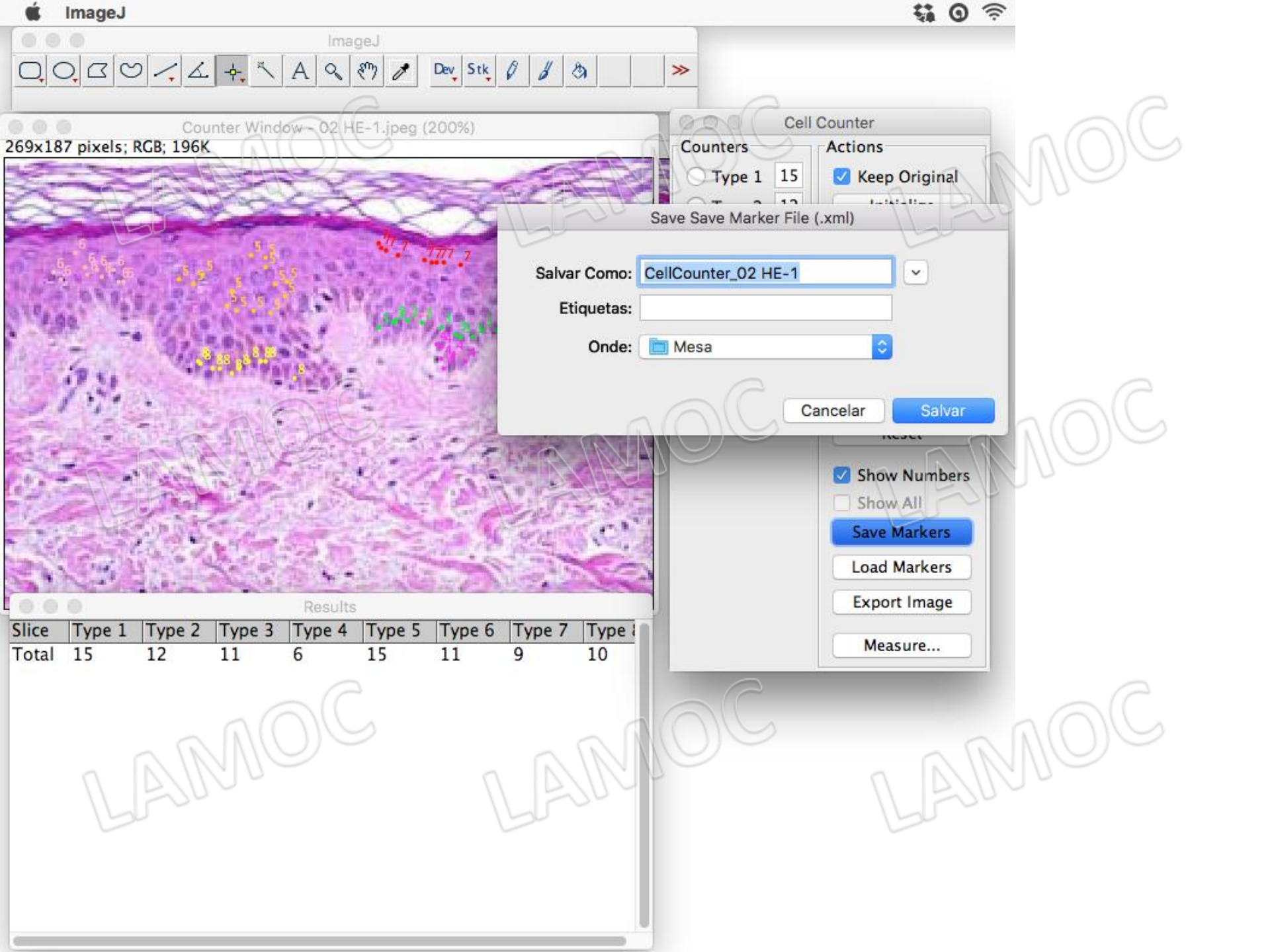
Measure...



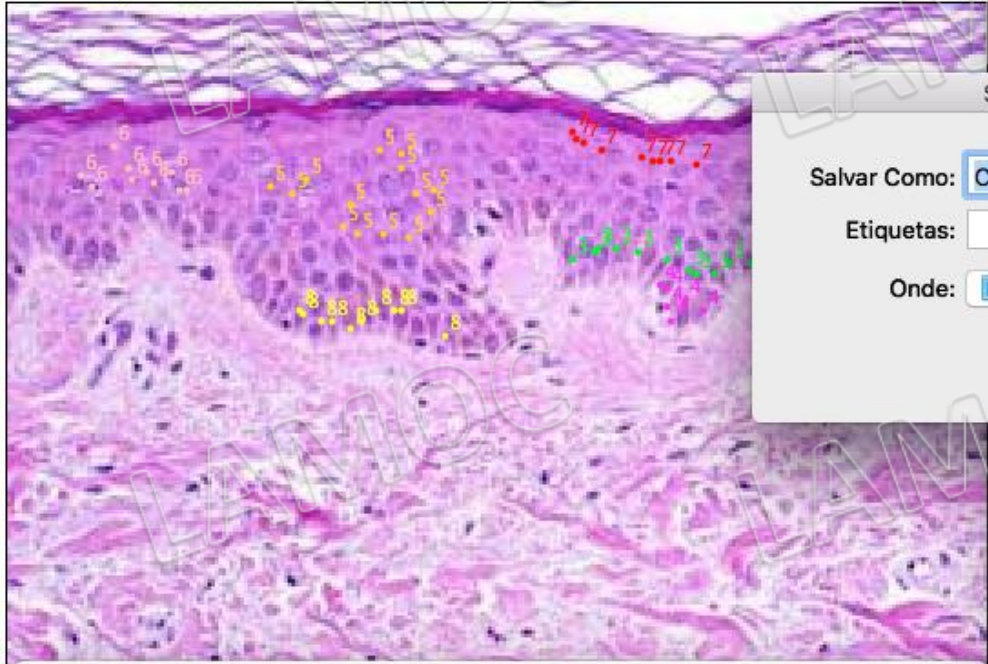
Cell Counter

Counters		Actions
☐ Type 1	15	☒ Keep Original
☐ Type 2	12	Initialize
☐ Type 3	11	Add
☐ Type 4	6	Remove
☐ Type 5	15	Delete
☐ Type 6	11	☐ Delete Mode
☐ Type 7	9	Results
☒ Type 8	10	Reset
		☒ Show Numbers
		☐ Show All
		Save Markers
		Load Markers
		Export Image
		Measure...





Counter Window - 02 HE-1.jpeg (200%)
269x187 pixels; RGB; 196K



Cell Counter

Counters

Type 1 15

Actions

☒ Keep Original

Save Marker File (.xml)

Salvar Como: CellCounter_02 HE-1

Etiquetas:

Onde: Mesa

Cancelar Salvar

☒ Show Numbers

☐ Show All

Save Markers

Load Markers

Export Image

Measure...

Results

Slice	Type 1	Type 2	Type 3	Type 4	Type 5	Type 6	Type 7	Type 8
Total	15	12	11	6	15	11	9	10



Save as Text

Salvar Como: ▾

Etiquetas:

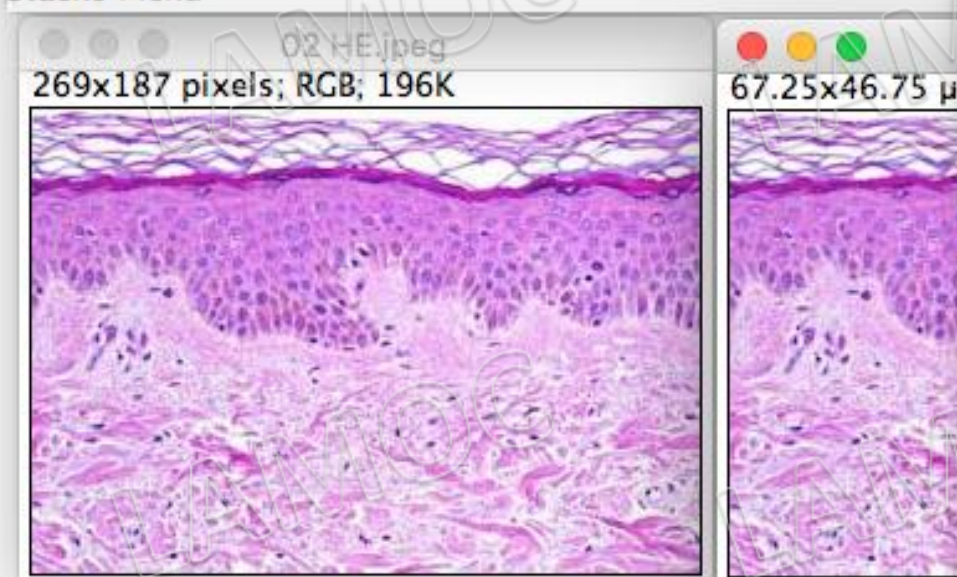
Onde: ▾

Results

Slice	Type 1	Type 2	Type 3	Type 4	Type 5	Type 6	Type 7	Type 8
Total	15	12	11	6	15	11	9	10

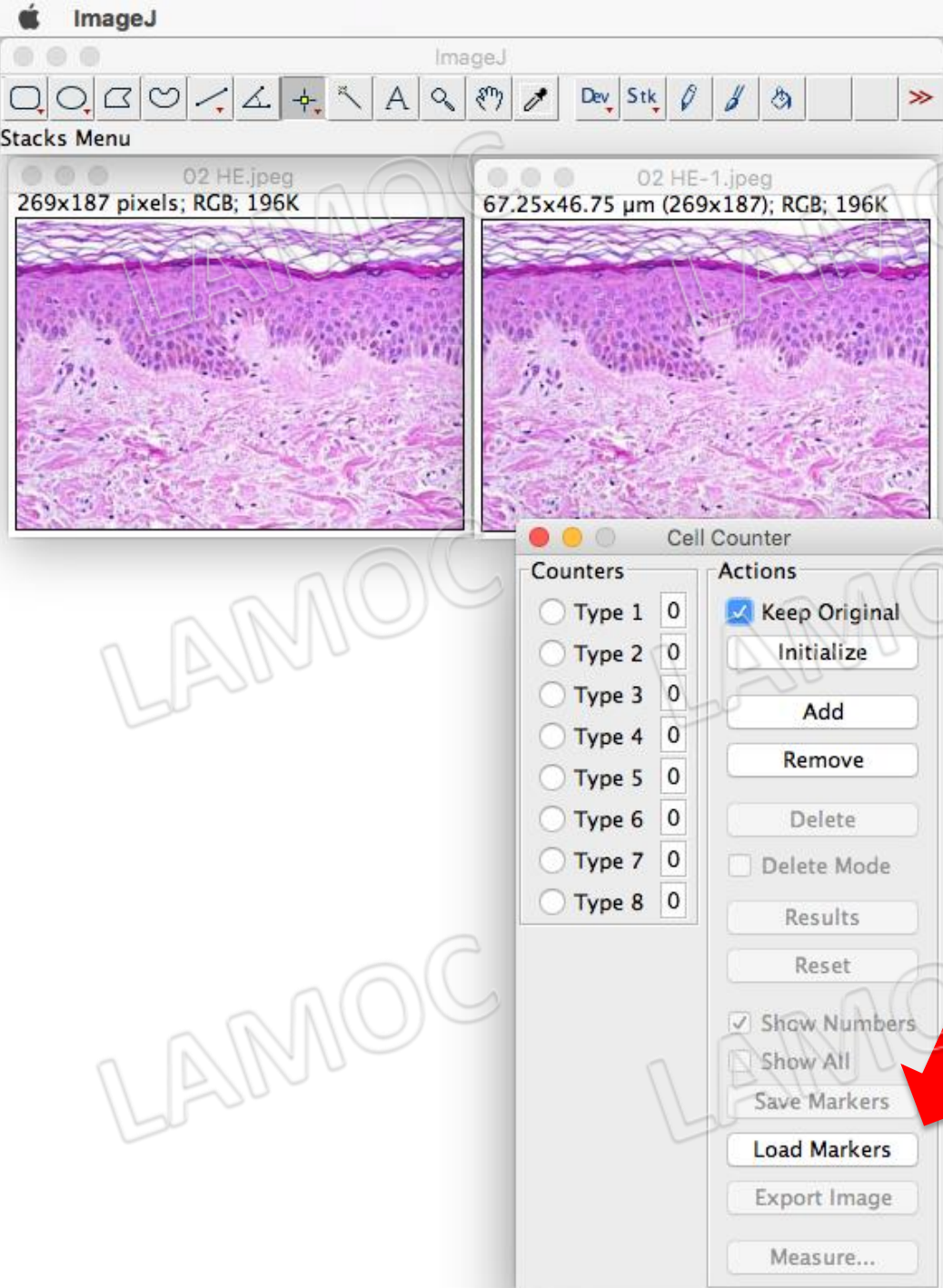


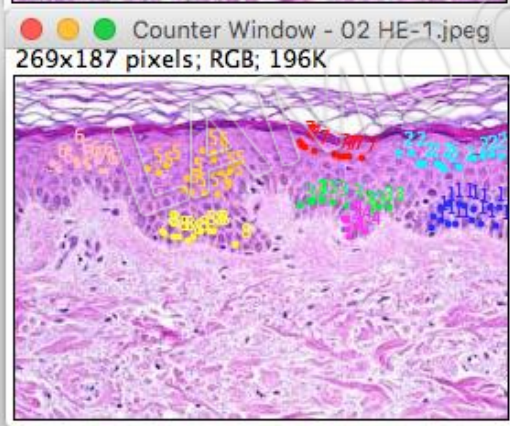
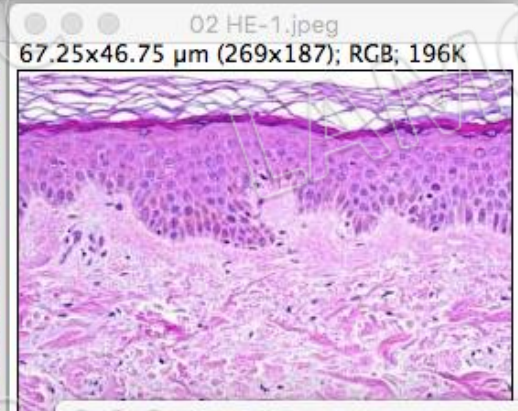
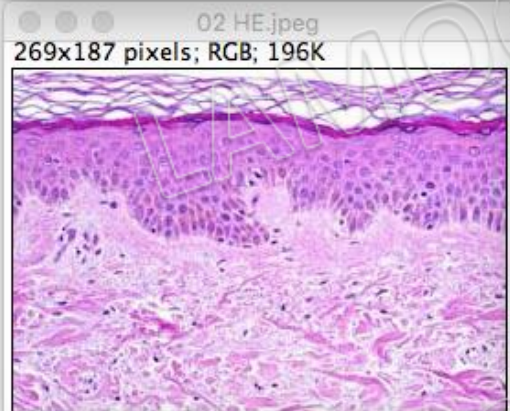
Stacks Menu



- Macros ▶
- Shortcuts ▶
- Utilities ▶
- New ▶
- Compile and Run...
- Install... ⌘ M
- 3D ▶
- Analyze ▶**
- Color ▶
- Examples ▶
- Filters ▶
- Graphics ▶
- Input-Output ▶
- LOCI ▶
- MBF_ImageJ ▶
- Macros ▶
- Manual Tracking
- OME ▶
- Process ▶
- Stacks ▶
- Tools ▶
- kymographs ▶

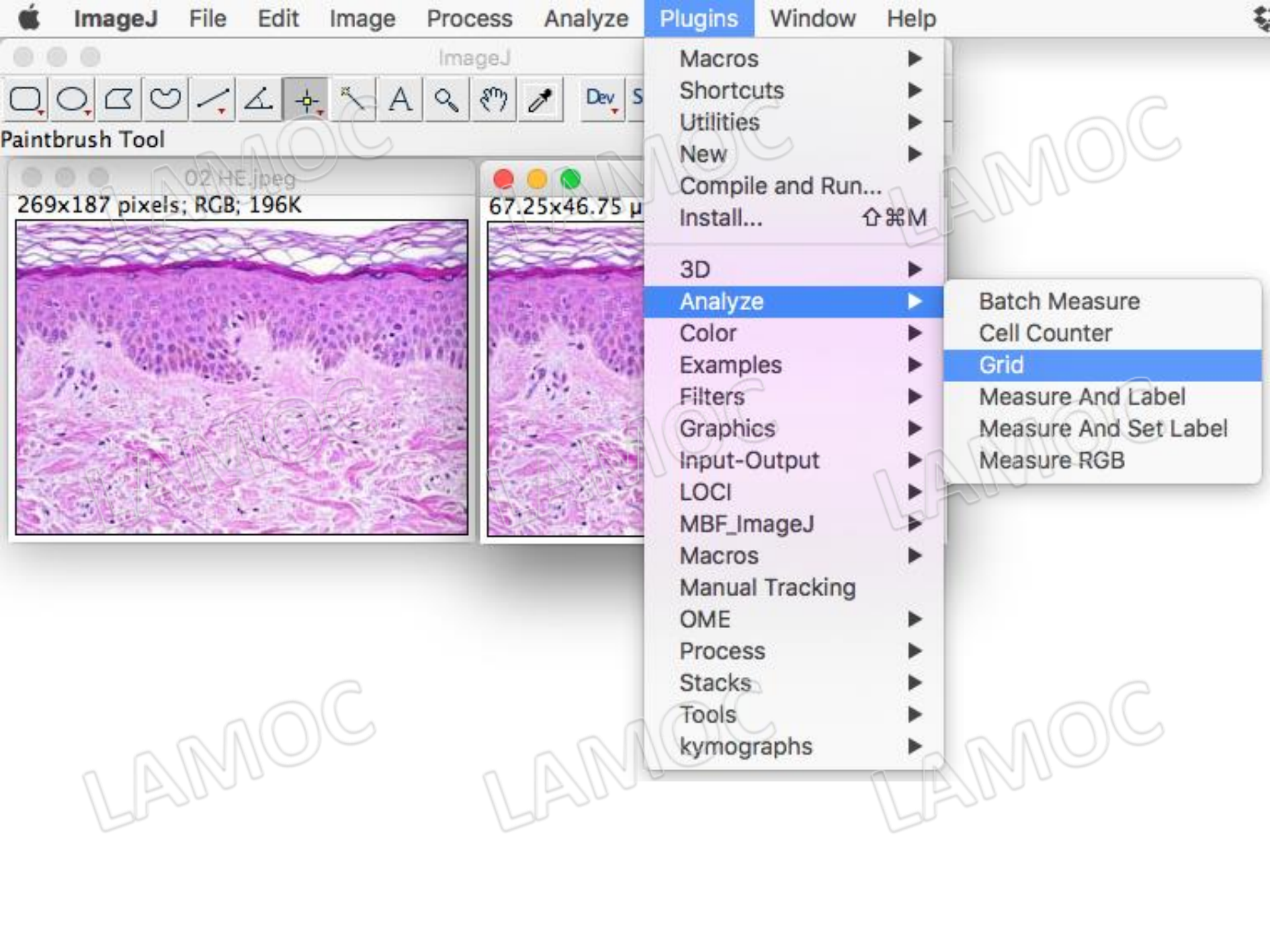
- Batch Measure
- Cell Counter**
- Grid
- Measure And Label
- Measure And Set Label
- Measure RGB





Cell Counter

Counters		Actions	
☐ Type 1	15	☒ Keep Original	Initialize
☐ Type 2	12		
☐ Type 3	11		
☐ Type 4	6		Add
☐ Type 5	15		Remove
☐ Type 6	11		Delete
☐ Type 7	9	☐ Delete Mode	
☒ Type 8	10		Results
			Reset
		☒ Show Numbers	
		☐ Show All	
			Save Markers
			Load Markers
			Export Image
			Measure...



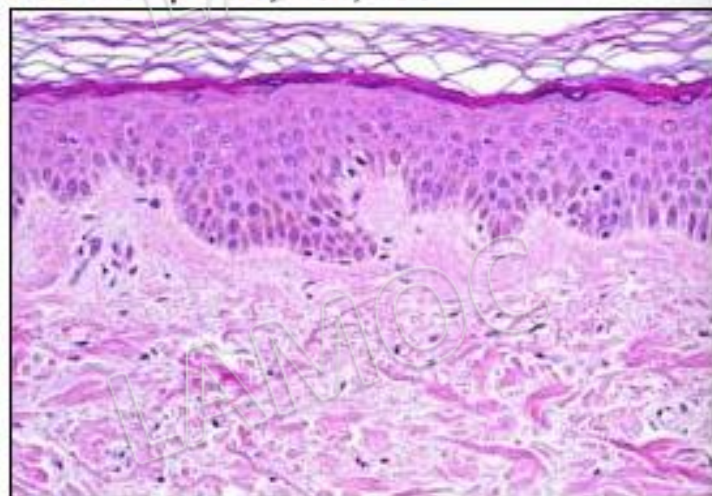
ImageJ



x=115, y=177, value=217,186,230 (#d9bae6)

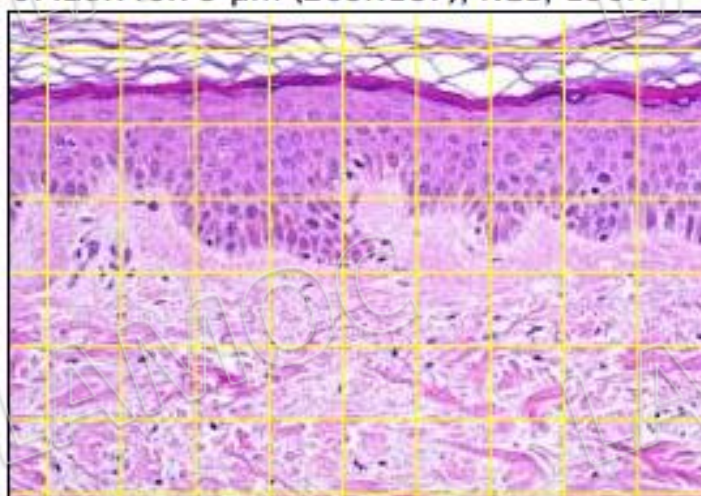
02 HE.jpeg

269x187 pixels; RGB; 196K



02 HE-1.jpeg

67.25x46.75 μ m (269x187); RGB; 196K



Grid...

Grid Type: Lines

Area per Point: 50 μ m

Color: Yellow

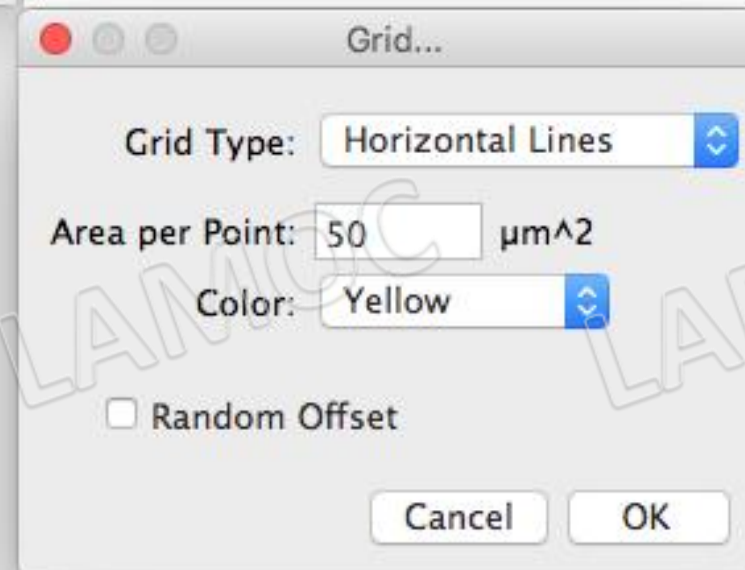
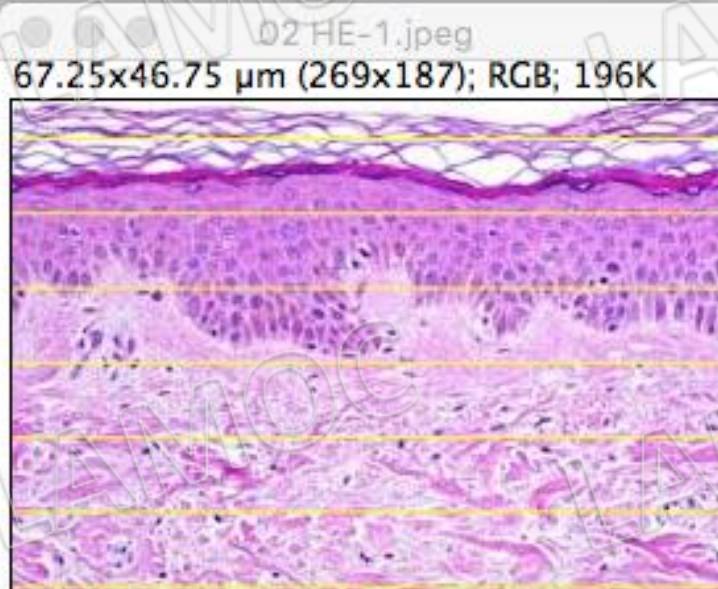
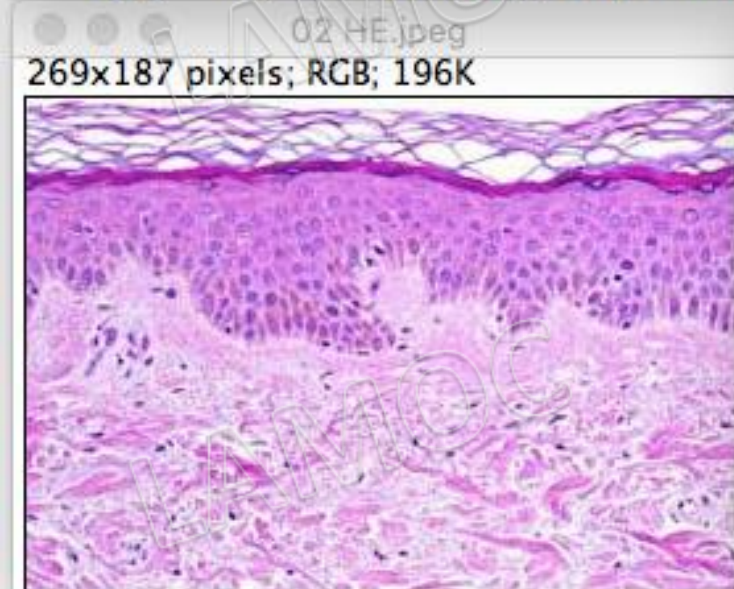
☐ Random Offset

Cancel

OK

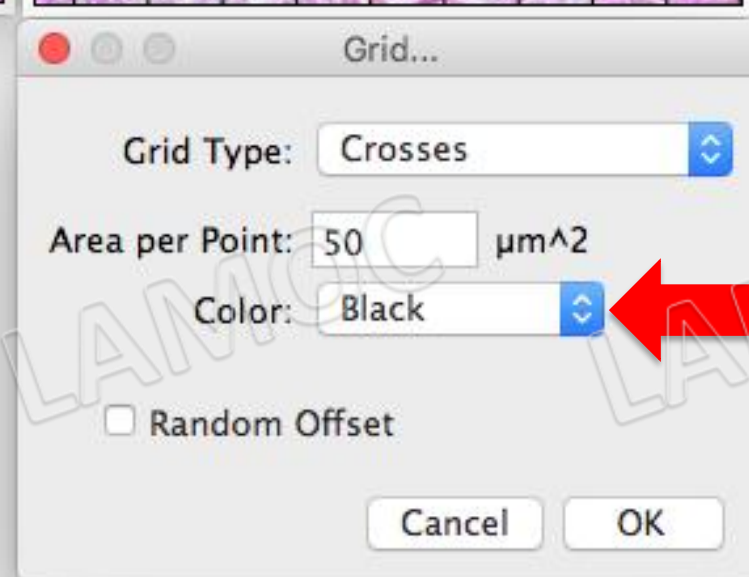
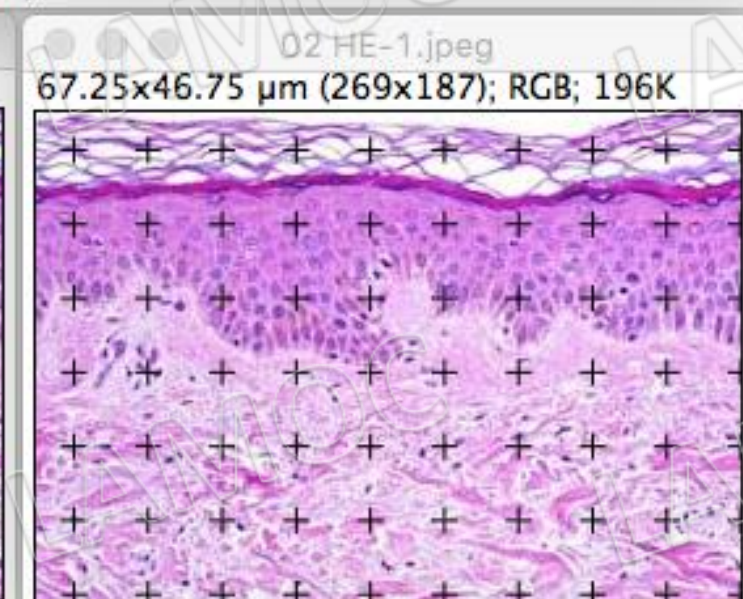
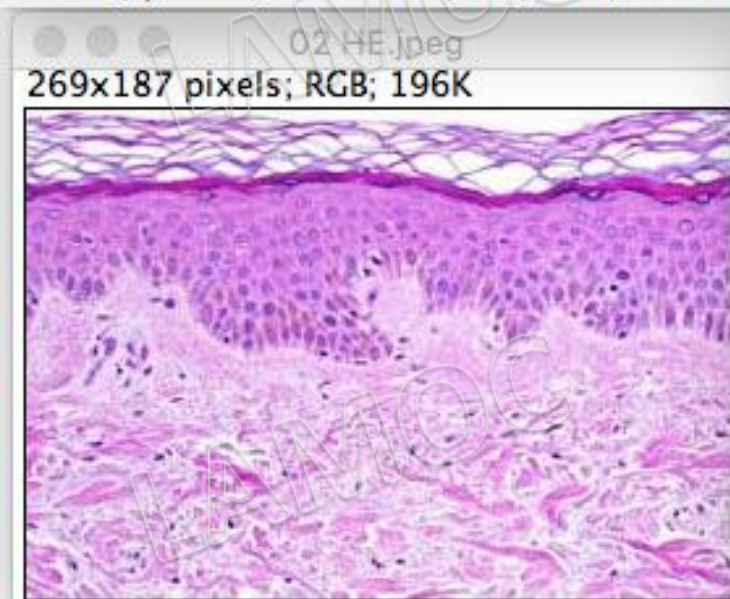


x=115, y=177, value=217,186,230 (#d9bae6)



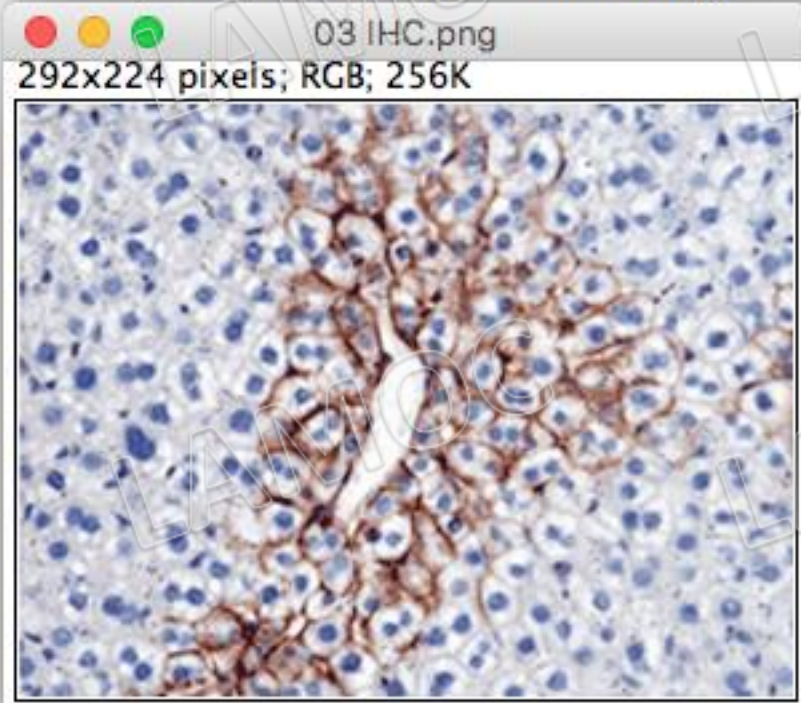


x=115, y=177, value=217,186,230 (#d9bae6)





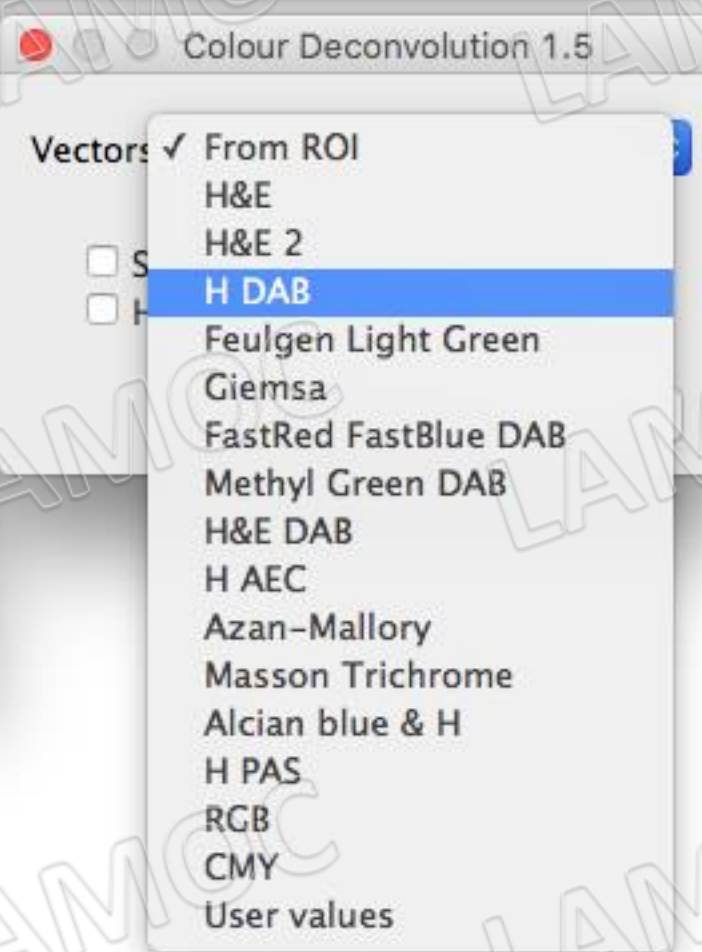
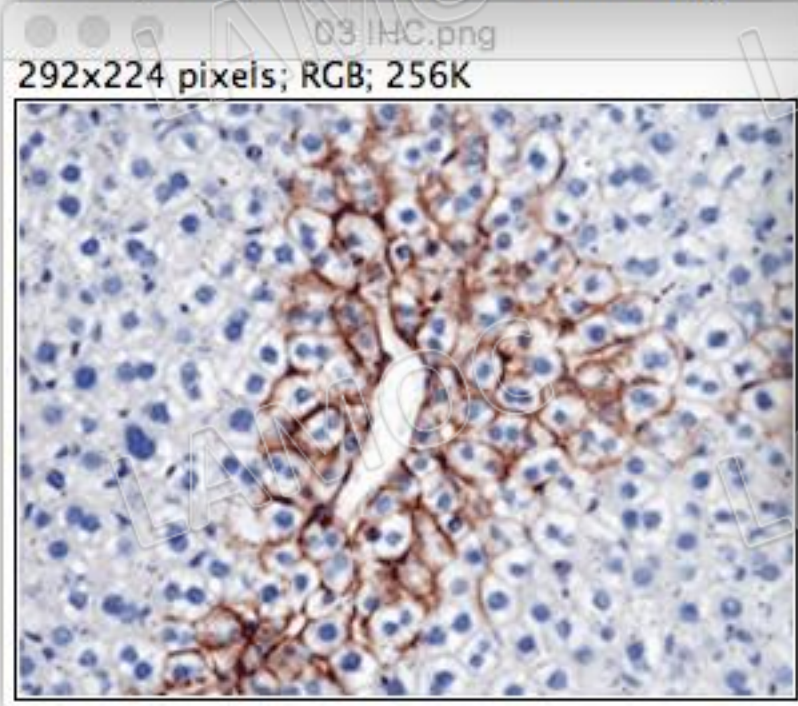
Scrolling tool (or press space bar and drag)

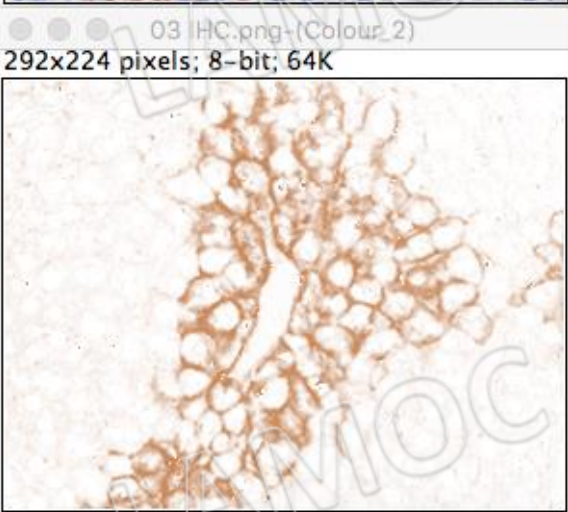
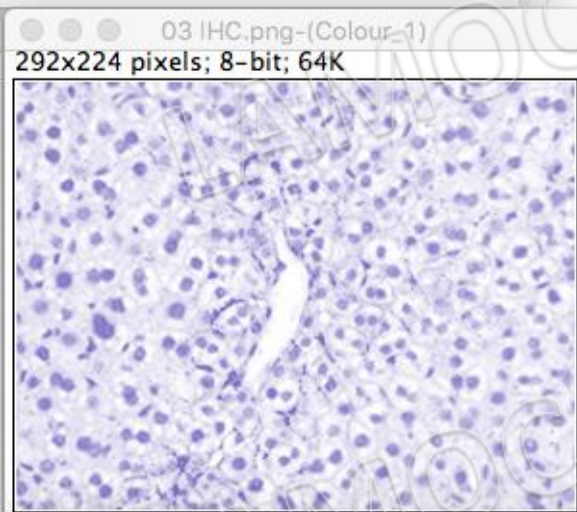
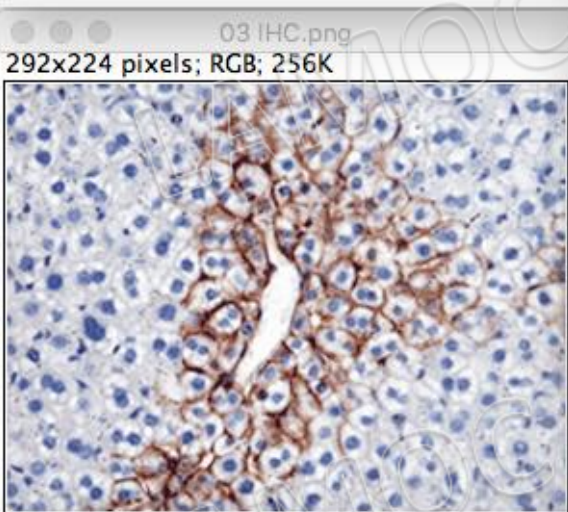


- Macros ▶
- Shortcuts ▶
- Utilities ▶
- New ▶
- Compile and Run... ▶
- Install... ⌘M
- 3D ▶
- Analyze ▶
- Colour Deconvolution**
- Examples ▶
- Filters ▶
- Graphics ▶
- Input-Output ▶
- LOCI ▶
- MBF_ImageJ ▶
- Macros ▶
- Manual Tracking ▶
- OME ▶
- Process ▶
- Stacks ▶
- Tools ▶
- kymographs ▶



Scrolling tool (or press space bar and drag)

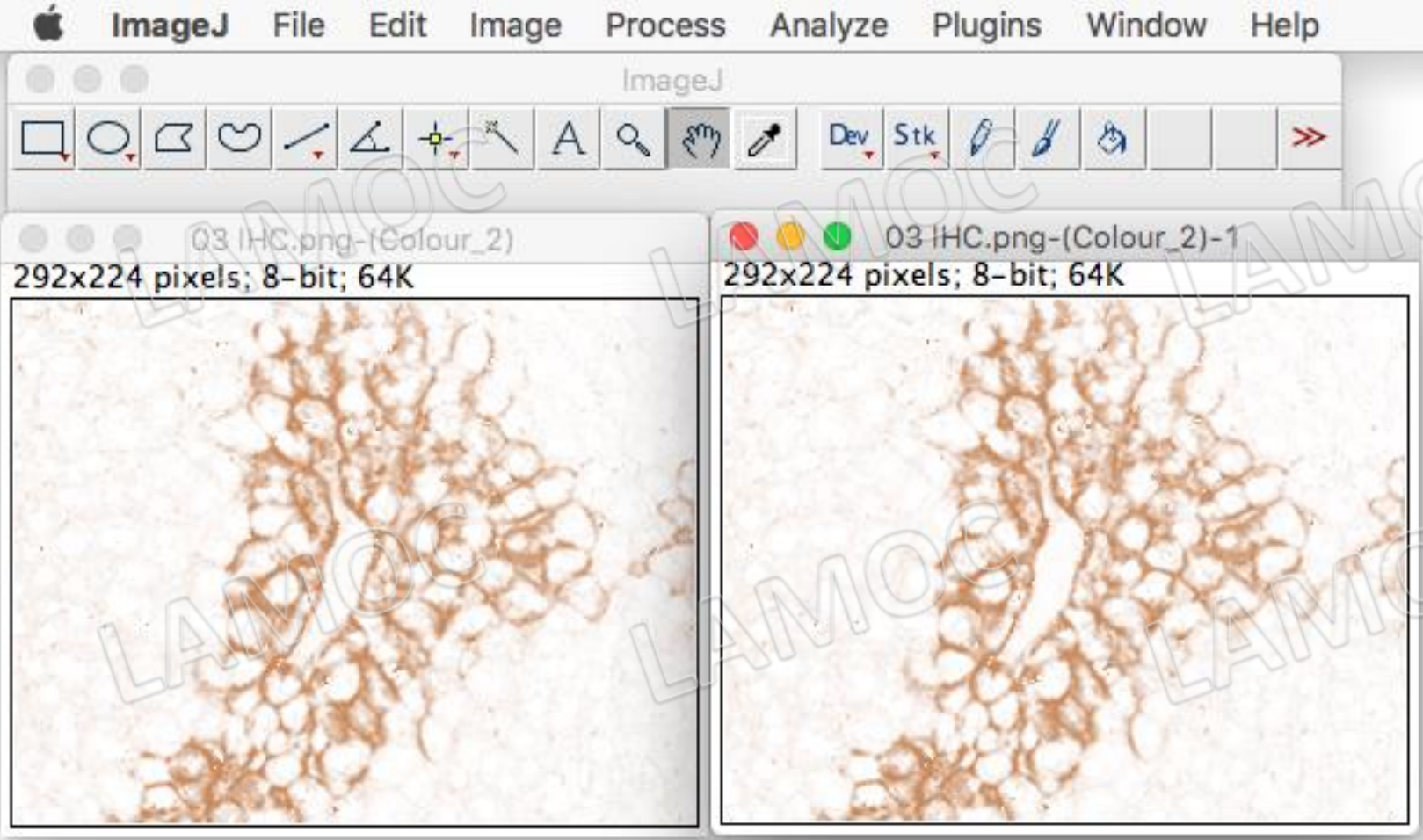


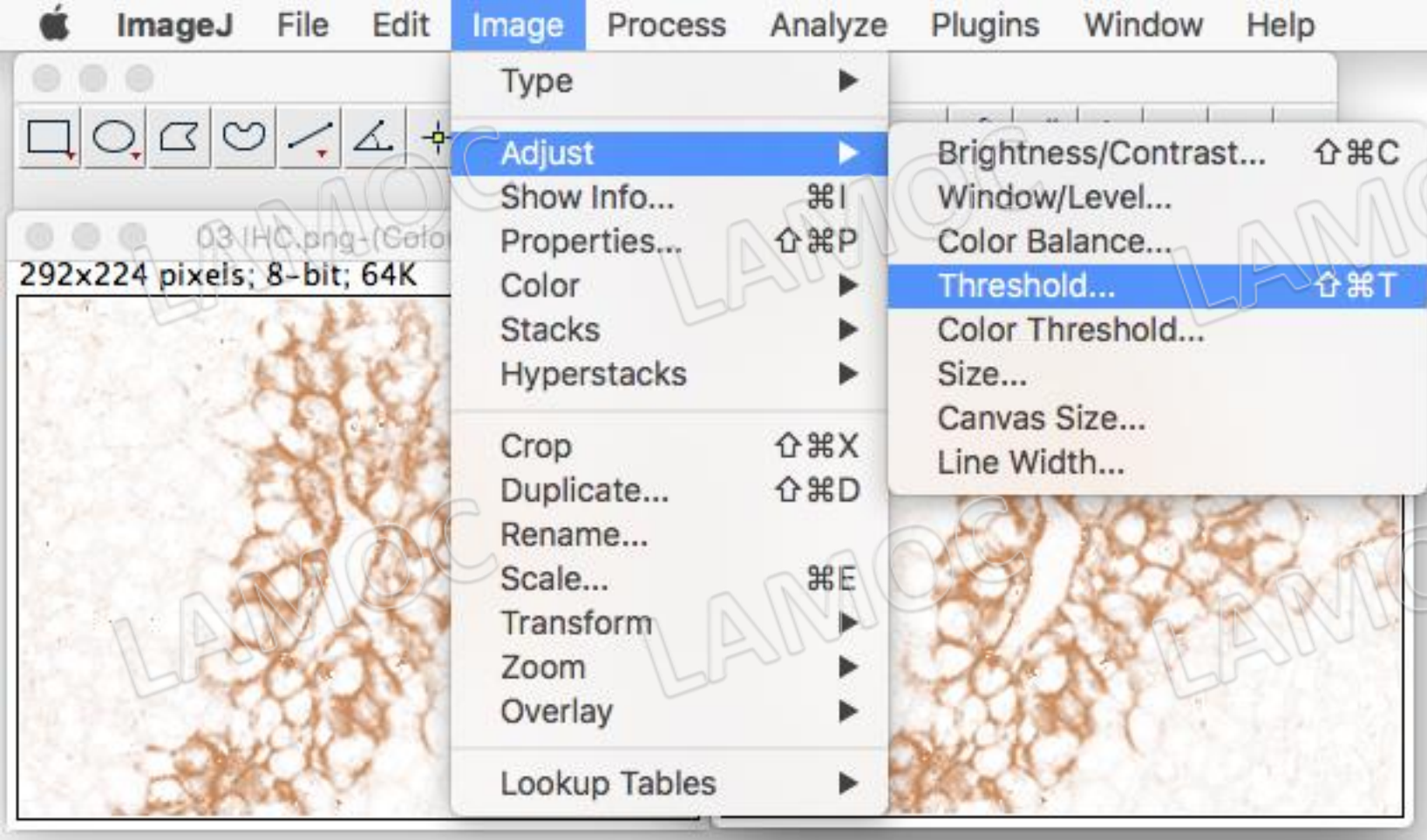


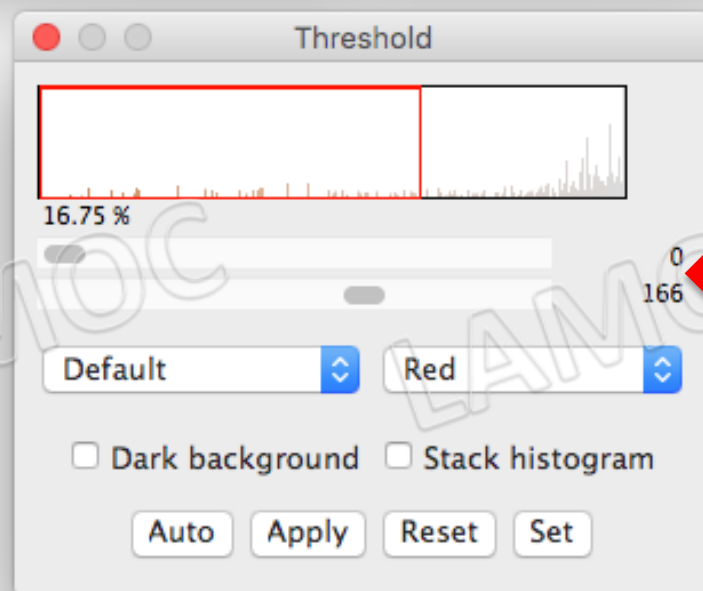
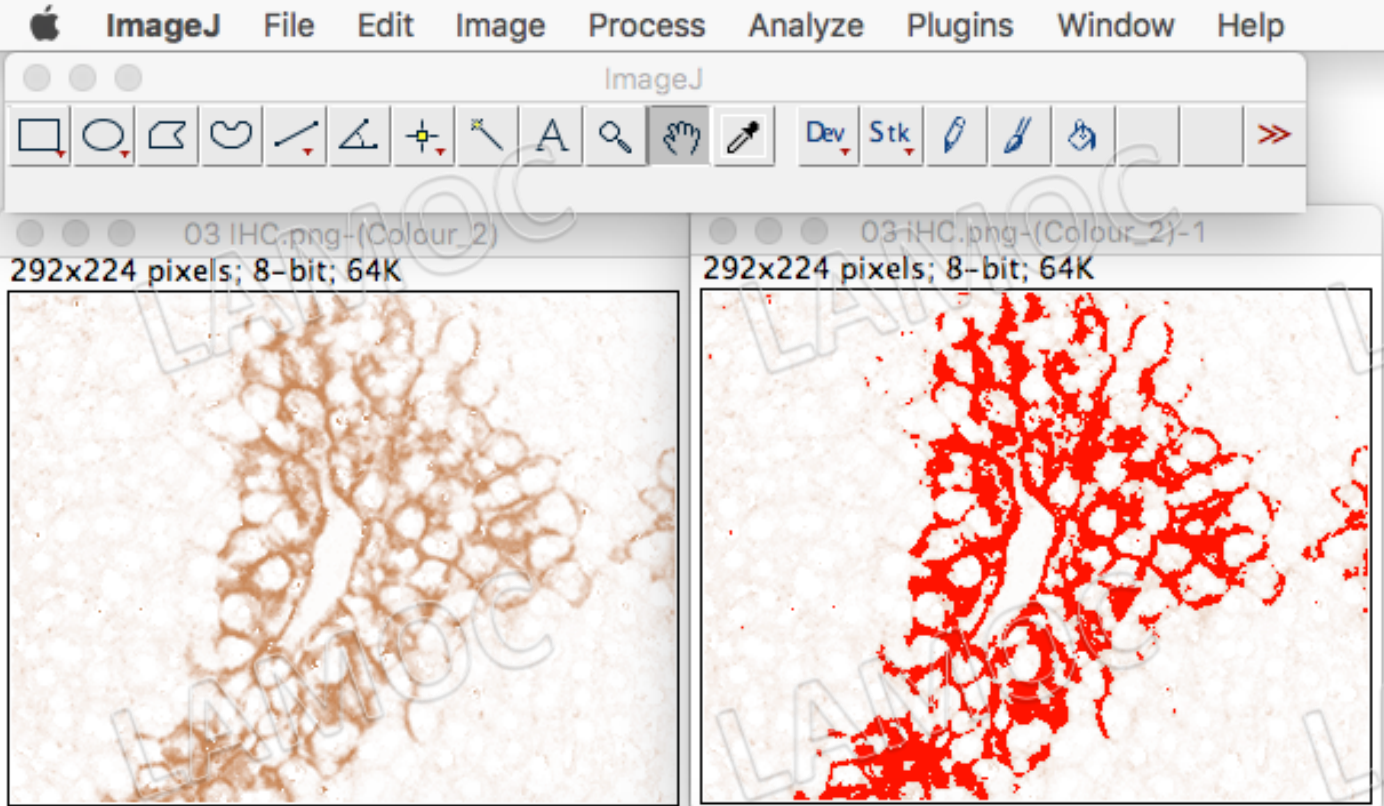
Colour Deconvolution
350x65 pixels; RGB; 89K

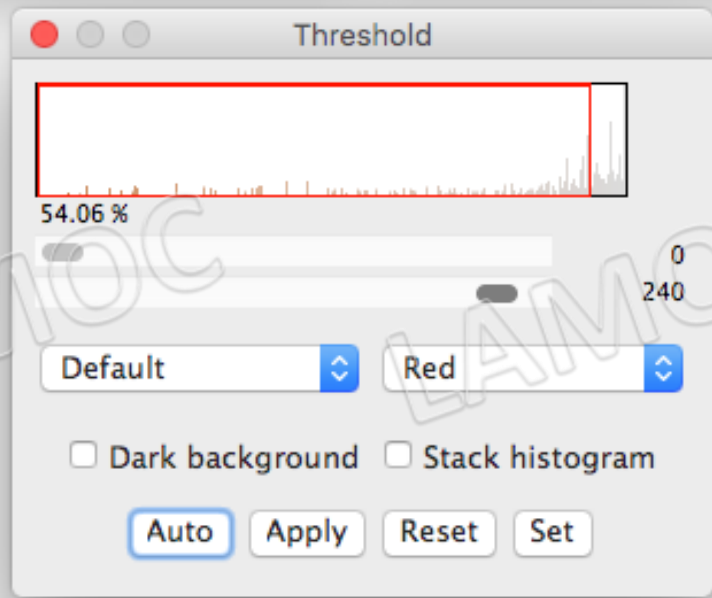
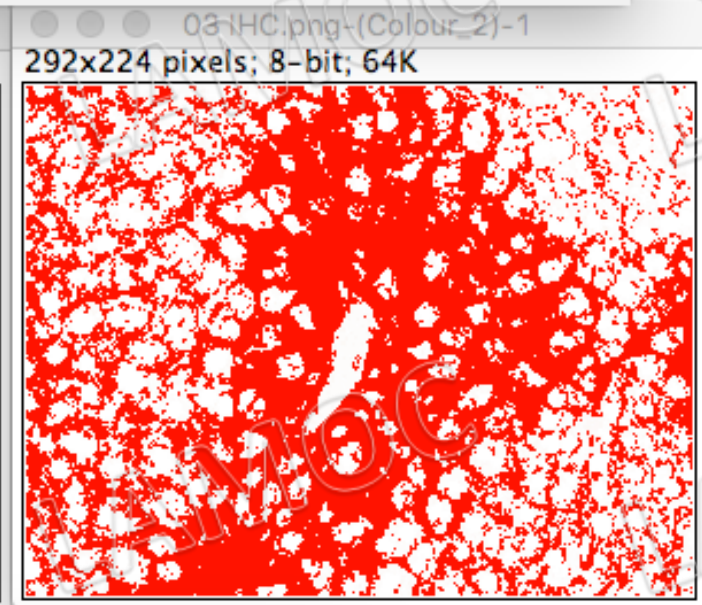
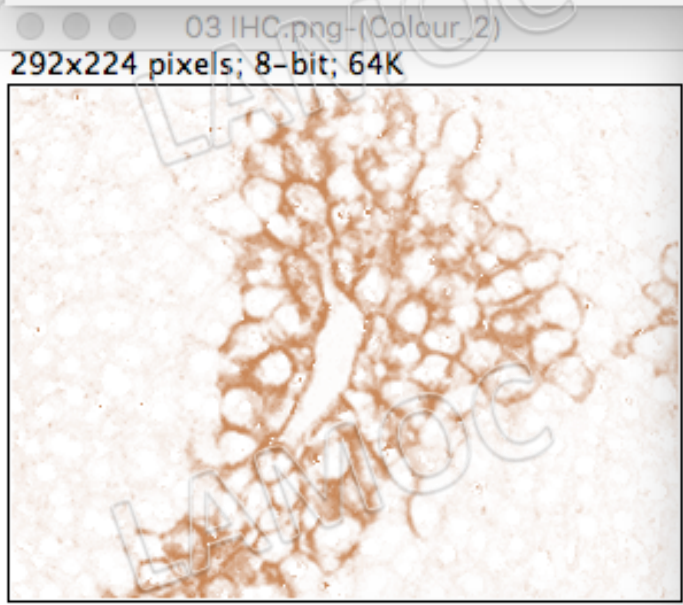
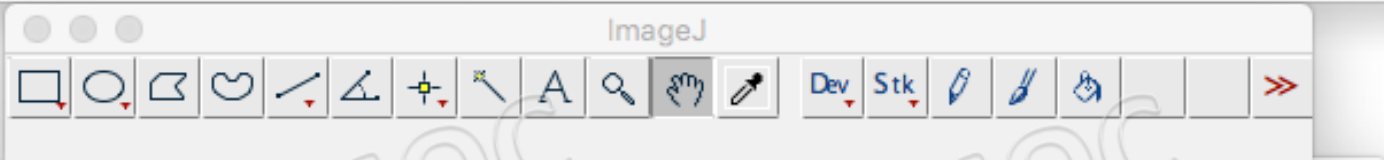
Colour deconvolution: H DAB

Colour_1	R:0.6500286, G:0.704031, B:0.2860126
Colour_2	R:0.26814753, G:0.57031375, B:0.77642715
Colour_3	R:0.7110272, G:0.42318153, B:0.5615672



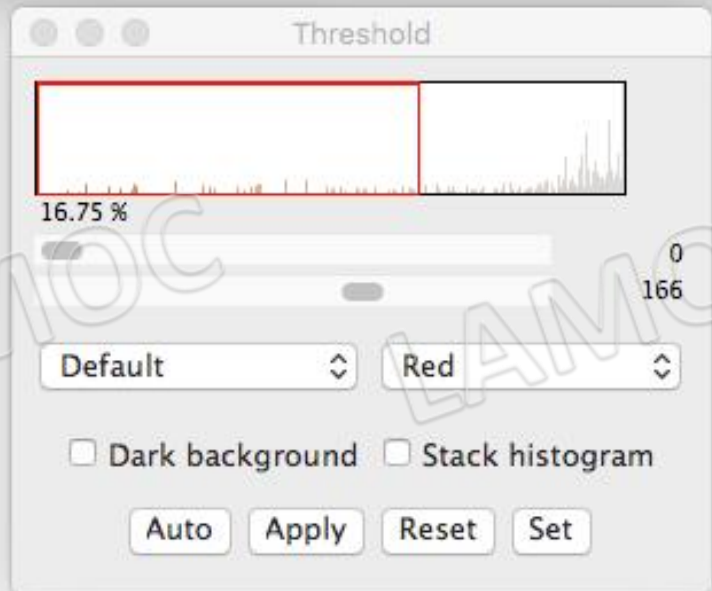
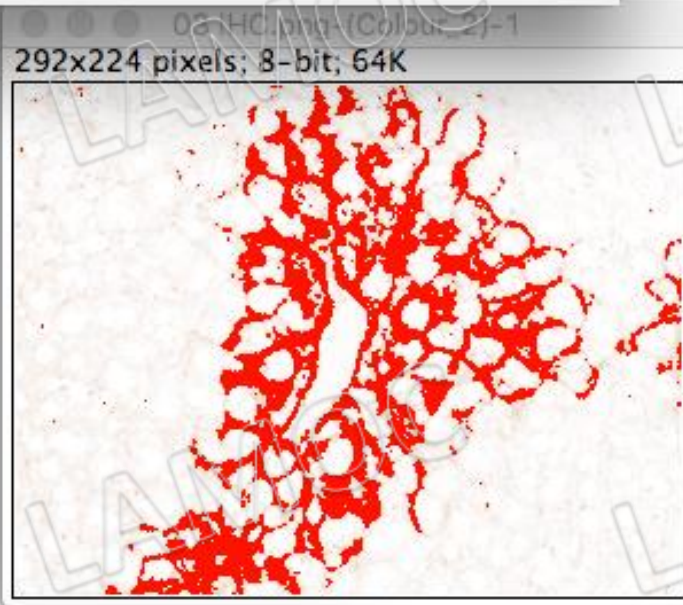
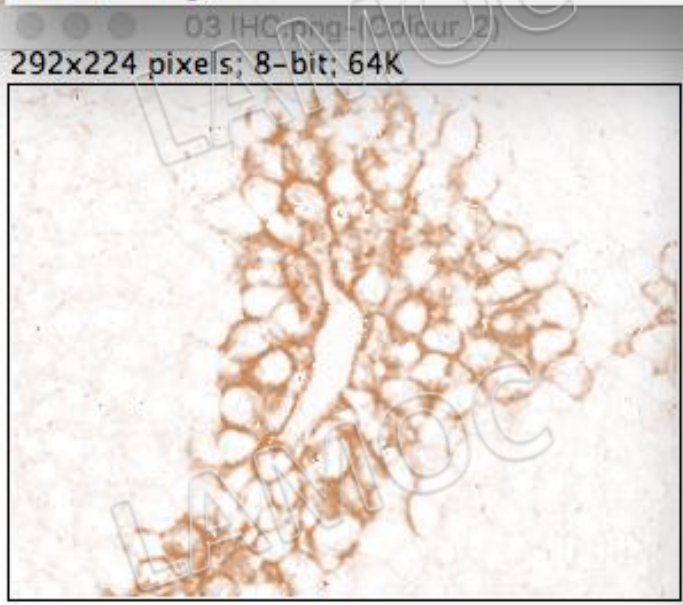








Wand (tracing) tool

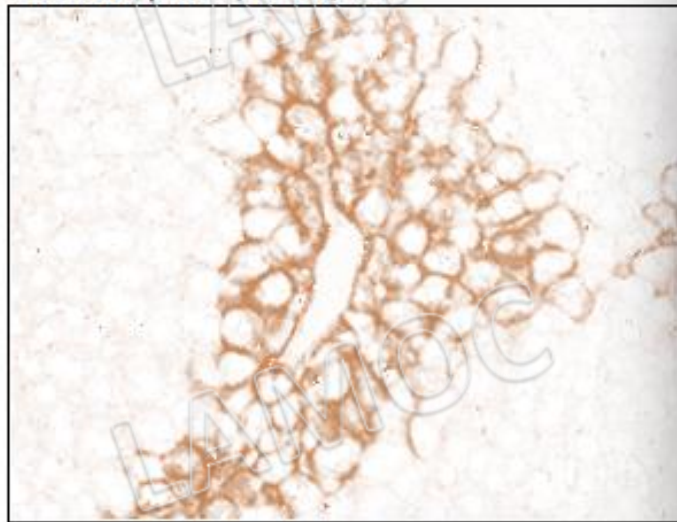




x=40, y=68, value=248

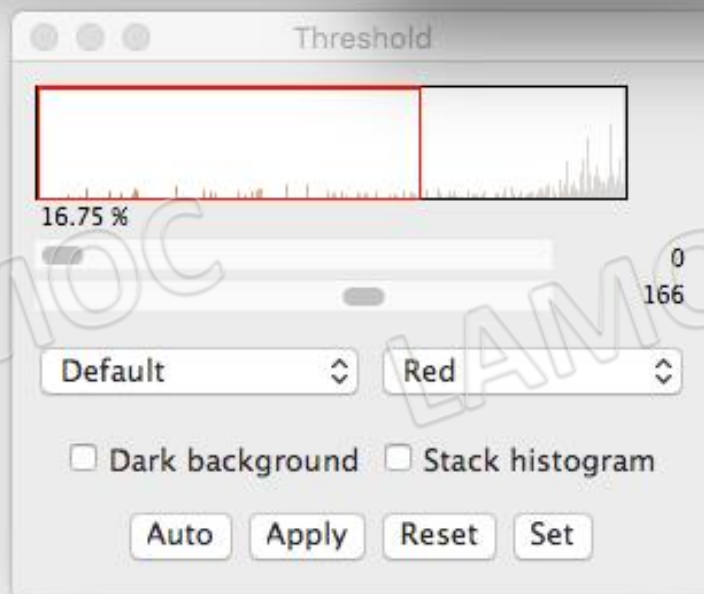
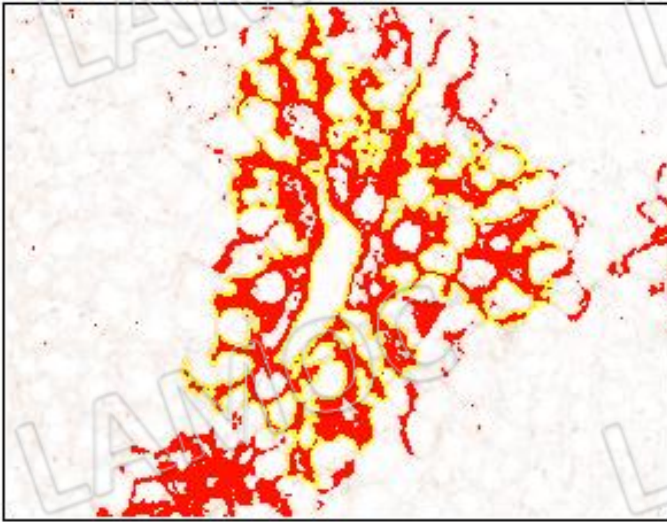
03 IHC.png-(Colour_2)

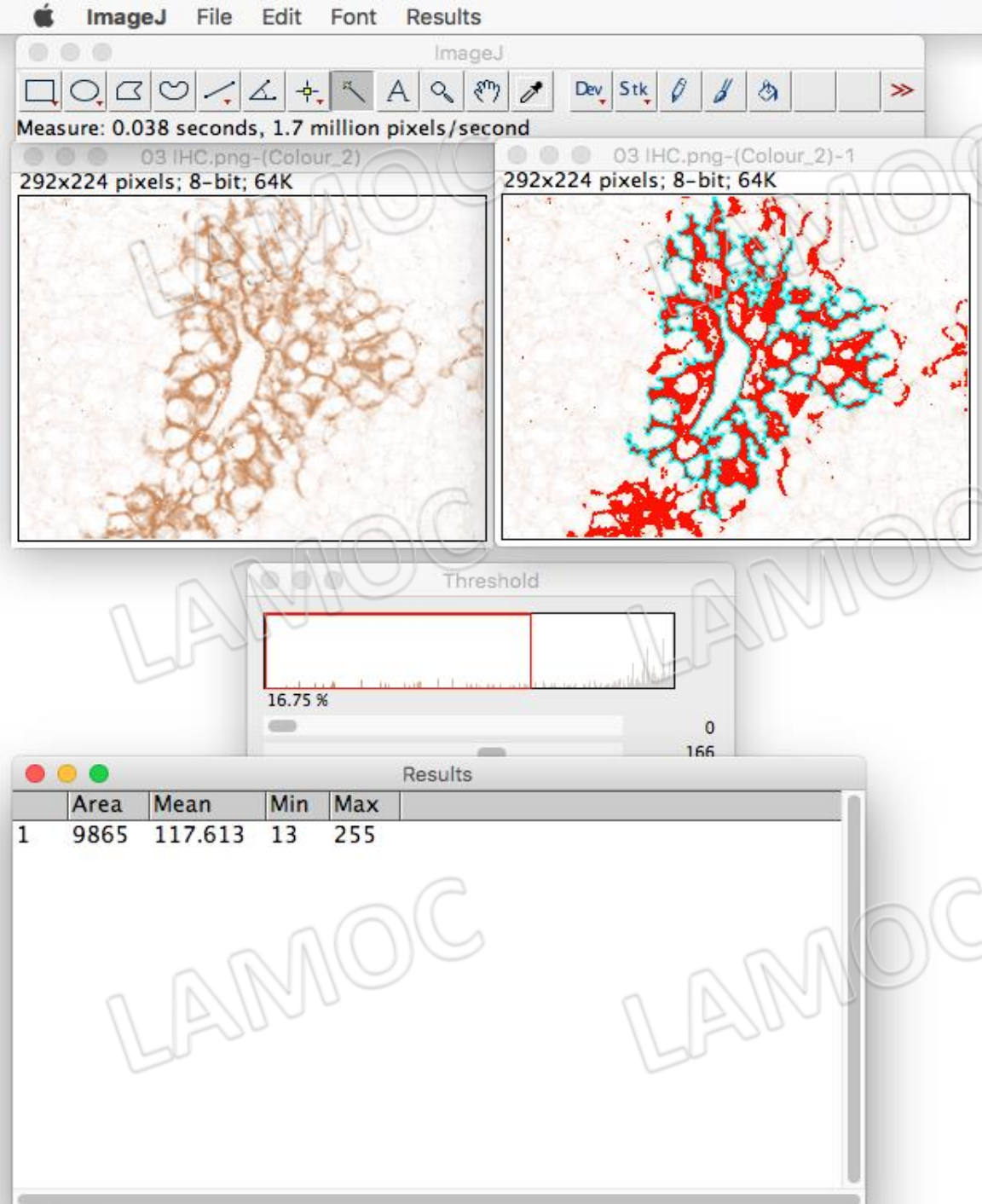
292x224 pixels; 8-bit; 64K



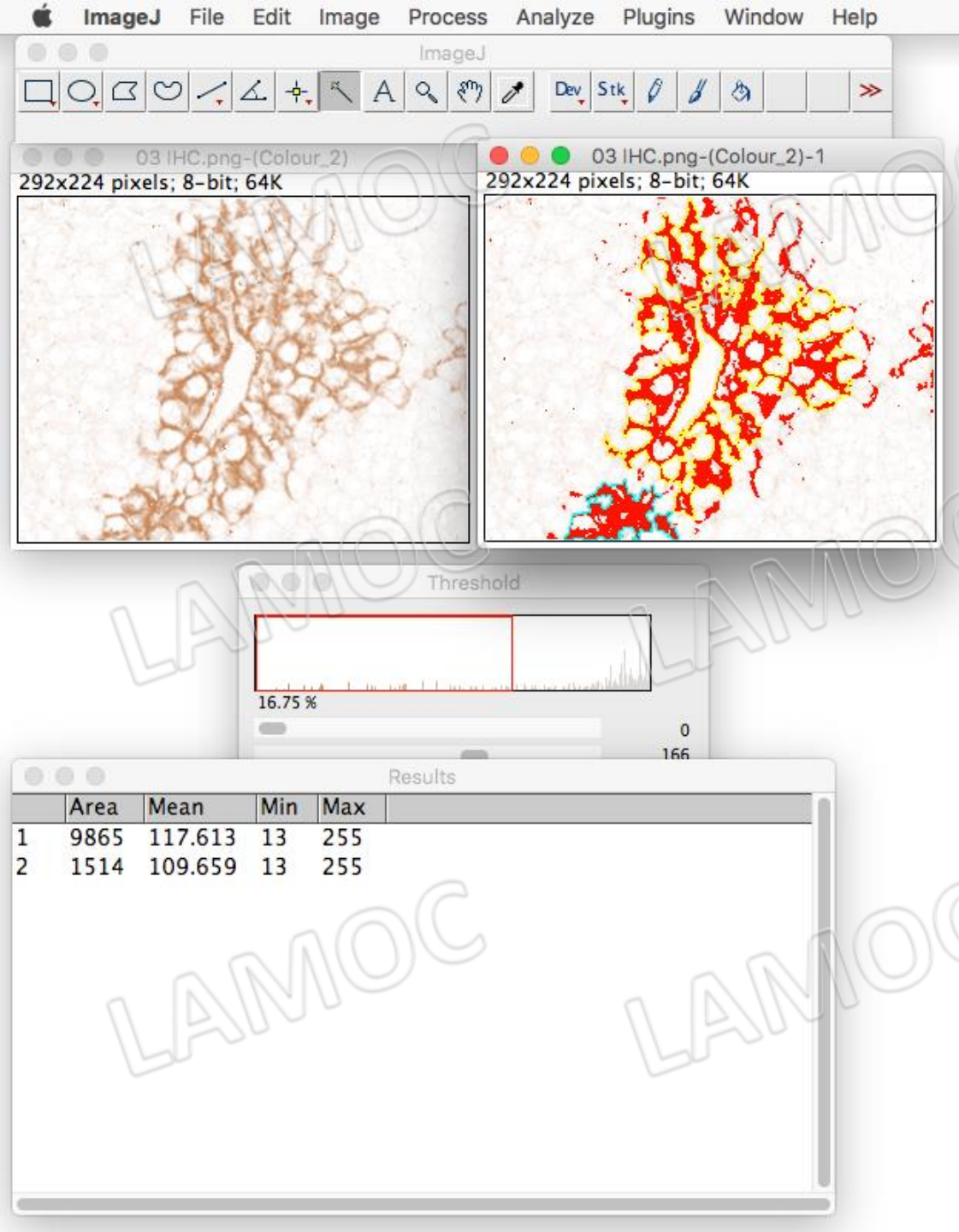
03 IHC.png-(Colour_2)-1

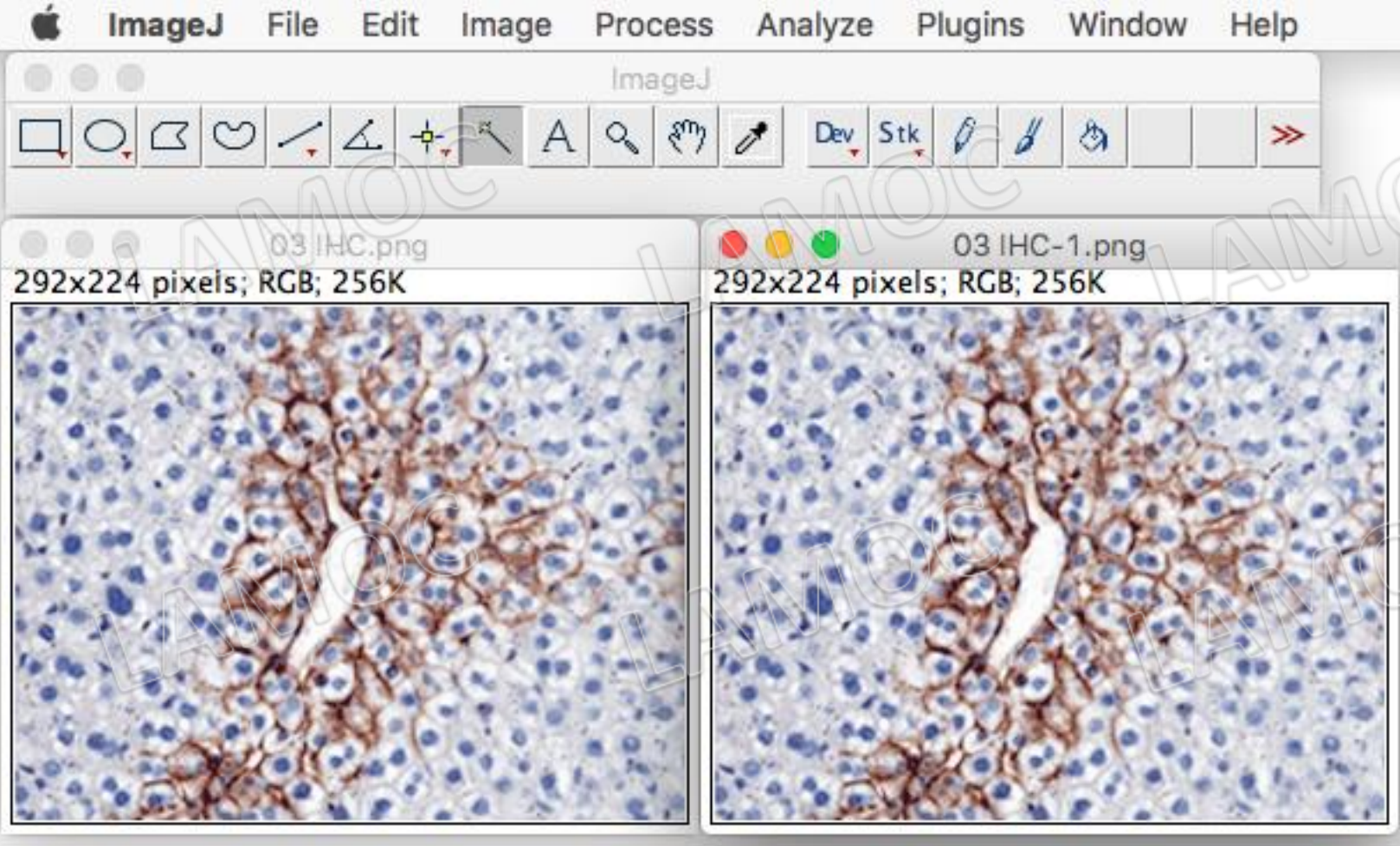
292x224 pixels; 8-bit; 64K

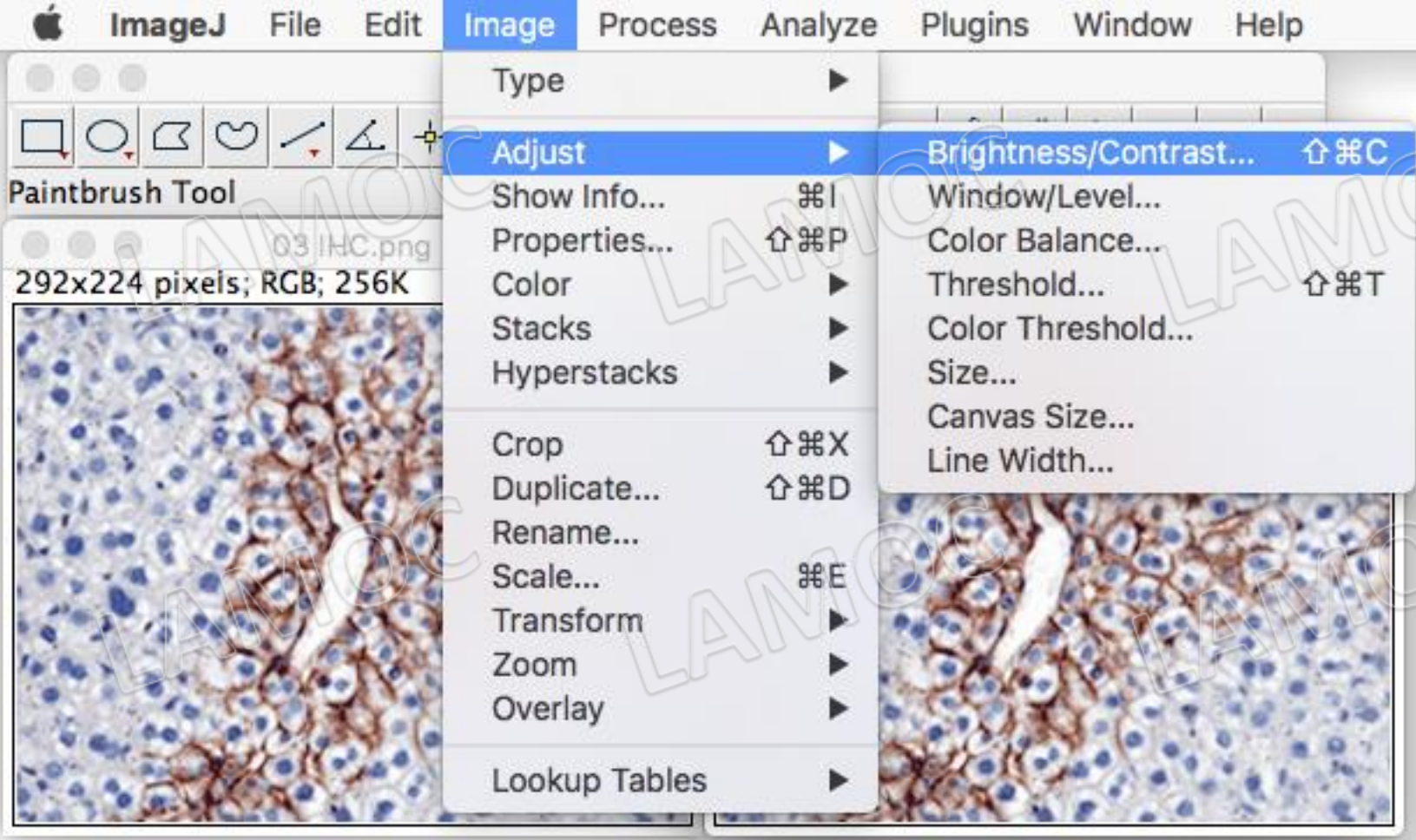


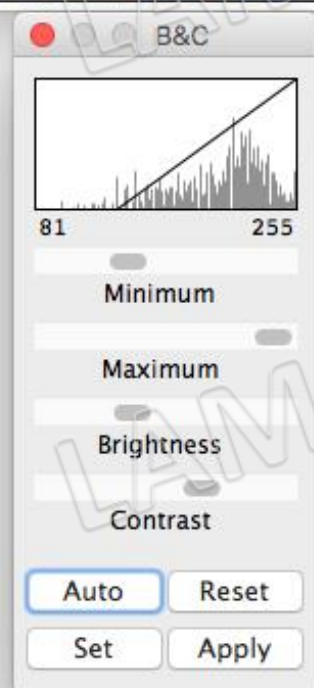
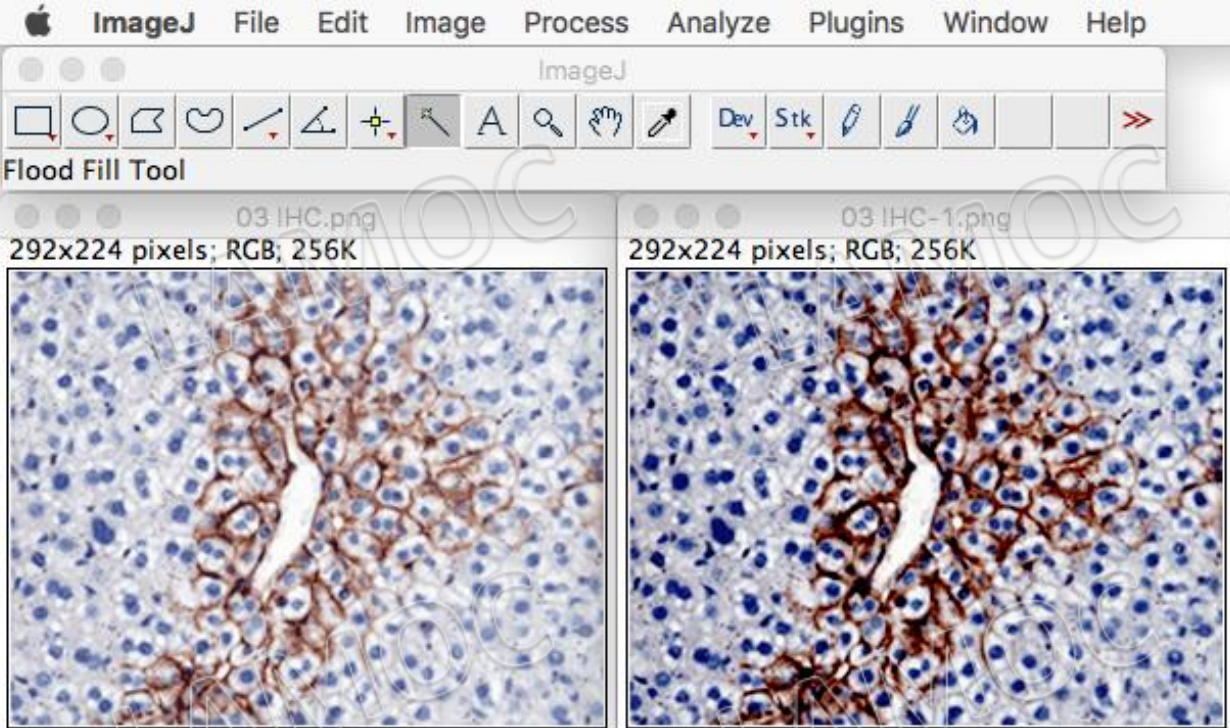


Dica: para gravar o que mediu, selecione a área, use a tecla “b” para marcar e depois “m” para quantificar









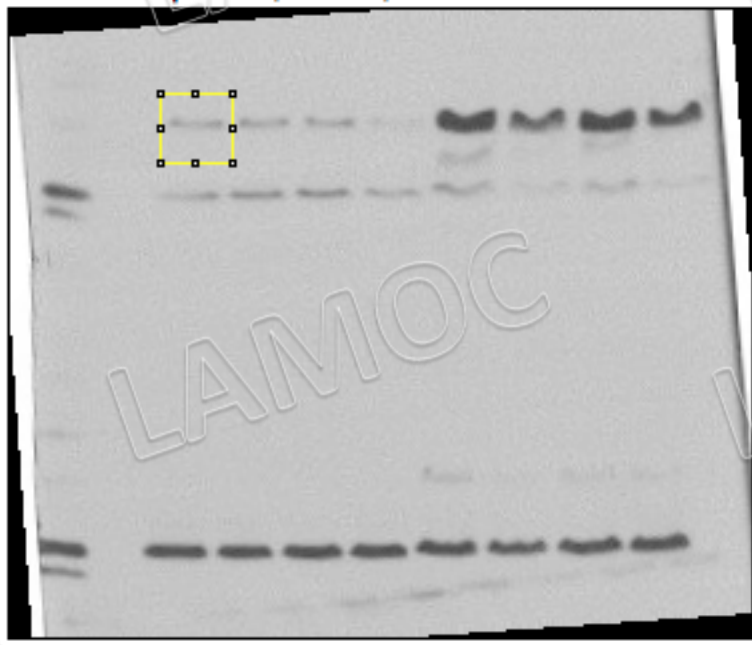
ImageJ



x=158, y=43, value=182

01 western blotting1.jpg

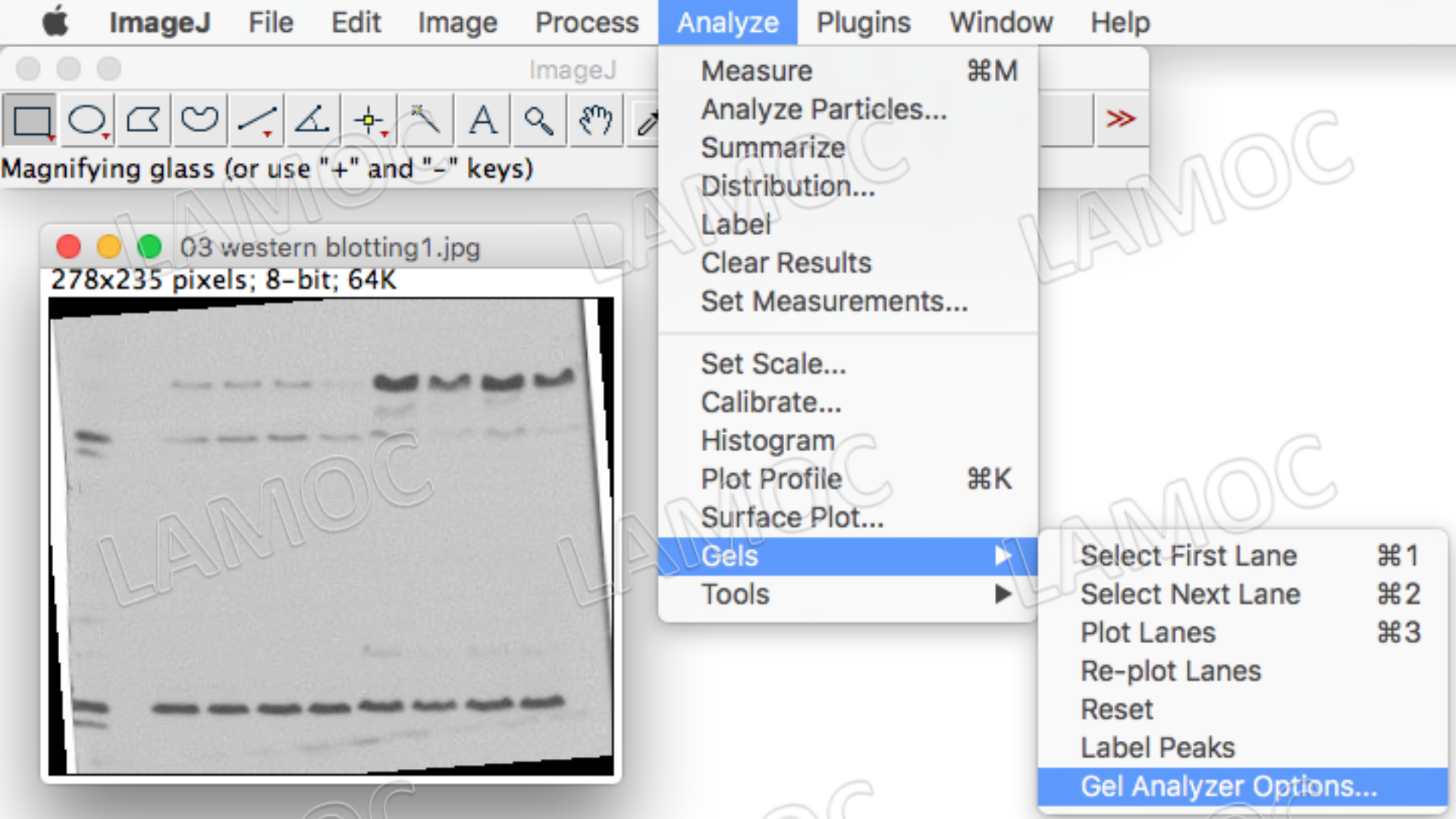
278x235 pixels; 8-bit; 64K

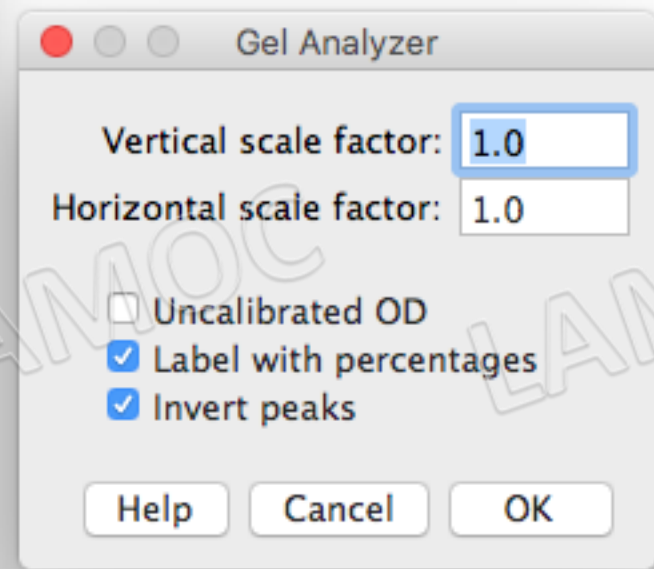
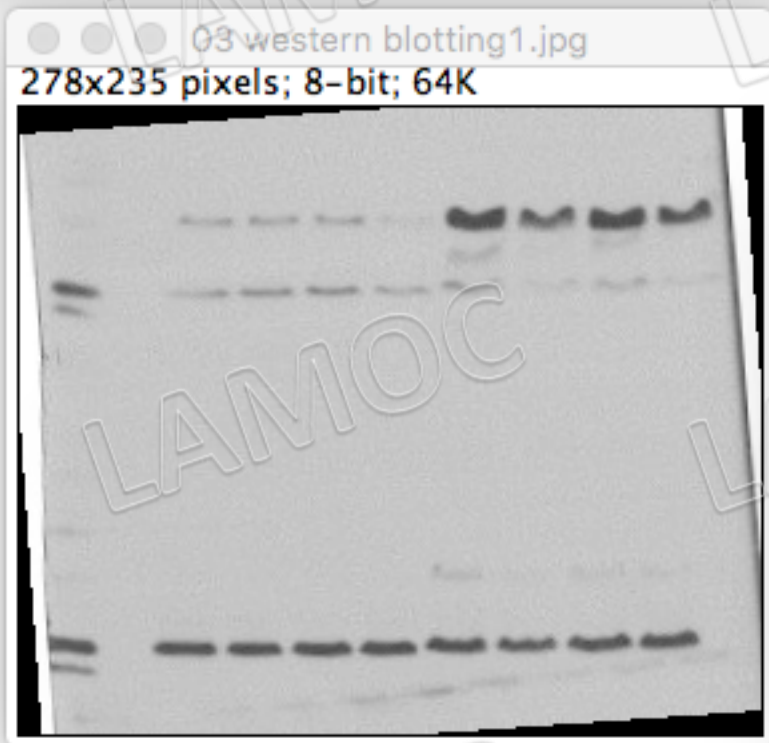
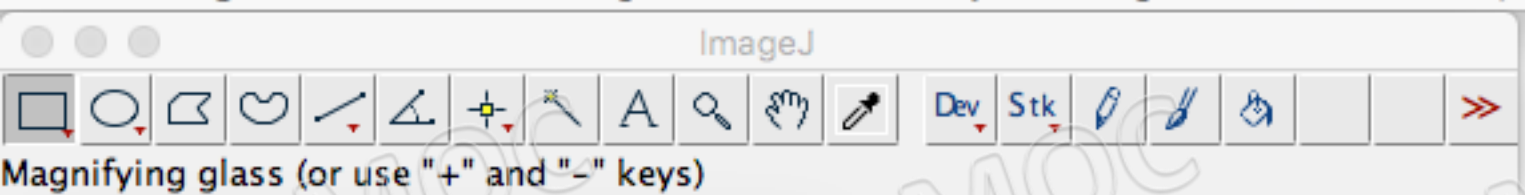


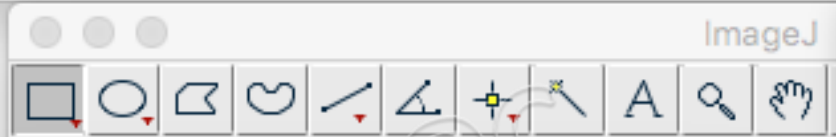


01 western blotting1.jpg
278x235 pixels; 8-bit; 64K









Magnifying glass (or use "+" and "-" keys)

01 western blotting1.jpg

278x235 pixels; 8-bit; 64K



- Measure ⌘M
- Analyze Particles...
- Summarize
- Distribution...
- Label
- Clear Results
- Set Measurements...
- Set Scale...
- Calibrate...
- Histogram
- Plot Profile ⌘K
- Surface Plot...
- Gels ▶**
- Tools ▶

- Select First Lane ⌘1
- Select Next Lane ⌘2
- Plot Lanes ⌘3
- Re-plot Lanes
- Reset
- Label Peaks
- Gel Analyzer Options...

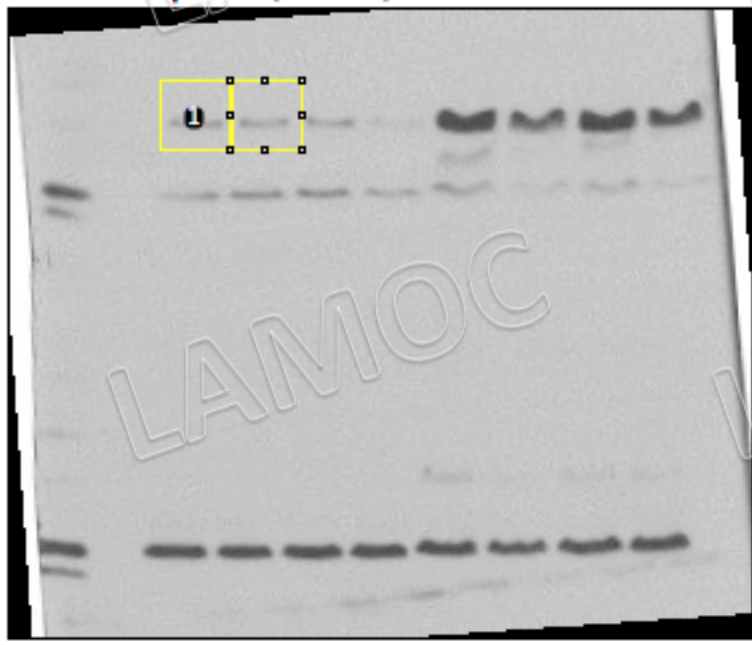
ImageJ



x=82, y=26, w=27, h=26

01 western blotting1.jpg

278x235 pixels; 8-bit; 64K

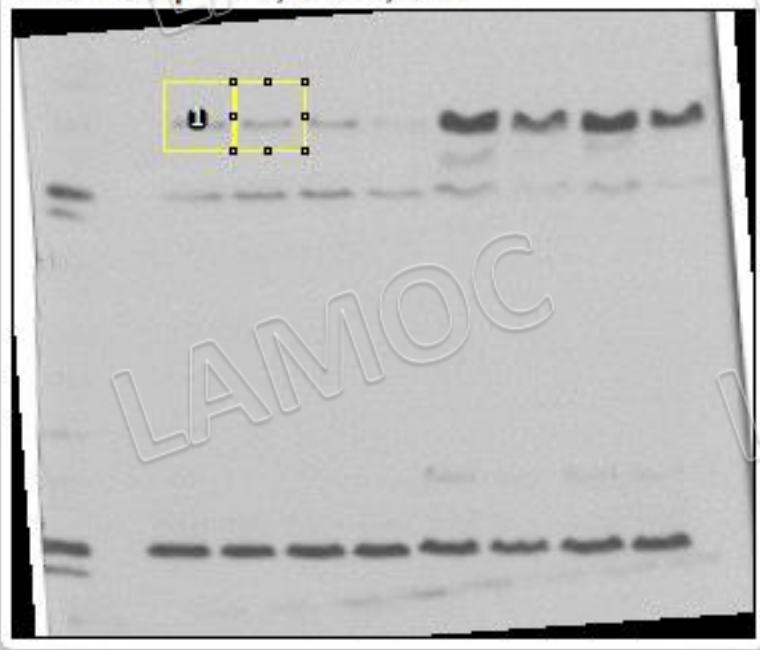




Developer Menu

01 western blotting1.jpg

278x235 pixels; 8-bit; 64K



- Measure ⌘M
- Analyze Particles...
- Summarize
- Distribution...
- Label
- Clear Results
- Set Measurements...
- Set Scale...
- Calibrate...
- Histogram
- Plot Profile ⌘K
- Surface Plot...
- Gels** ▶
- Tools ▶

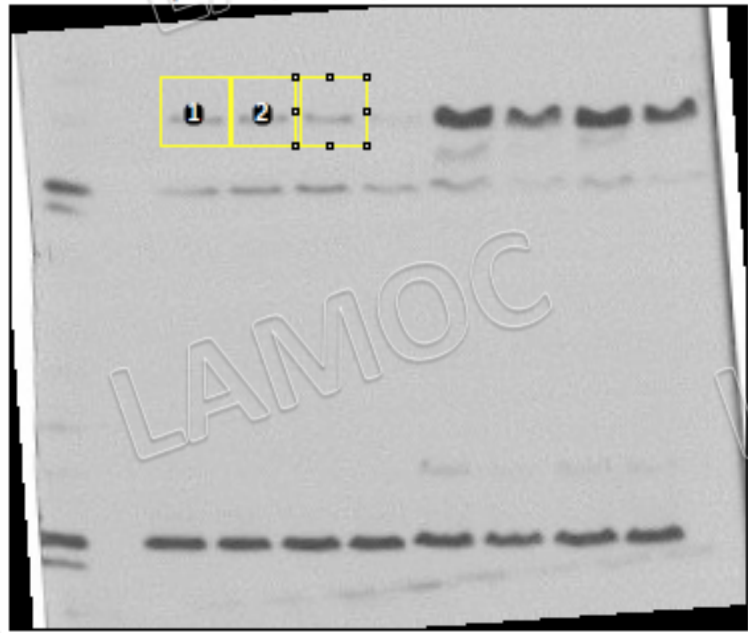
- Select First Lane ⌘1
- Select Next Lane ⌘2**
- Plot Lanes ⌘3
- Re-plot Lanes
- Reset
- Label Peaks
- Gel Analyzer Options...



x=107, y=26, w=27, h=26

01 western blotting1.jpg

278x235 pixels; 8-bit; 64K



- Measure ⌘M
- Analyze Particles...
- Summarize
- Distribution...
- Label
- Clear Results
- Set Measurements...
- Set Scale...
- Calibrate...
- Histogram
- Plot Profile ⌘K
- Surface Plot...
- Gels** ▶
- Tools ▶

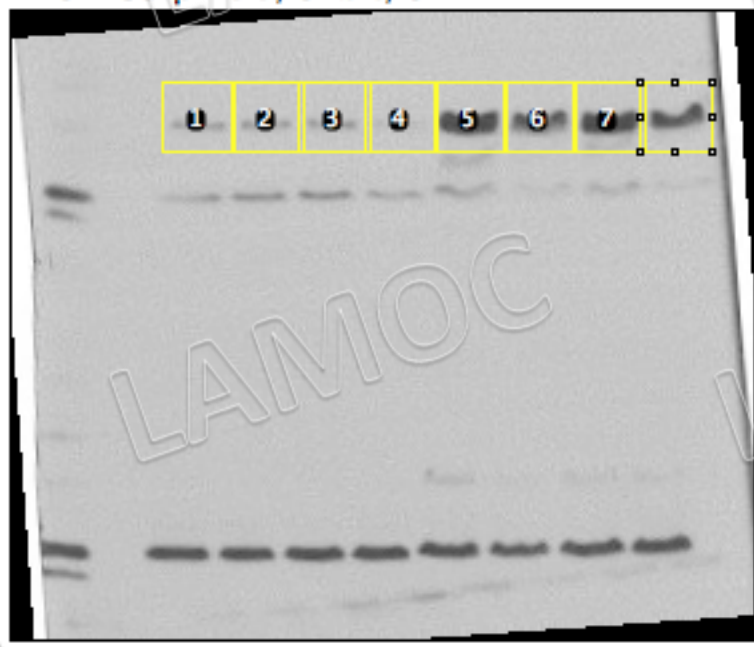
- Select First Lane ⌘1
- Select Next Lane ⌘2**
- Plot Lanes ⌘3
- Re-plot Lanes
- Reset
- Label Peaks
- Gel Analyzer Options...

ImageJ



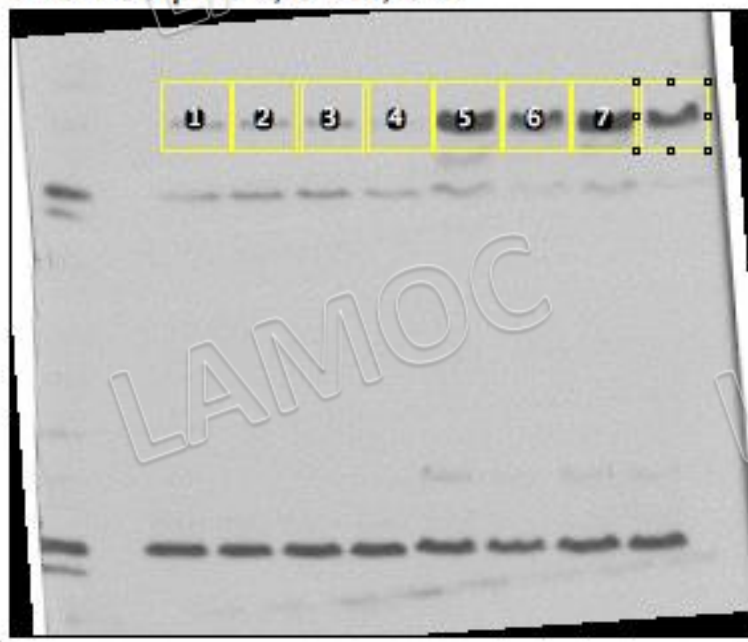
01 western blotting1.jpg

278x235 pixels; 8-bit; 64K






 01 western blotting1.jpg
 278x235 pixels; 8-bit; 64K

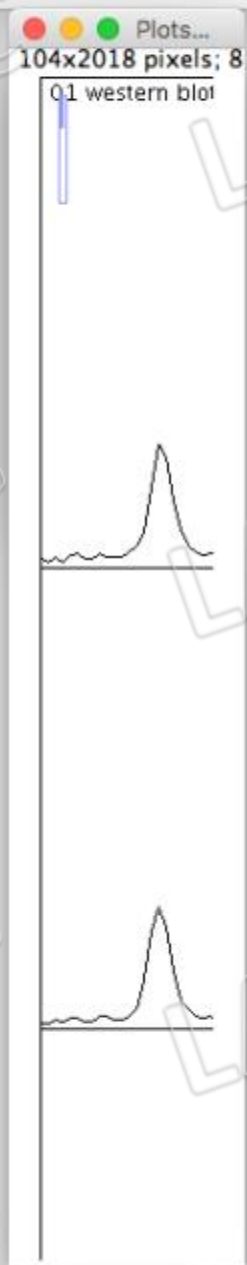


Measure ⌘M
 Analyze Particles...
 Summarize
 Distribution...
 Label
 Clear Results
 Set Measurements...

Set Scale...
 Calibrate...
 Histogram
 Plot Profile ⌘K
 Surface Plot...

Gels ▶
 Tools ▶

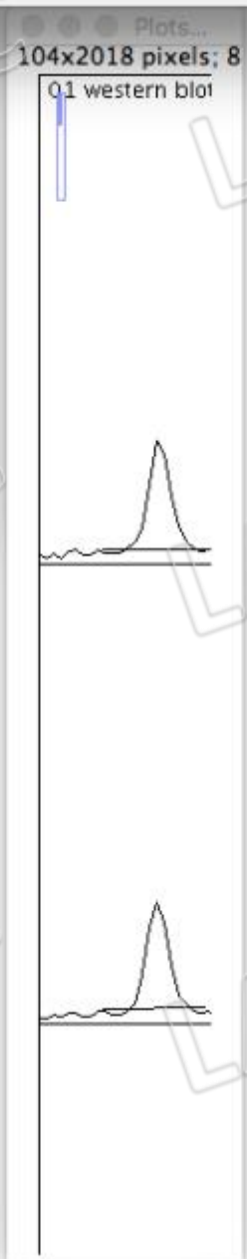
Select First Lane ⌘1
 Select Next Lane ⌘2
Plot Lanes ⌘3
 Re-plot Lanes
 Reset
 Label Peaks
 Gel Analyzer Options...

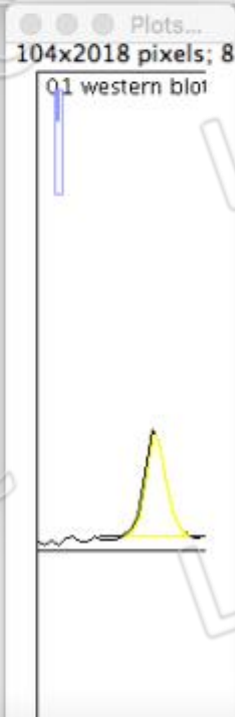




Plots...
104x2018 pixels; 8
01 western blot





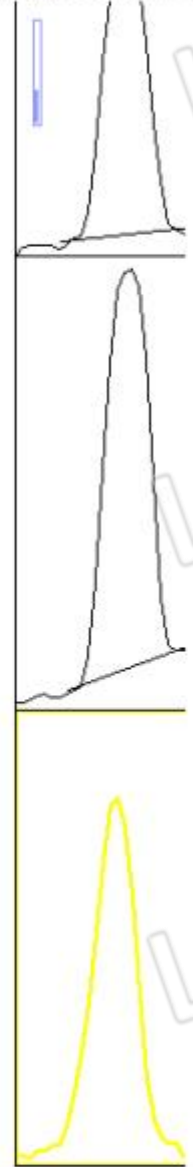


Results

	Area
1	836.749



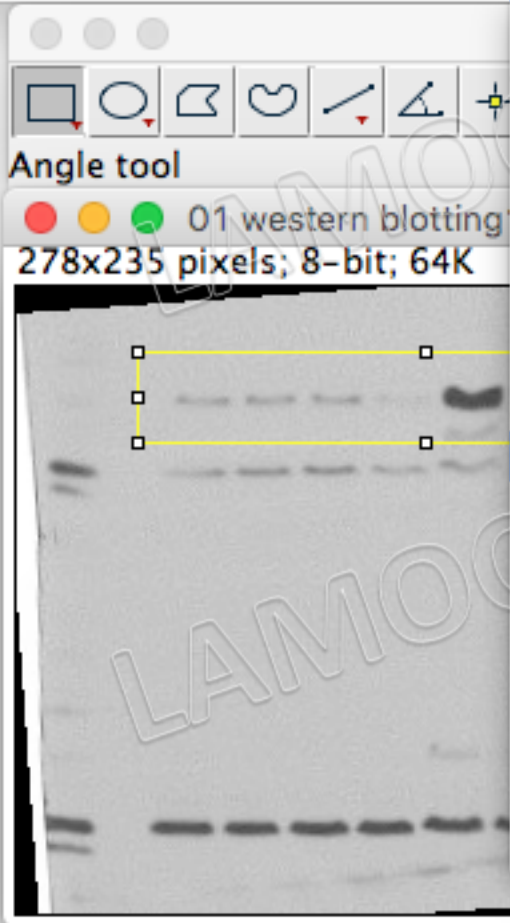
Plots...
104x2018 pixels; 8



Results

	Area
1	836.749
2	803.335
3	747.799
4	326.213
5	6773.891
6	4475.305
7	6067.790
8	25776.380

Cuidado: certifique-se de que fechou completamente a área a ser quantificada...



- Type ▶
- Adjust ▶
- Show Info... ⌘I
- Properties... ⌘P
- Color ▶
- Stacks ▶
- Hyperstacks ▶
- Crop ⌘X**
- Duplicate... ⌘D
- Rename...
- Scale... ⌘E
- Transform ▶
- Zoom ▶
- Overlay ▶
- Lookup Tables ▶





Resize: 1/1

01 western blotting1.jpg

217x34 pixels; 8-bit; 7K





- New ▶
- Open... ⌘O
- Open Next ⇧⌘O
- Open Samples ▶
- Open Recent ▶
- Import ▶
- Close ⌘W
- Close All ⇧⌘W
- Save ⌘S
- Save As ▶
- Revert ⌘R
- Page Setup...
- Print... ⌘P
- Quit



- Image Sequence...
- Raw...
- LUT...
- Text Image...
- Text File...
- Results...
- Table...
- URL...
- Stack From List...
- TIFF Virtual Stack...
- AVI...
- XY Coordinates...
- Animated Gif...
- Exif Data...
- NifTI-Analyze
- Bio-Formats
- Bio-Formats (Remote)
- Bio-Formats (Windowless)
- Using QuickTime...
- Video
- QuickTime Player...



ImageJ



Favoritos

- Dropbox
- All My Files
- iCloud Drive
- Applications
- Desktop
- Documents
- Downloads
- Movies
- Music
- Pictures
- Calculator

Etiquetas

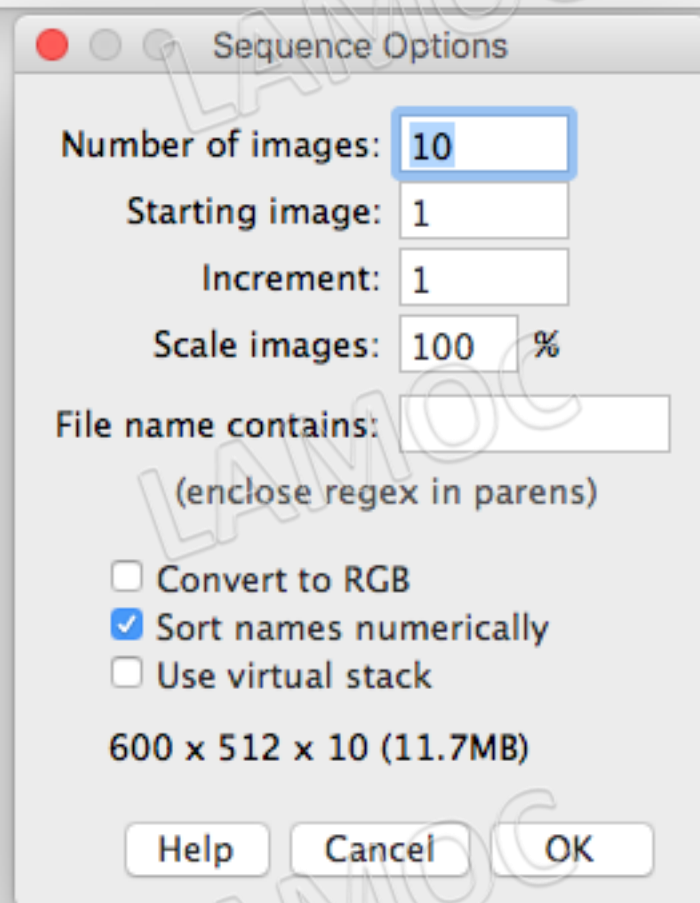
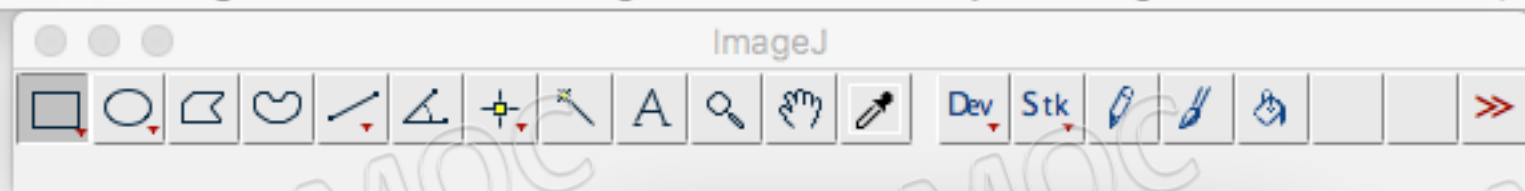
- Vermelho
- Laranja

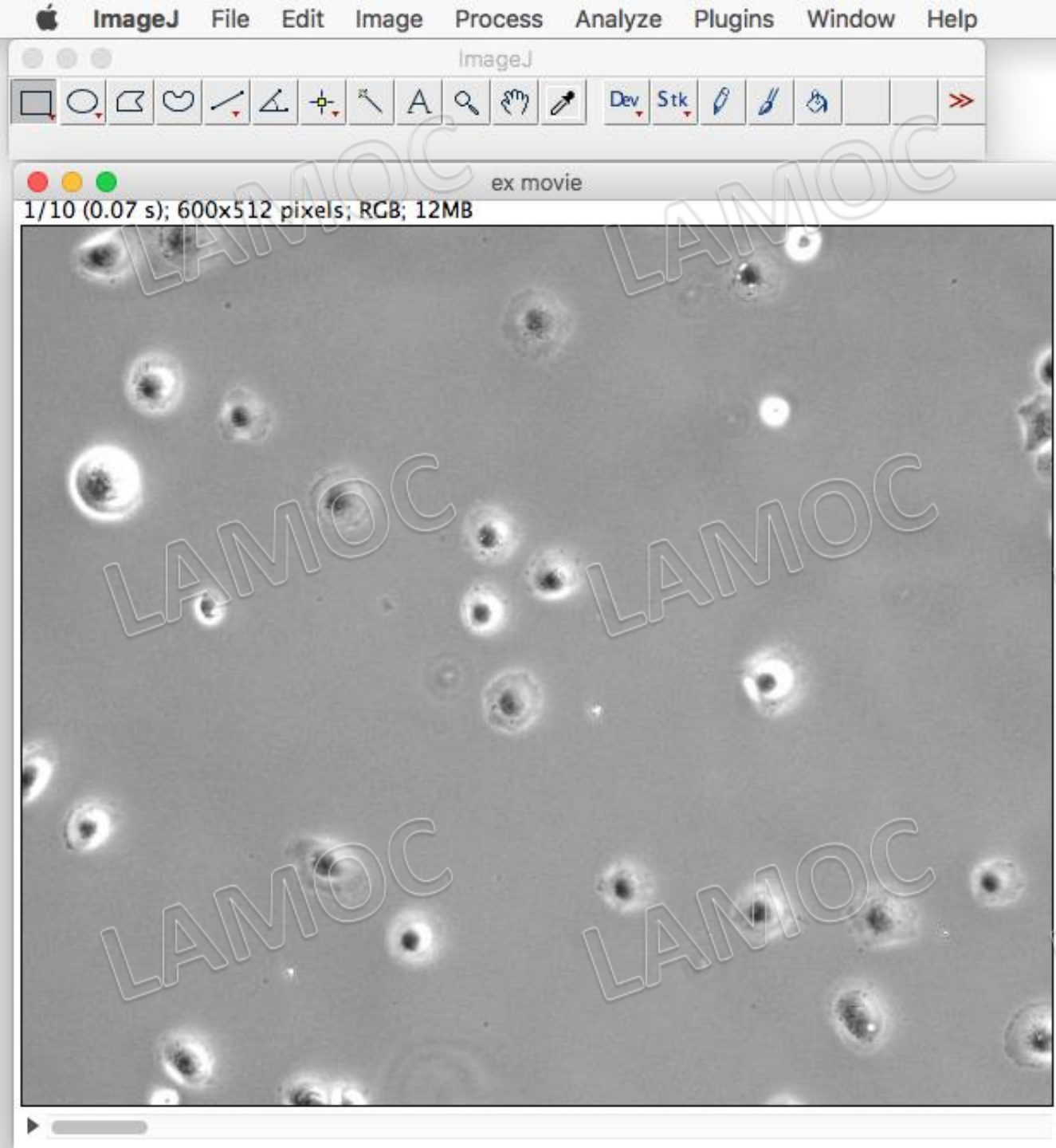
Nome	Data de Modific.
☐ 0.07 s.tif	Hoje 12:01
☐ 0.79 s.tif	Hoje 12:01
☐ 1.50 s.tif	Hoje 12:01
☐ 2.21 s.tif	Hoje 12:01
☐ 2.93 s.tif	Hoje 12:01
☐ 3.64 s.tif	Hoje 12:01
☐ 4.36 s.tif	Hoje 12:01
☐ 5.07 s.tif	Hoje 12:01
☐ 5.79 s.tif	Hoje 12:01
☐ 6.50 s.tif	Hoje 12:01

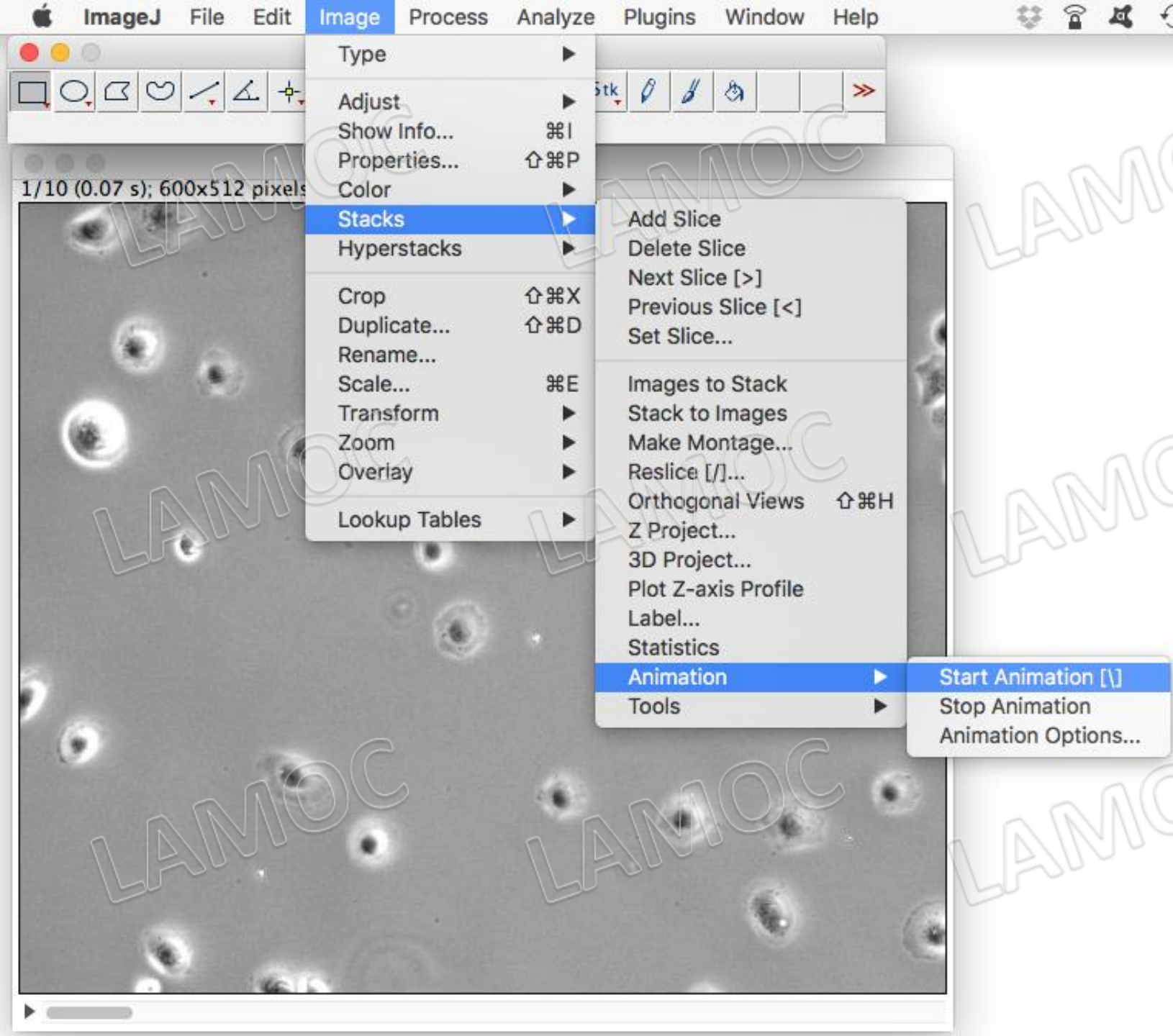
Nova Pasta

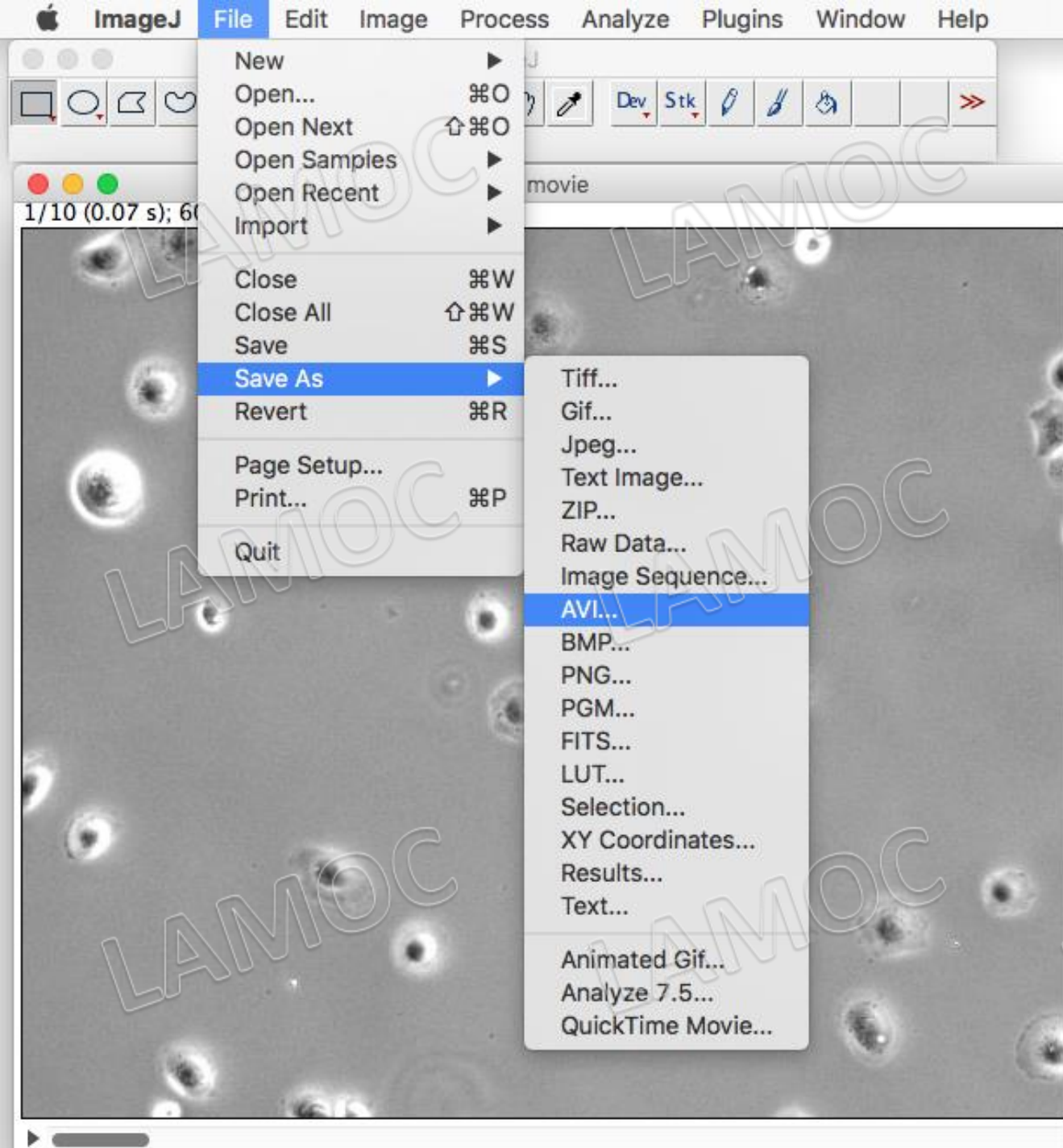
Cancelar

Escolher







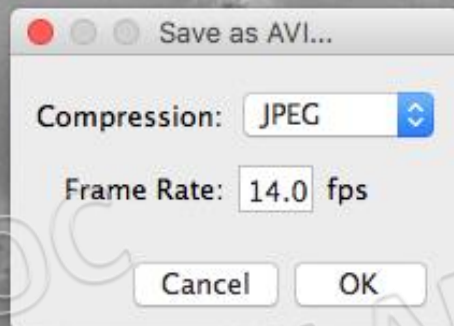
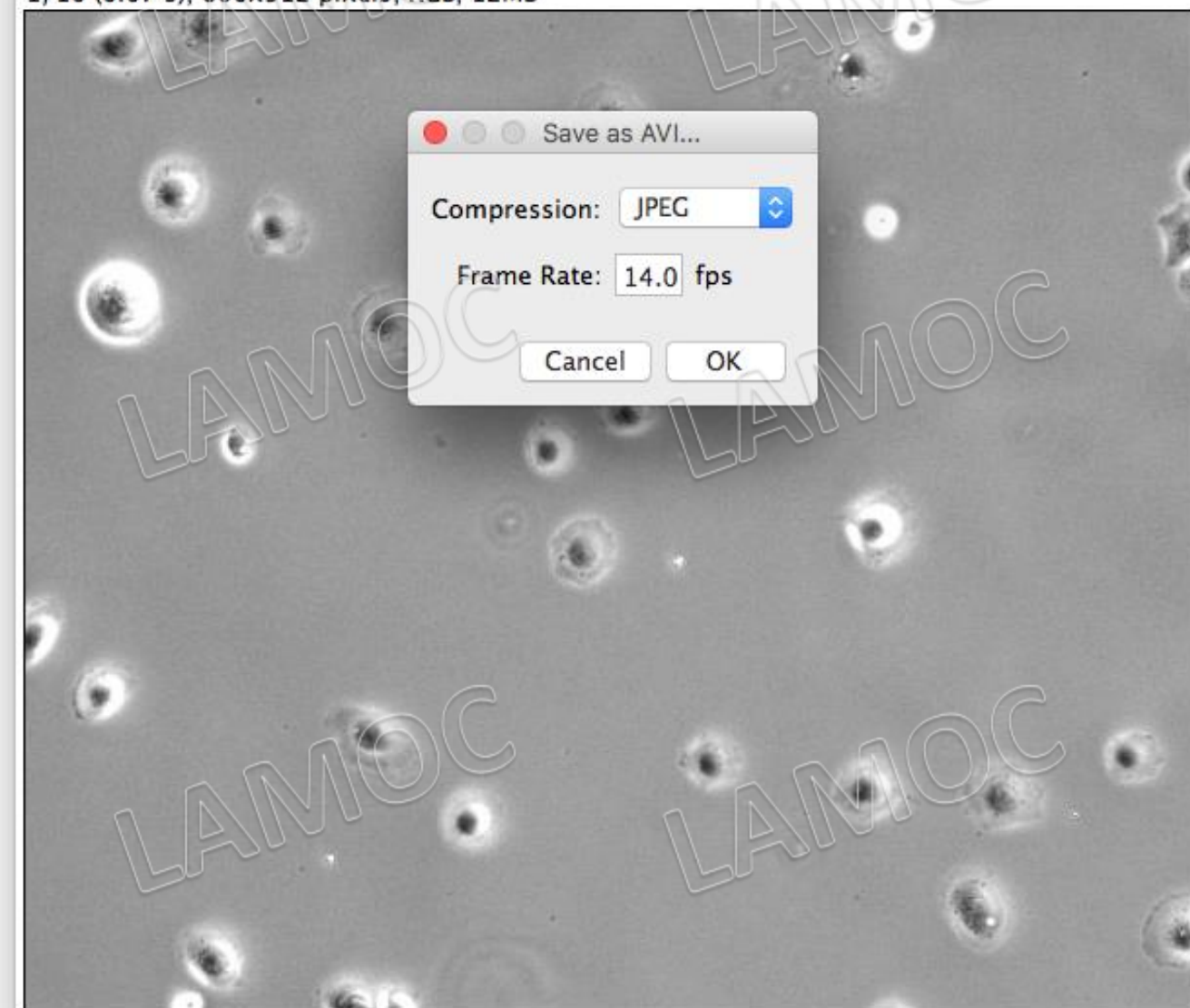




AVI... ..

ex movie

1/10 (0.07 s); 600x512 pixels; RGB; 12MB

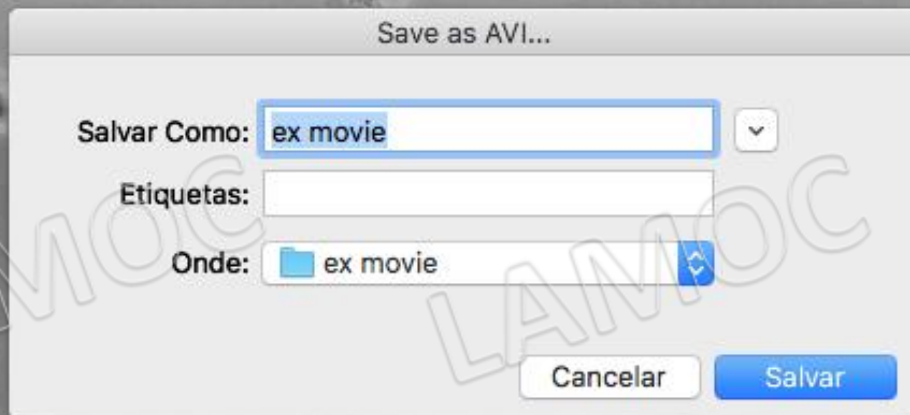


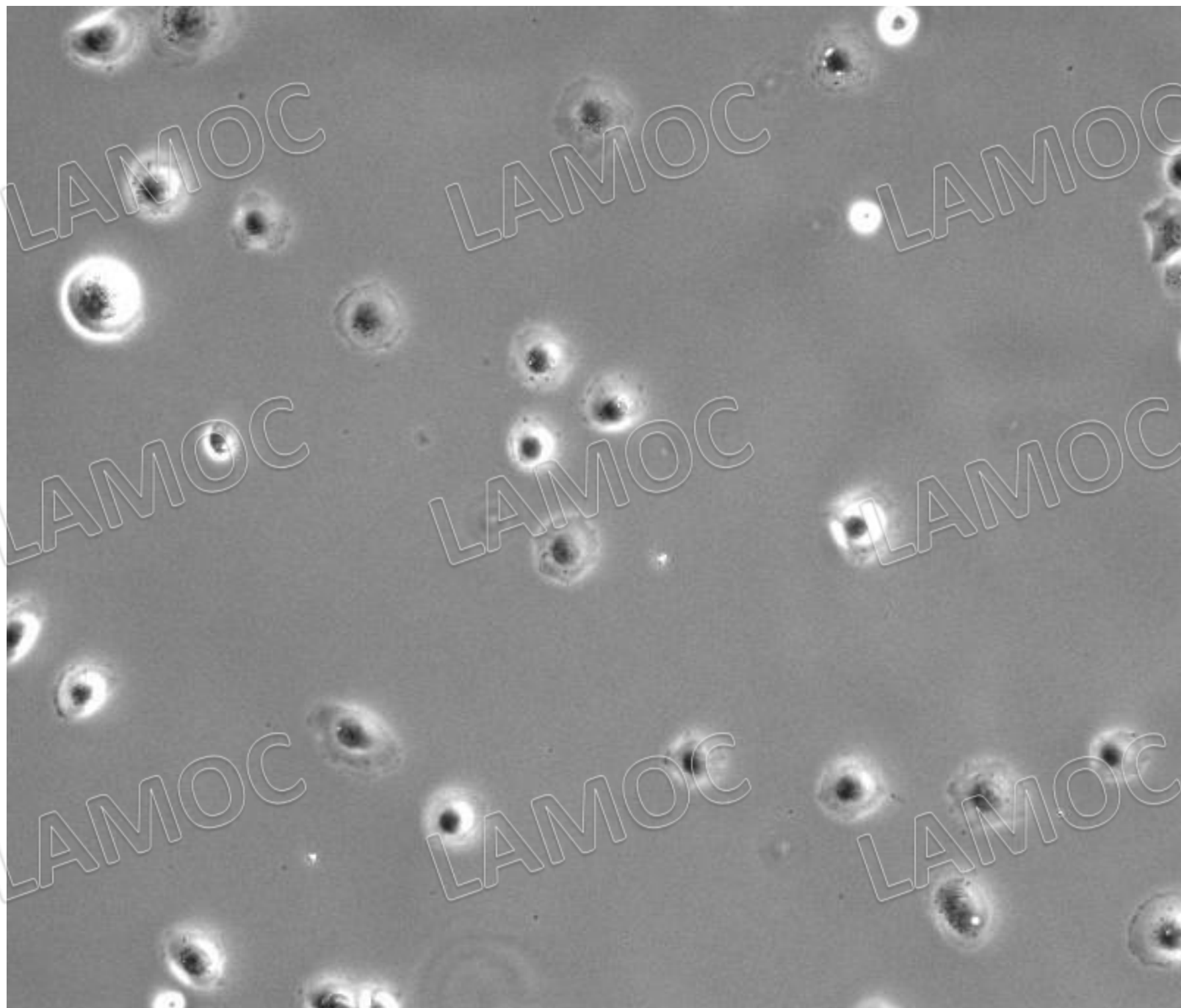


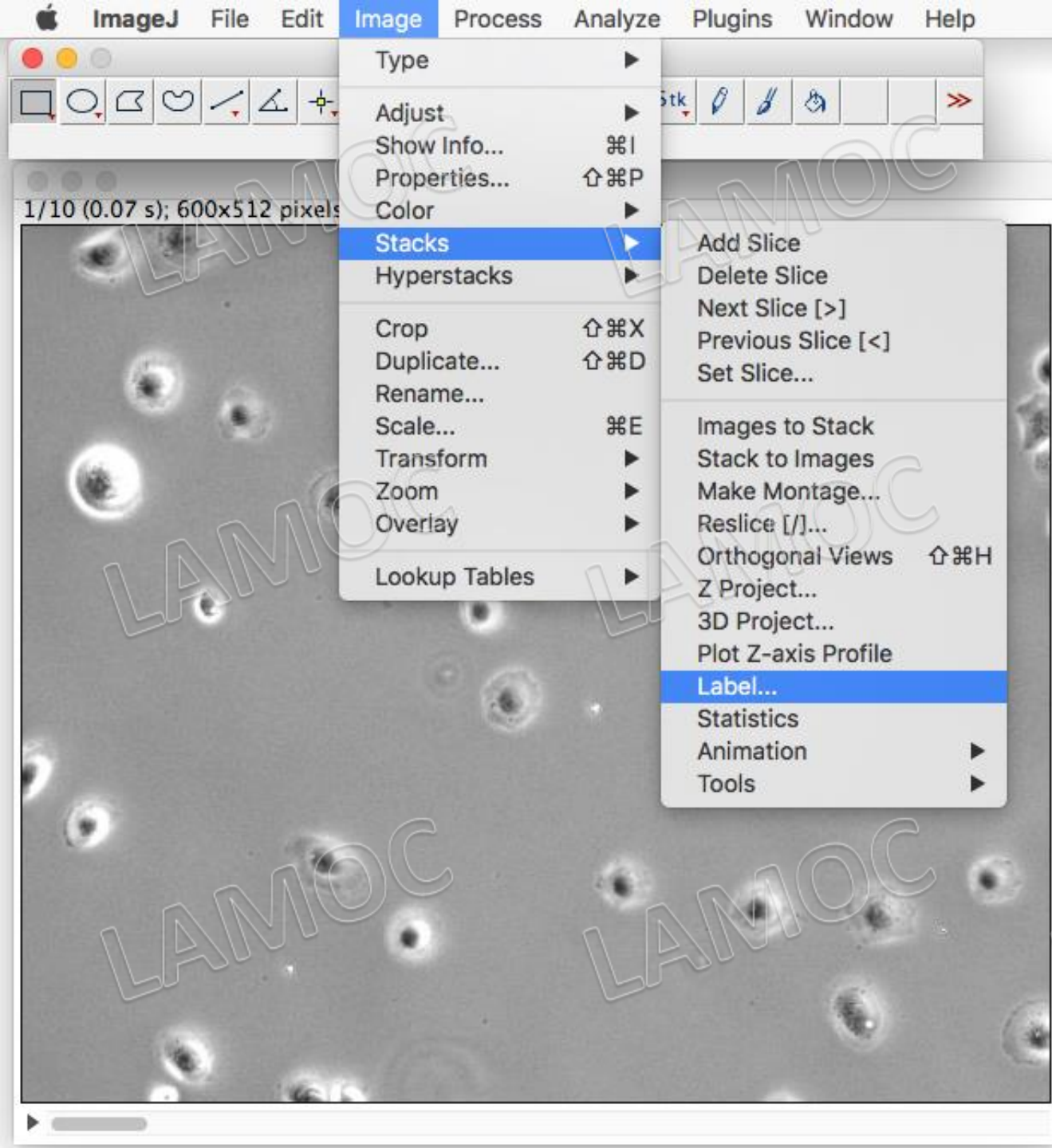
AVI... ..

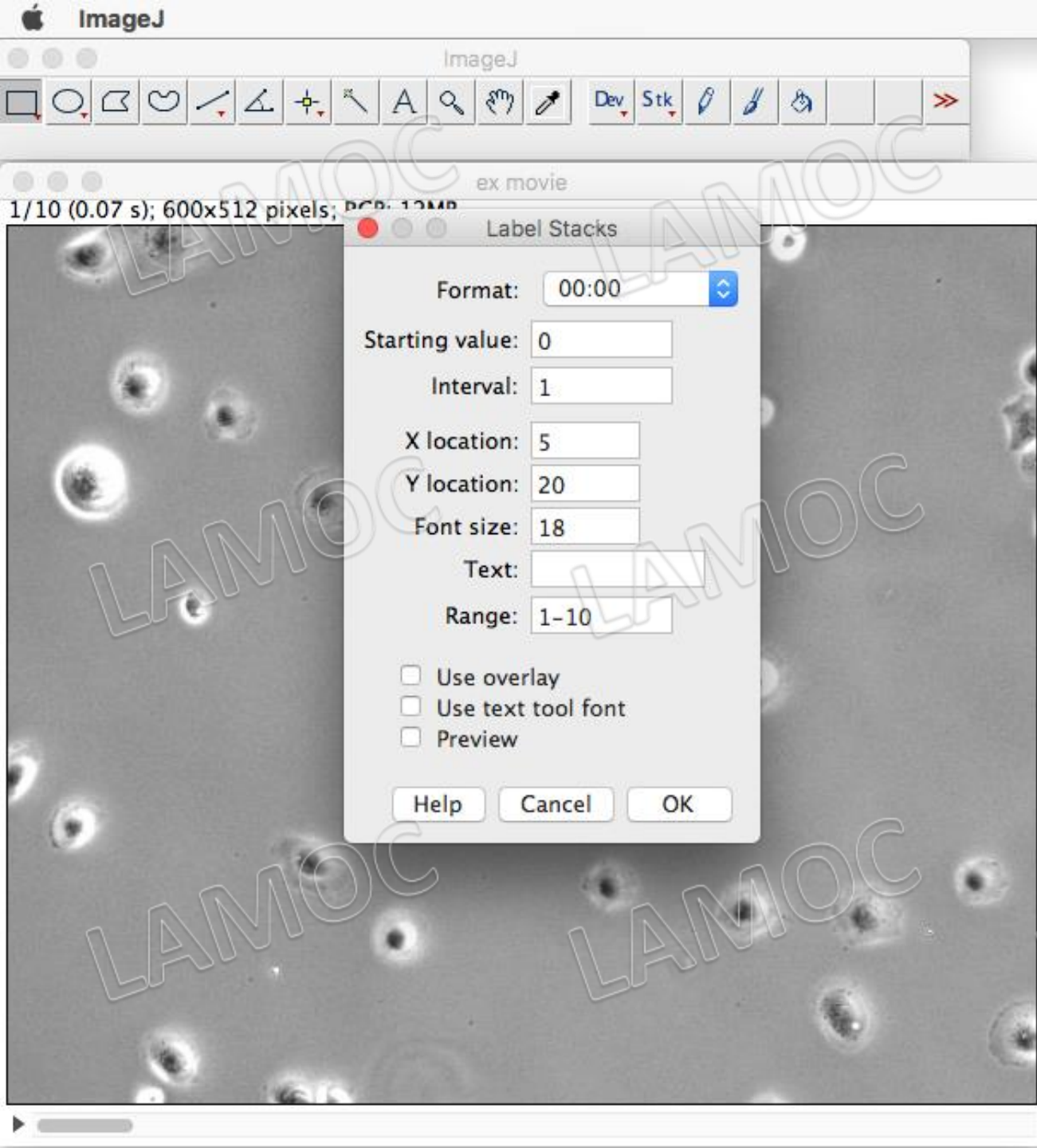
ex movie

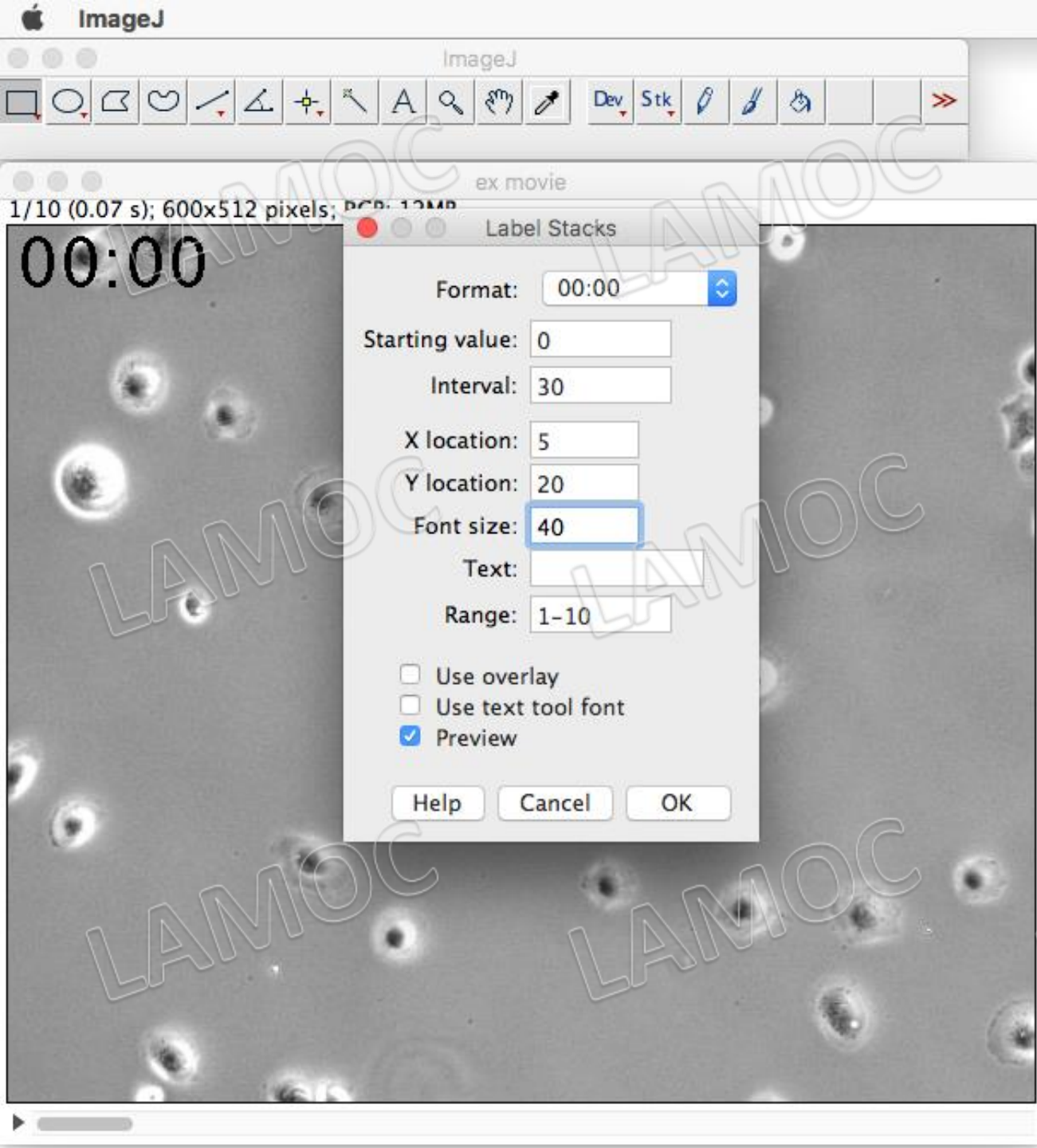
1/10 (0.07 s); 600x512 pixels; RGB; 12MB



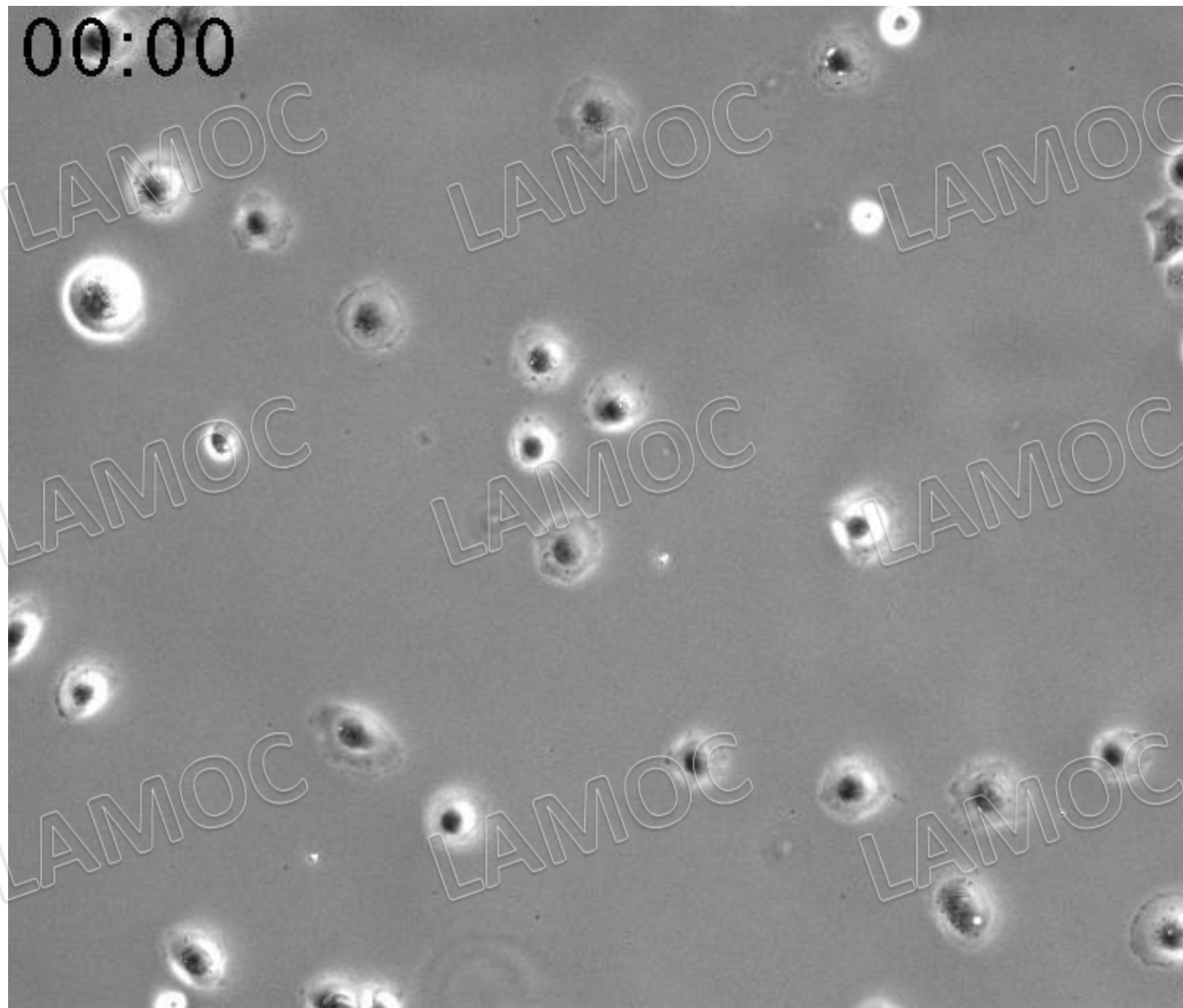








00:00

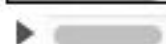
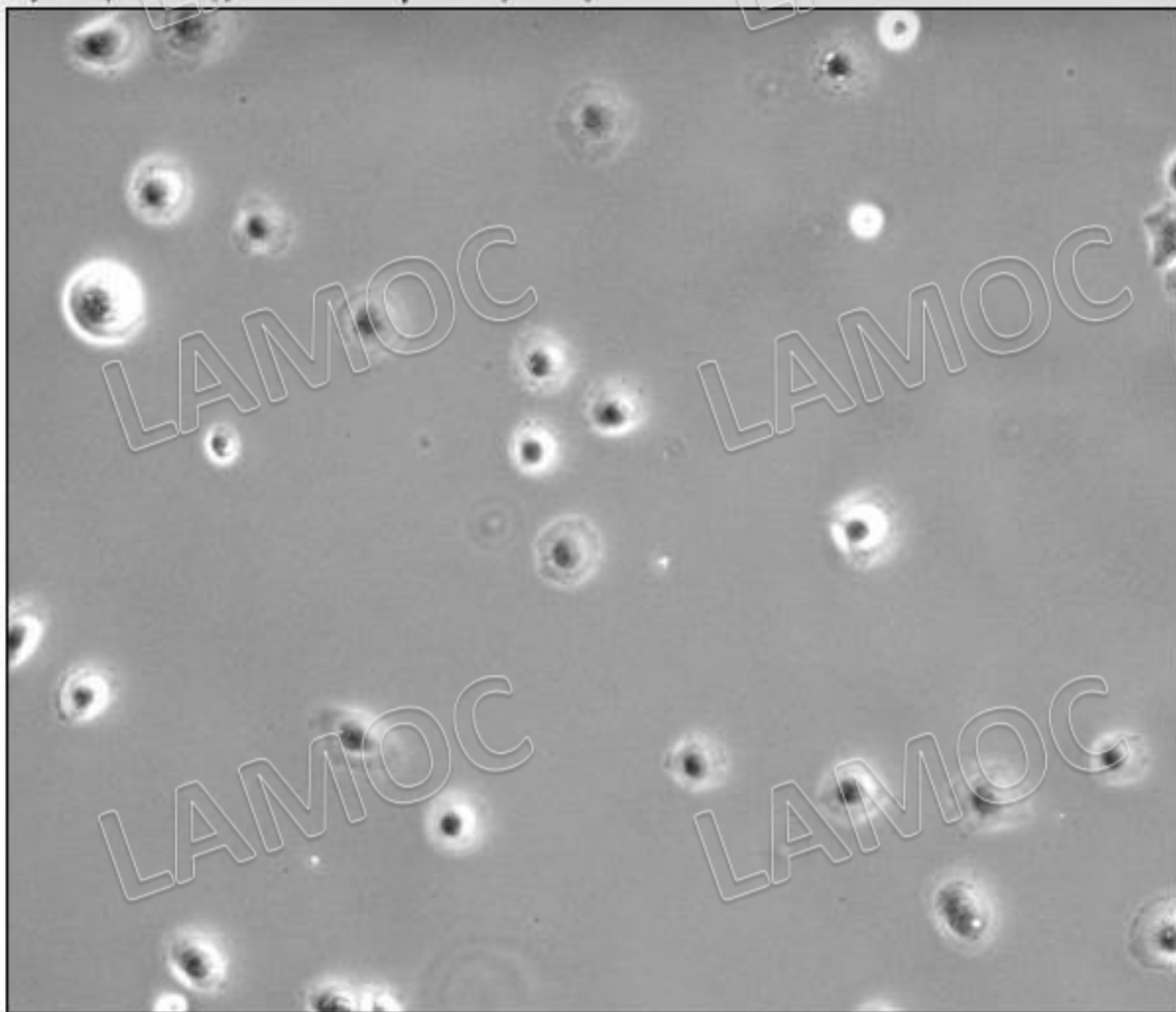


ImageJ



ex movie.avi (V) (75%)

1/10 (0.50 s); 600x512 pixels; RGB; 12MB



Tracking :

Add track	Delete last point	End track
Delete track n°		Delete all tracks

☐ Show path ?

Centring Correction:

Centring option :

☐ Use centring correction ?

Directionality :

Add reference	Delete reference	No reference set
☐ Show reference ?		☐ Use directionality ?

Drawing :

Dots	Progressive Lines	Dots & Lines
Overlay Dots	Overlay Lines	Overlay Dots & Lines

☐ Show text ?

Load Previous Track File	☒ Show parameters ?	Retrieve Z Coordinates
--------------------------	---	------------------------

Parameters :

Time Interval :	2.0	sec
x/y calibration :	0.129	µm
z calibration :	0.3	
Search square size for centring:	5.0	pixels
Dot size :	5.0	
Line width :	1.0	
Font size :	12.0	

Tracking :

Add track	Delete last point	End track
Delete track n°		Delete all tracks

☐ Show path ?

Centring Correction:

Centring option :

☐ Use centring correction ?

Directionality :

Add reference	Delete reference	No reference set
☐ Show reference ?		☐ Use directionality ?

Drawing :

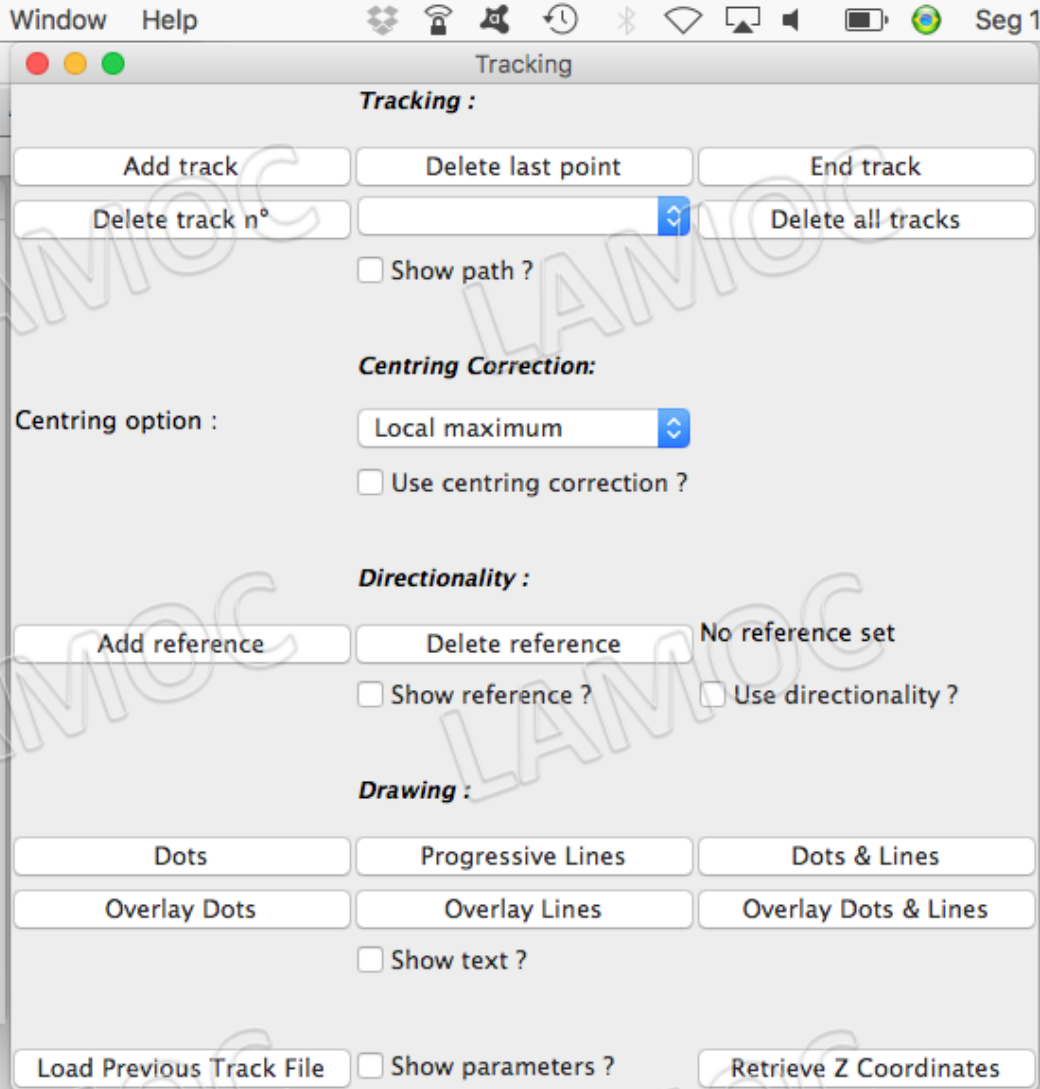
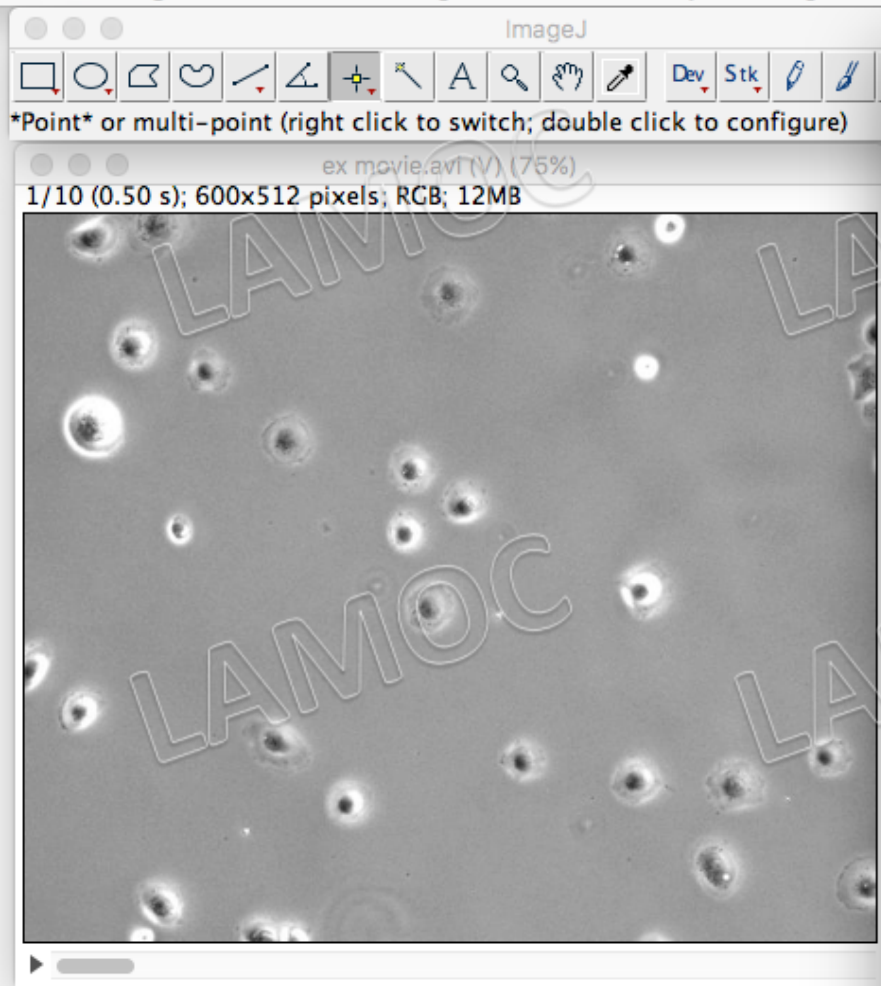
Dots	Progressive Lines	Dots & Lines
Overlay Dots	Overlay Lines	Overlay Dots & Lines

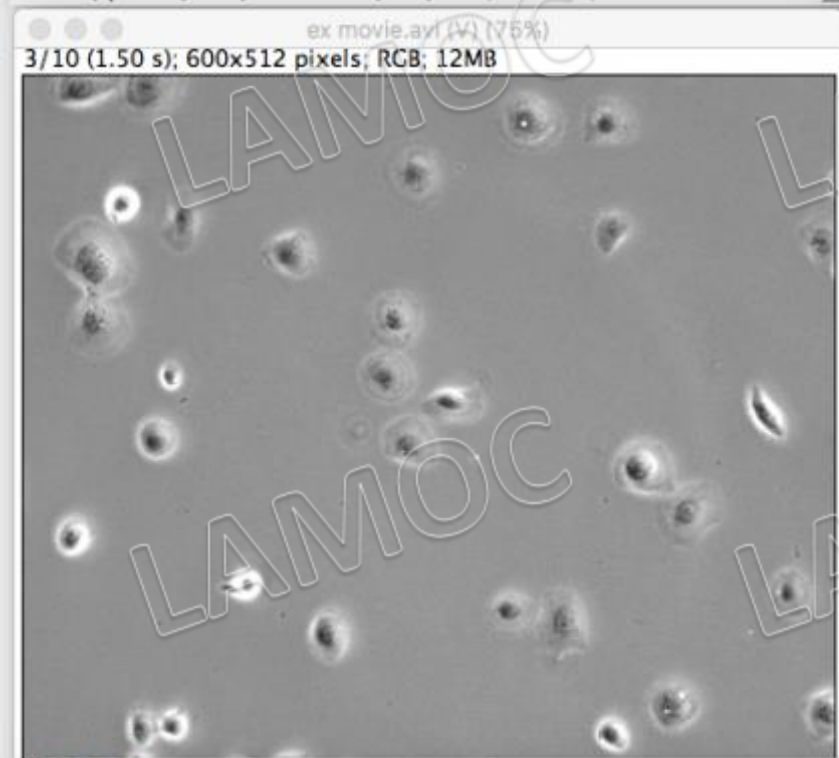
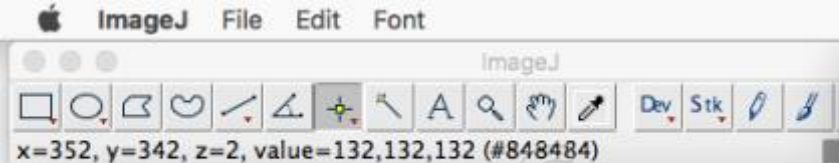
☐ Show text ?

Load Previous Track File	☒ Show parameters ?	Retrieve Z Coordinates
--------------------------	---	------------------------

Parameters :

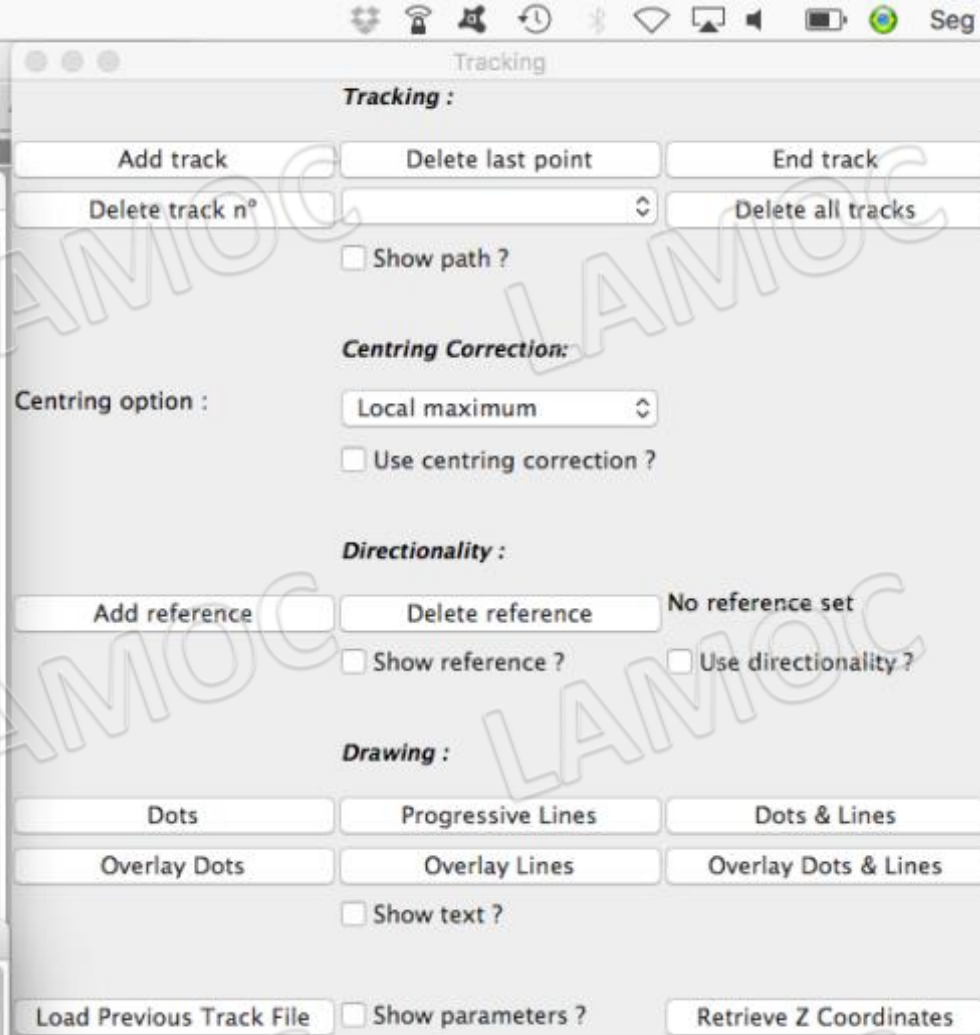
Time Interval :	30	min
x/y calibration :	1.423	µm
z calibration :	0.3	
Search square size for centring:	5.0	pixels
Dot size :	5.0	
Line width :	1.0	
Font size :	12.0	





Results from ex movie in μm per min

	Track n°	Slice n°	X	Y	Distance	Velocity	Pixel
1	1	2	596	181	-1	-1	-750



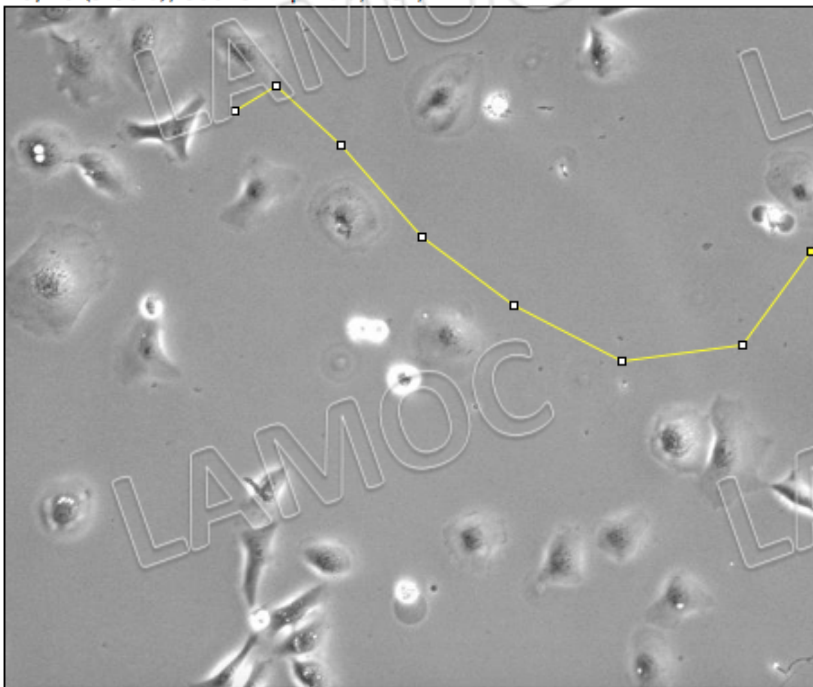
ImageJ



Tracking is over

ex movie.avi (V) (75%)

10/10 (5.00 s); 600x512 pixels; RGB; 12MB

Results from ex movie in μm per min

	Track n°	Slice n°	X	Y	Distance	Velocity	Pixel
1	1	2	596	181	-1.000	-1.000	-750
2	1	3	546	250	121.256	4.042	-125
3	1	4	456	262	129.203	4.307	-121
4	1	5	377	221	126.655	4.222	-114
5	1	6	309	170	120.955	4.032	-104
6	1	7	249	102	129.047	4.302	-130
7	1	8	200	58	93.713	3.124	-921
8	1	9	170	76	49.785	1.659	-110
9	1	10	125	88	66.273	2.209	-107

Tracking

Tracking :

Add track

Delete last point

End track

Delete track n°

1

Delete all tracks

☒ Show path ?

Centring Correction:

Centring option :

Local maximum

☐ Use centring correction ?

Directionality :

Add reference

Delete reference

No reference set

☐ Show reference ?☐ Use directionality ?

Drawing :

Dots

Progressive Lines

Dots & Lines

Overlay Dots

Overlay Lines

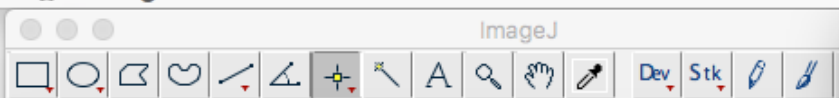
Overlay Dots & Lines

☐ Show text ?

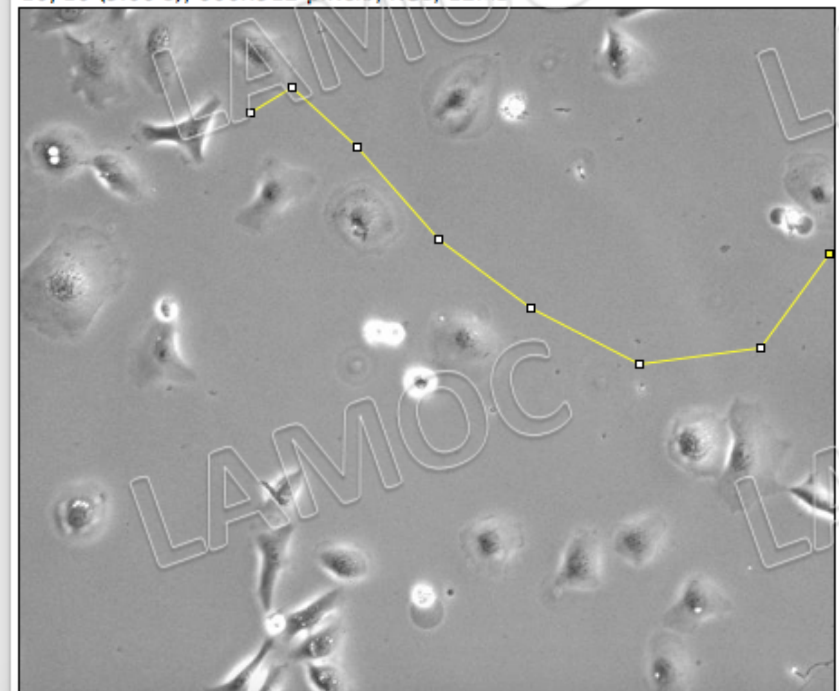
Load Previous Track File

☐ Show parameters ?

Retrieve Z Coordinates



ex movie.avi (V) (75%)
10/10 (5.00 s); 600x512 pixels; RGB; 12MB



Results from ex movie in μm per min

	Track n°	Slice n°	X	Y	Distance	Velocity	Pixel
1	1	2	596	181	-1.000	-1.000	-750
2	1	3	546	250	121.256	4.042	-125
3	1	4	456	262	129.203	4.307	-121
4	1	5	377	221	126.655	4.222	-114
5	1	6	309	170	120.955	4.032	-104
6	1	7	249	102	129.047	4.302	-130
7	1	8	200	58	93.713	3.124	-921
8	1	9	170	76	49.785	1.659	-110
9	1	10	125	88	66.273	2.209	-107

Tracking :

Add track Delete last point End track

Delete track n° 1 Delete all tracks

☒ Show path ?

Centring Correction:

Centring option : Local maximum

☐ Use centring correction ?

Directionality :

Add reference Delete reference No reference set

☐ Show reference ? ☐ Use directionality ?

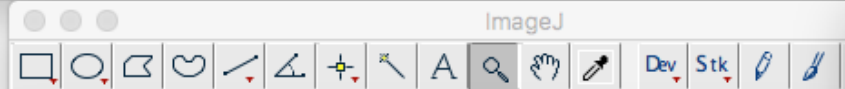
Drawing :

Dots Progressive Lines Dots & Lines

Overlay Dots Overlay Lines Overlay Dots & Lines

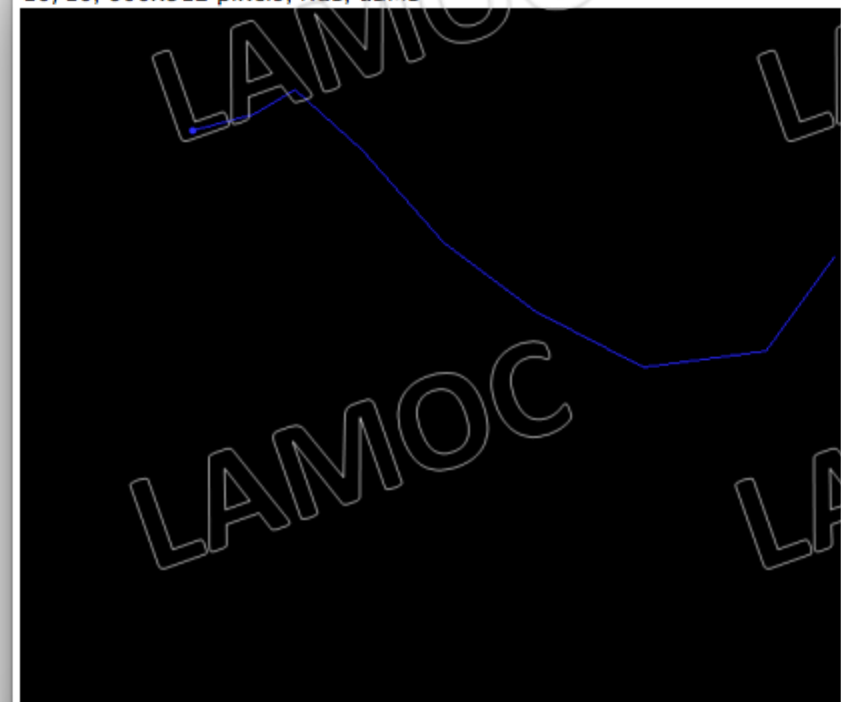
☐ Show text ?

Load Previous Track File ☐ Show parameters ? Retrieve Z Coordinates



Dots & Lines ex movie (75%)

10/10; 600x512 pixels; RGB; 12MB



	Track n°	Slice n°	X	Y	Distance	velocity	Pixel
1	1	2	596	181	-1.000	-1.000	-750
2	1	3	546	250	121.256	4.042	-125
3	1	4	456	262	129.203	4.307	-121
4	1	5	377	221	126.655	4.222	-114
5	1	6	309	170	120.955	4.032	-104
6	1	7	249	102	129.047	4.302	-130
7	1	8	200	58	93.713	3.124	-921
8	1	9	170	76	49.785	1.659	-110
9	1	10	125	88	66.273	2.209	-107

Tracking

Tracking :

Add track

Delete last point

End track

Delete track n°

1

Delete all tracks

☒ Show path ?**Centring Correction:**

Centring option :

Local maximum

☐ Use centring correction ?**Directionality :**

Add reference

Delete reference

No reference set

☐ Show reference ?☐ Use directionality ?**Drawing :**

Dots

Progressive Lines

Dots & Lines

Overlay Dots

Overlay Lines

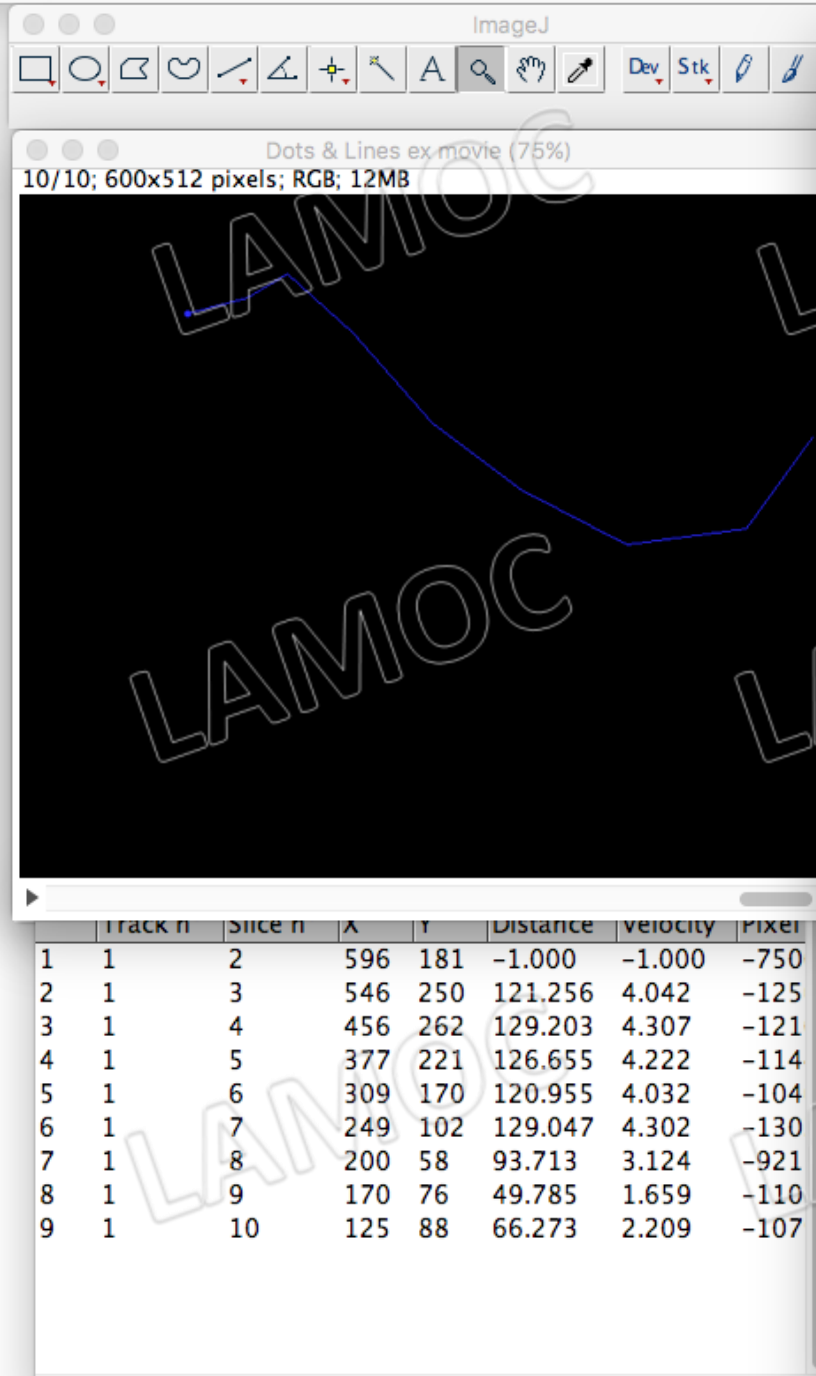
Overlay Dots & Lines

☐ Show text ?

Load Previous Track File

☐ Show parameters ?

Retrieve Z Coordinates



Tracking

Tracking :

Add track Delete last point End track

Delete track n° 1 Delete all tracks

☒ Show path ?

Centring Correction:

Centring option : Local maximum

☐ Use centring correction ?

Directionality :

Add reference Delete reference No reference set

☐ Show reference ? ☐ Use directionality ?

Drawing :

Dots Progressive Lines Dots & Lines

Overlay Dots Overlay Lines Overlay Dots & Lines

☐ Show text ?

Load Previous Track File ☒ Show parameters ? Retrieve Z Coordinates

Parameters :

Time Interval : 30 min

x/y calibration : 1.423 μm

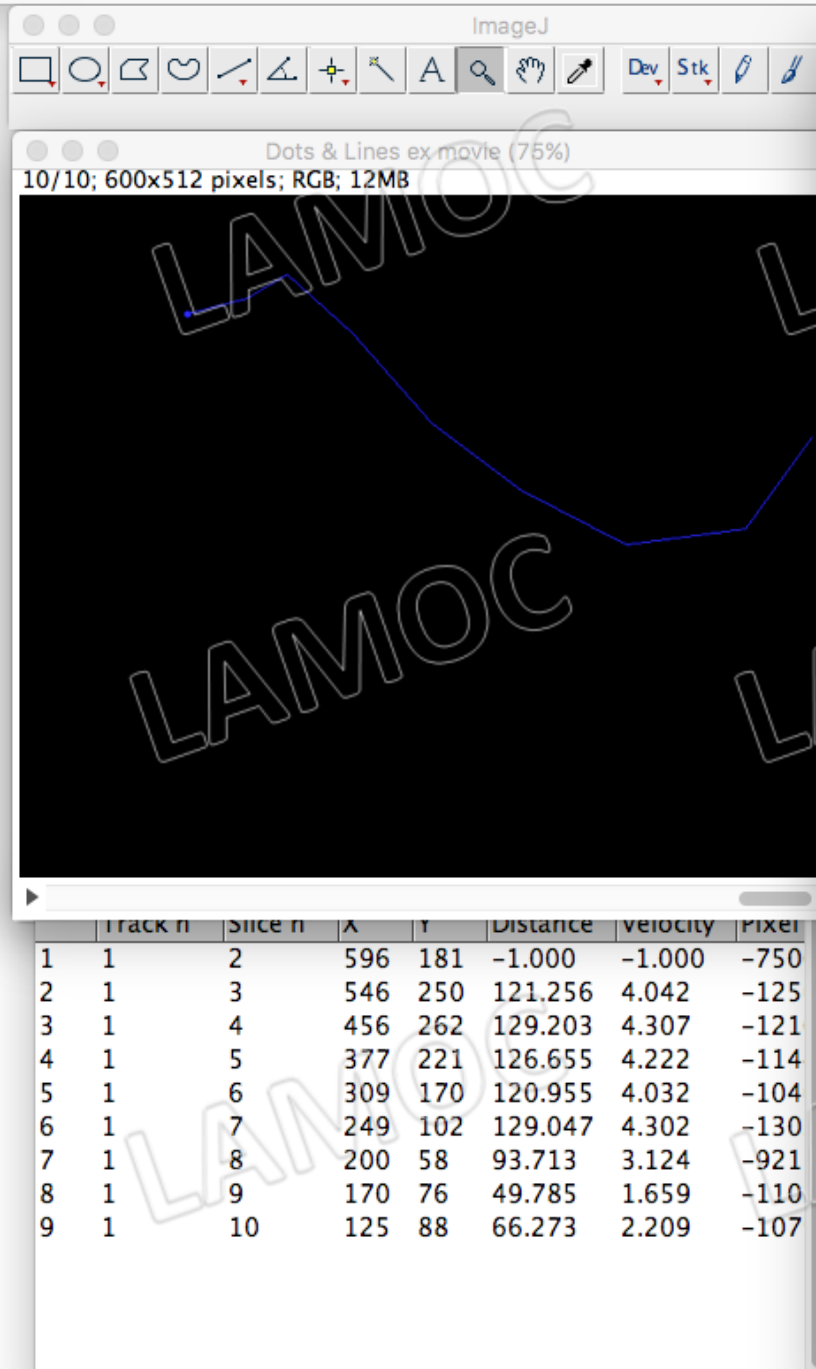
z calibration : 0.3

Search square size for centring: 5.0 pixels

Dot size : 5.0

Line width : 1.0

Font size : 12.0



Tracking

Tracking :

Add track Delete last point End track

Delete track n° 1 Delete all tracks

☒ Show path ?

Centring Correction:

Centring option : Local maximum

☐ Use centring correction ?

Directionality :

Add reference Delete reference No reference set

☐ Show reference ? ☐ Use directionality ?

Drawing :

Dots Progressive Lines Dots & Lines

Overlay Dots Overlay Lines Overlay Dots & Lines

☒ Show text ?

Load Previous Track File ☒ Show parameters ? Retrieve Z Coordinates

Parameters :

Time Interval : 30 min

x/y calibration : 1.423 μm

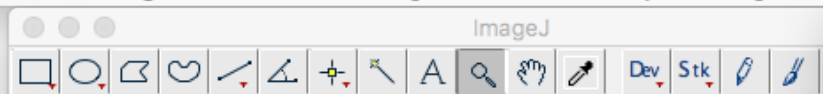
z calibration : 0.3

Search square size for centring: 5.0 pixels

Dot size : 10

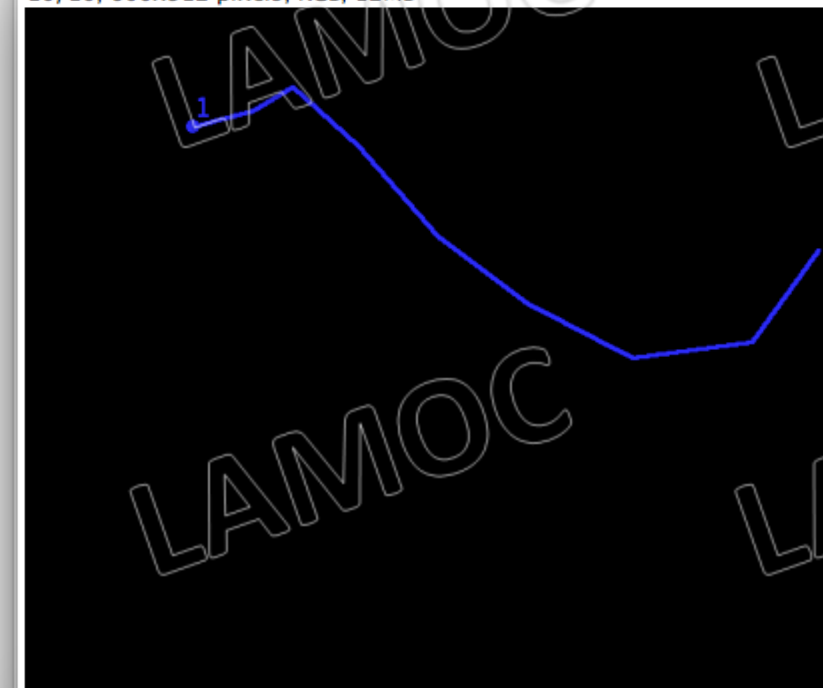
Line width : 3

Font size : 20



Dots & Lines ex movie (75%)

10/10; 600x512 pixels; RGB; 12MB



	Track n°	Slice n°	X	Y	Distance	Velocity	Pixel
1	1	2	596	181	-1.000	-1.000	-750
2	1	3	546	250	121.256	4.042	-125
3	1	4	456	262	129.203	4.307	-121
4	1	5	377	221	126.655	4.222	-114
5	1	6	309	170	120.955	4.032	-104
6	1	7	249	102	129.047	4.302	-130
7	1	8	200	58	93.713	3.124	-921
8	1	9	170	76	49.785	1.659	-110
9	1	10	125	88	66.273	2.209	-107

Tracking :

Add track	Delete last point	End track
Delete track n°	1	Delete all tracks
☒ Show path ?		

Centring Correction:

Centring option : Local maximum

☐ Use centring correction ?

Directionality :

Add reference	Delete reference	No reference set
☐ Show reference ?		☐ Use directionality ?

Drawing :

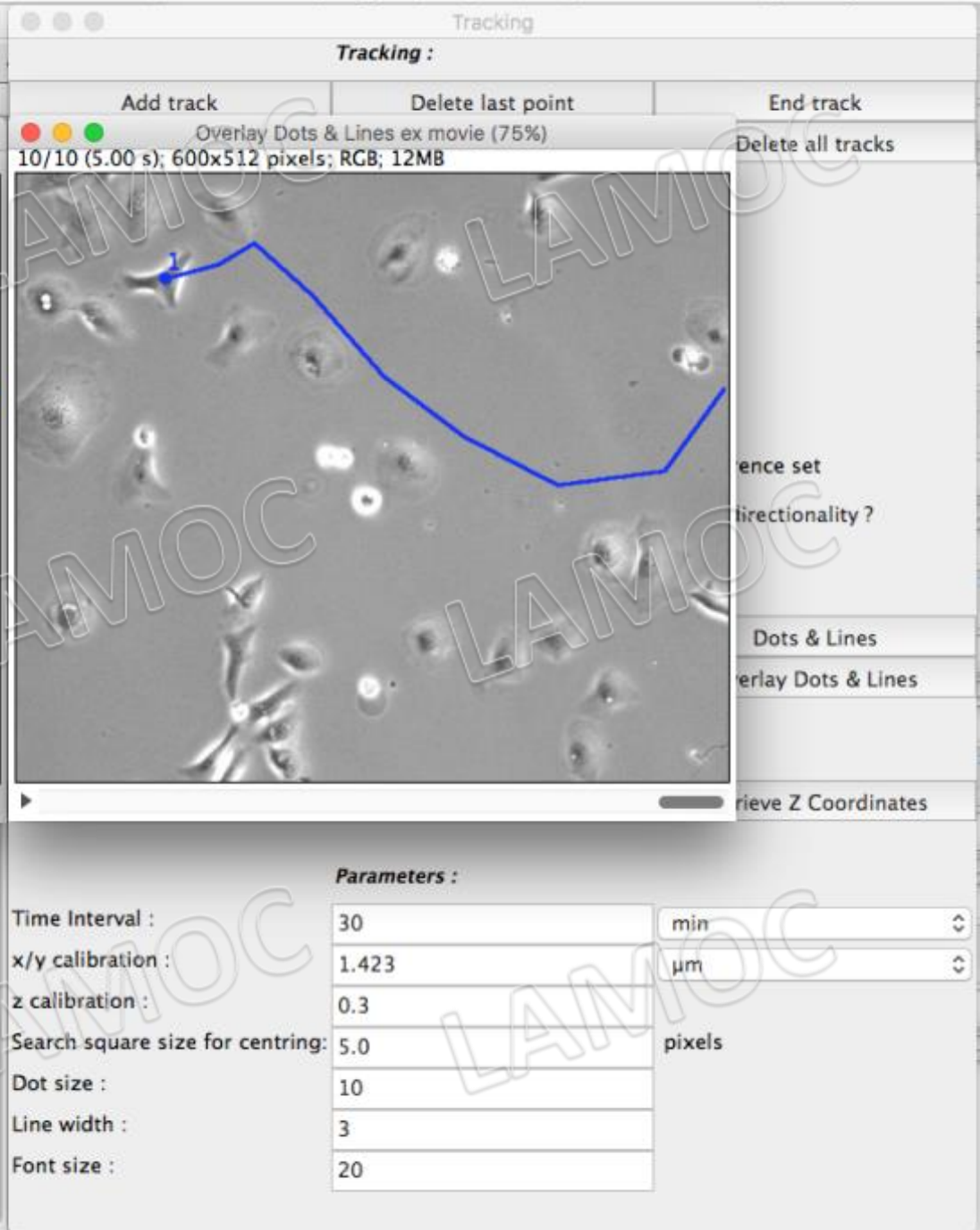
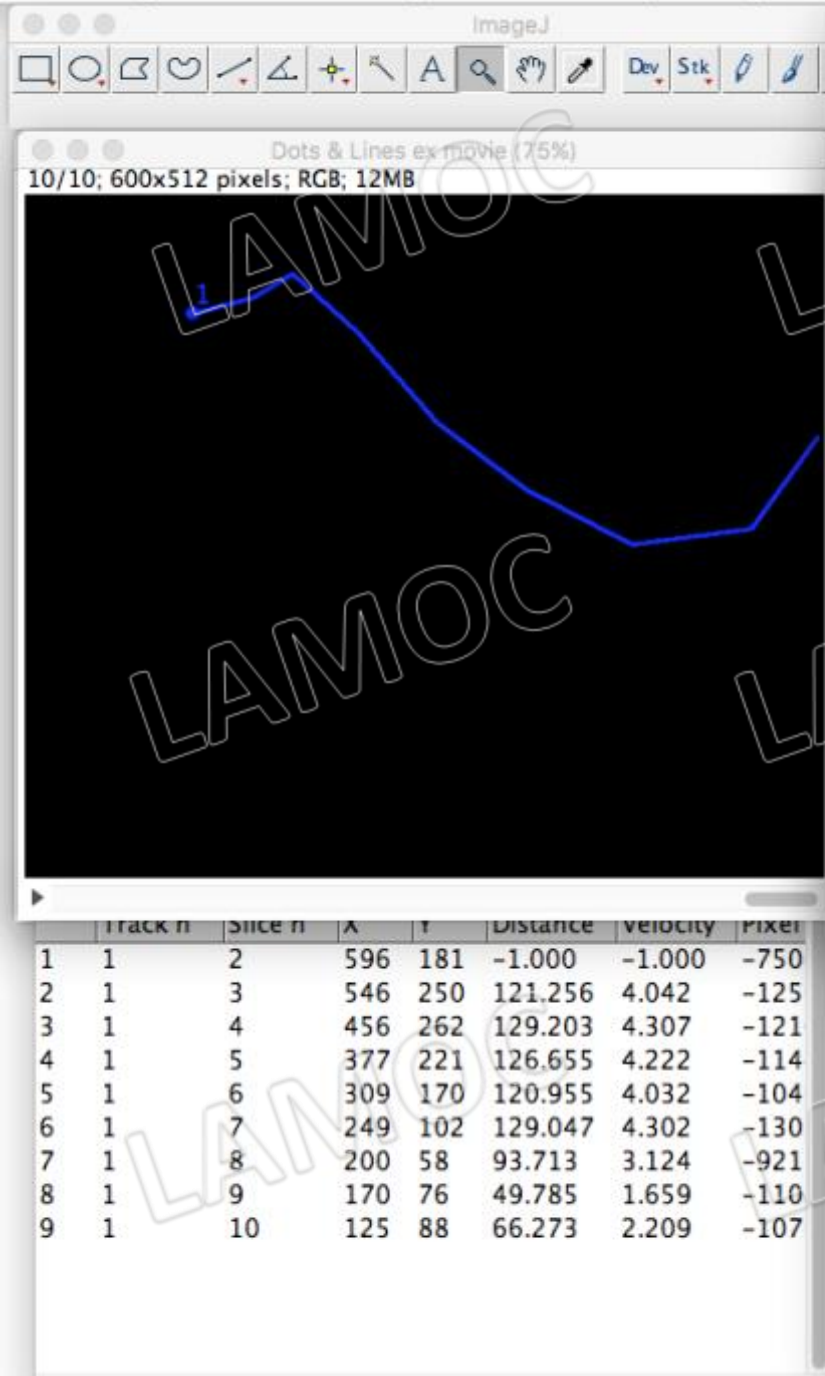
Dots	Progressive Lines	Dots & Lines
Overlay Dots	Overlay Lines	Overlay Dots & Lines

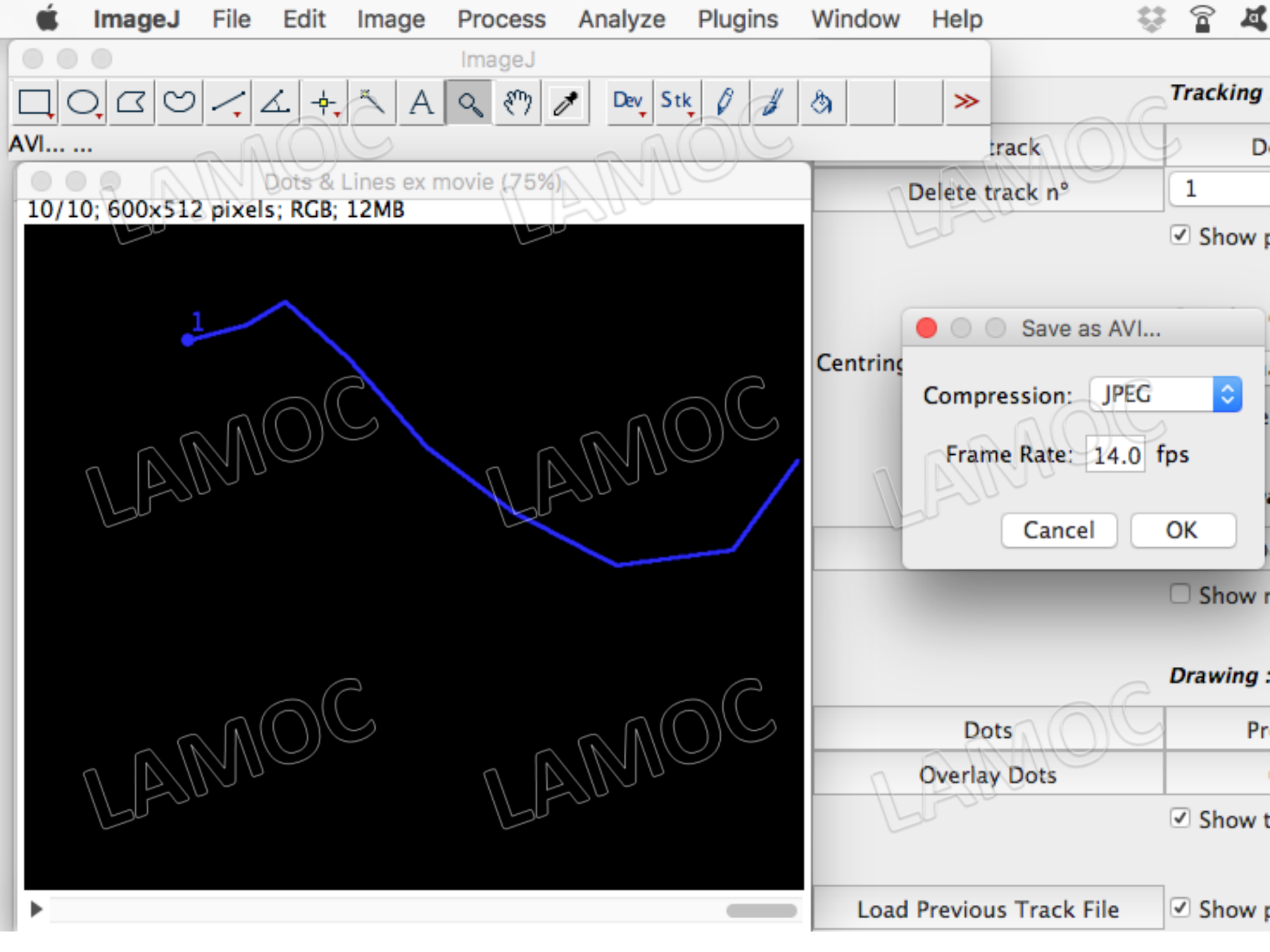
☒ Show text ?

Load Previous Track File ☒ Show parameters ? Retrieve Z Coordinates

Parameters :

Time Interval :	30	min
x/y calibration :	1.423	µm
z calibration :	0.3	
Search square size for centring:	5.0	pixels
Dot size :	10	
Line width :	3	
Font size :	20	





LAMOC

LAMOC

LAMOC

LAMOC

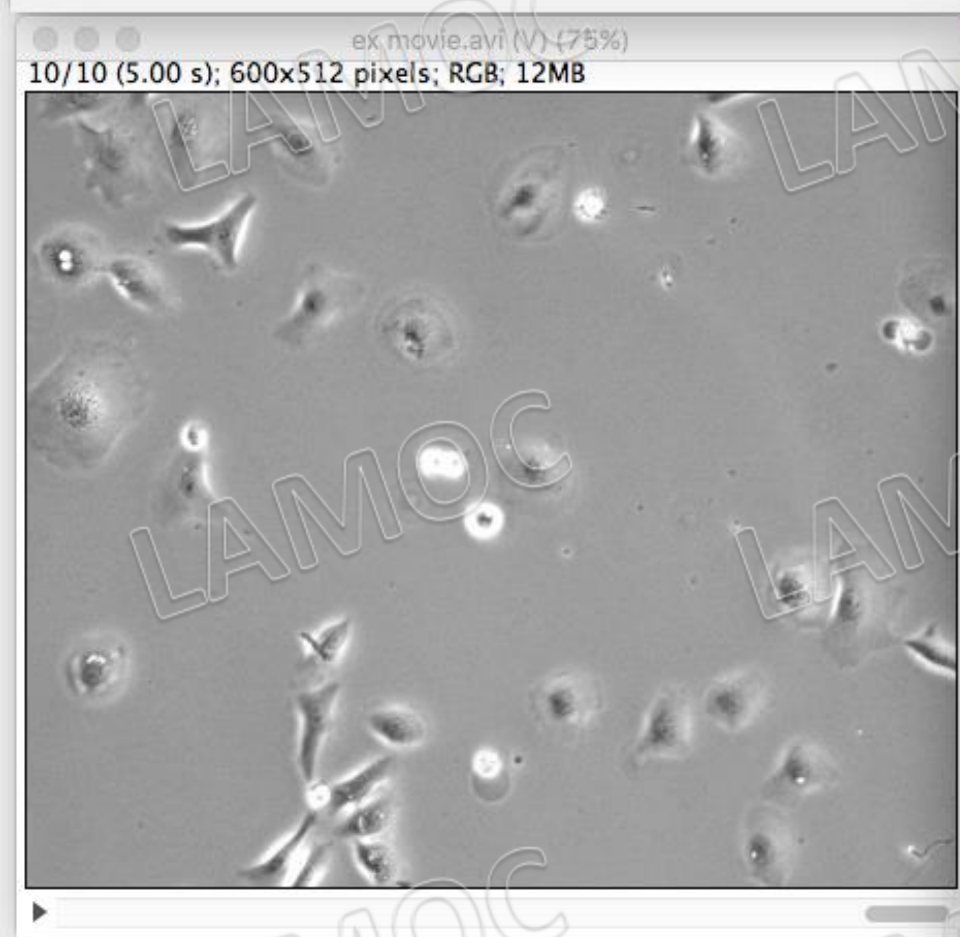
LAMOC

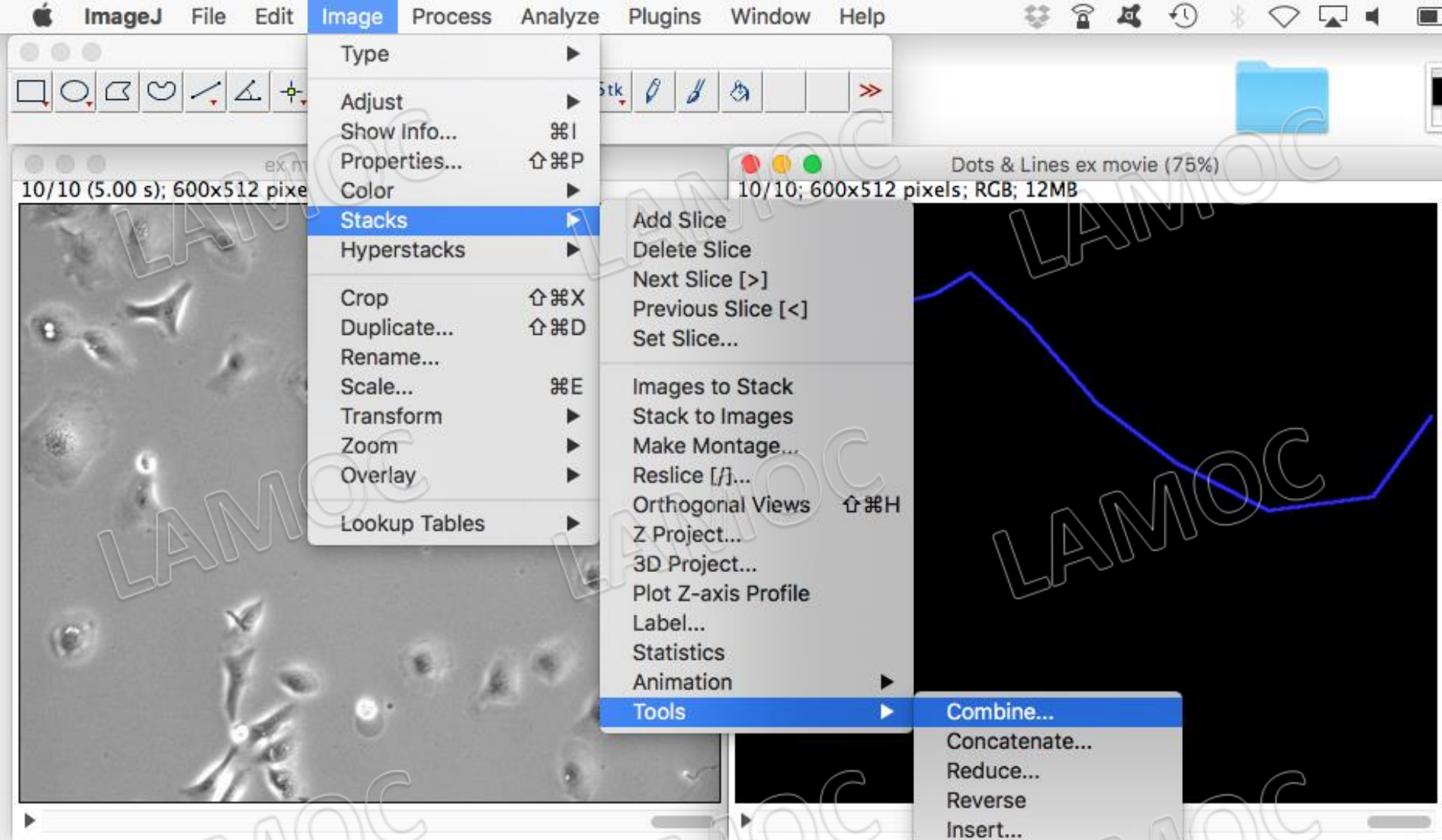
LAMOC

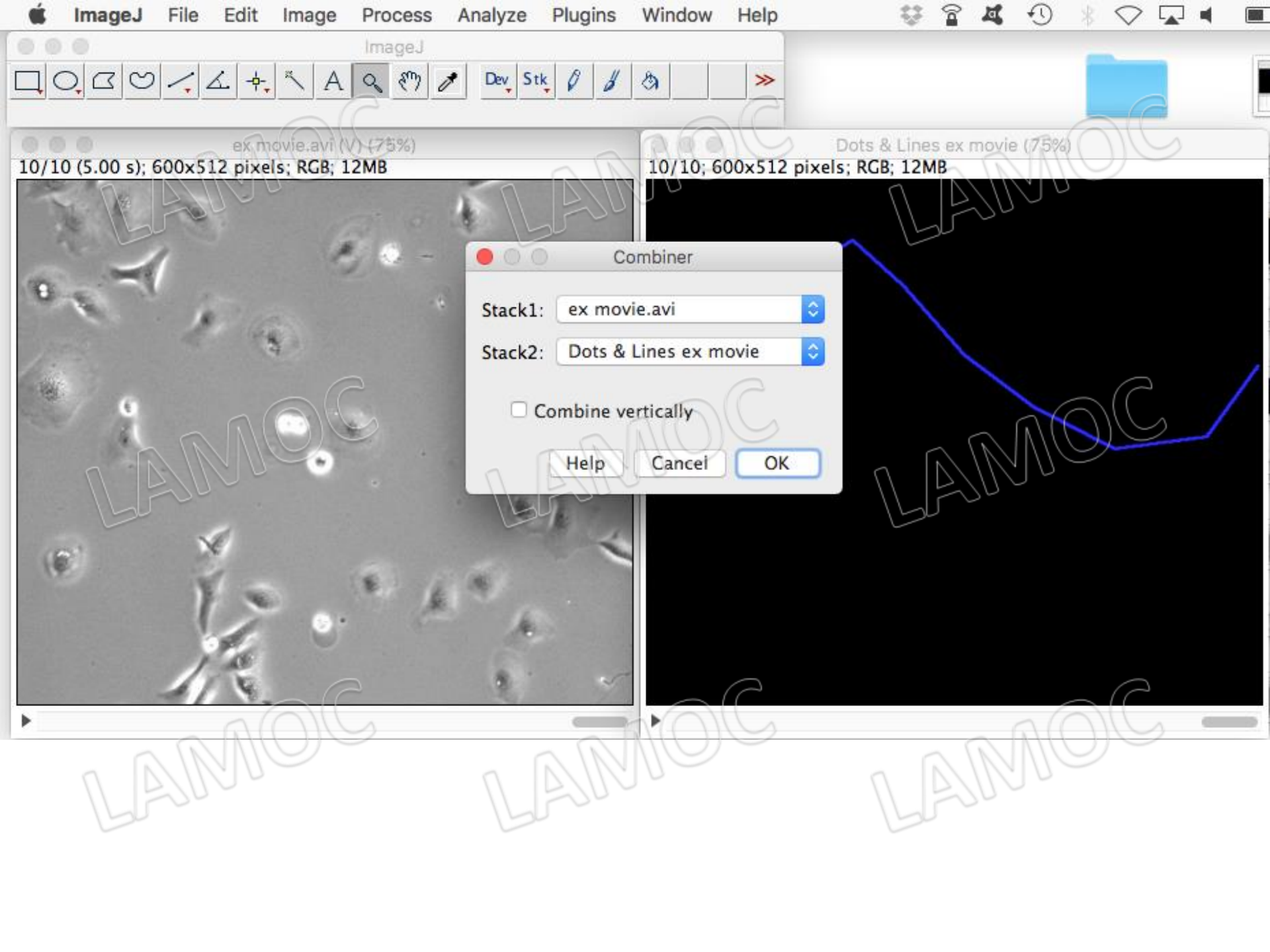
LAMOC

LAMOC

LAMOC







ImageJ

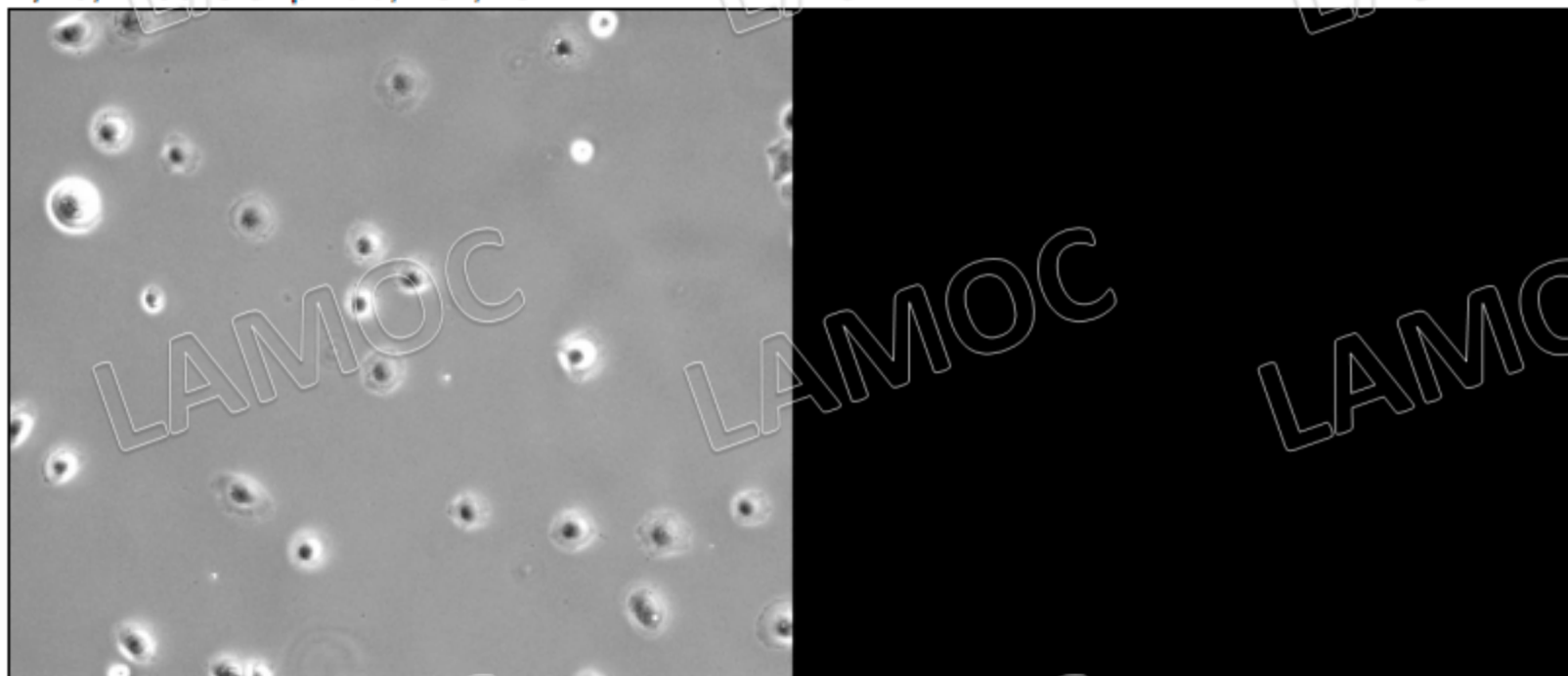


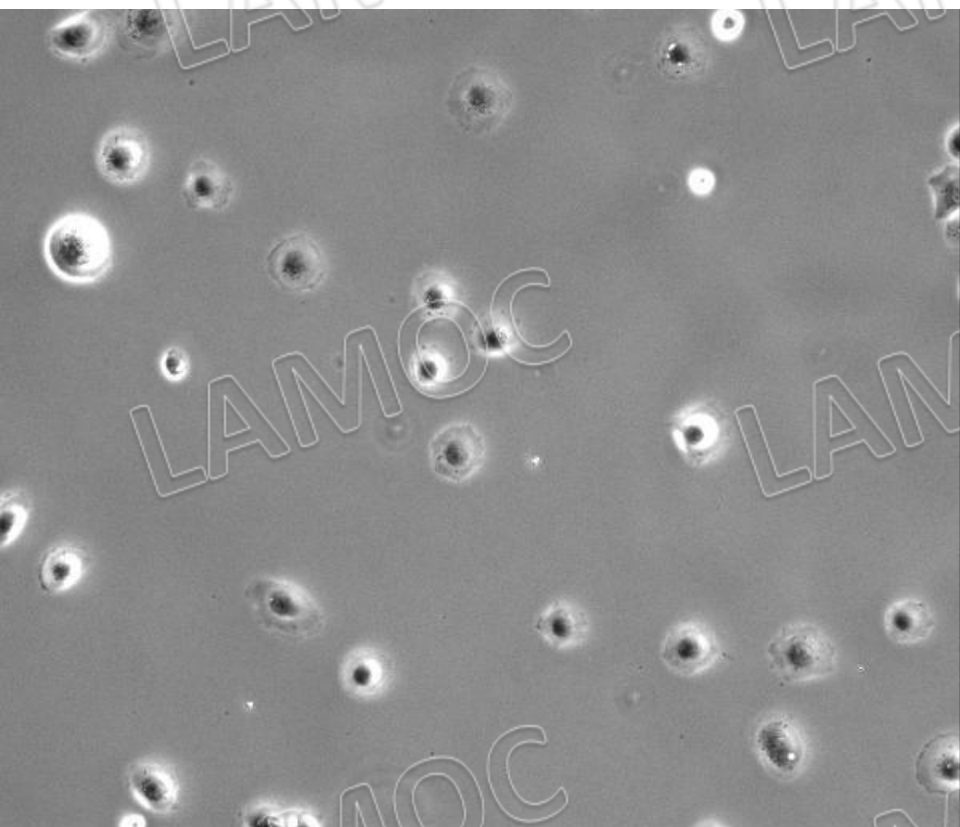
x=936, y=160, z=0, value=000,000,000 (black)

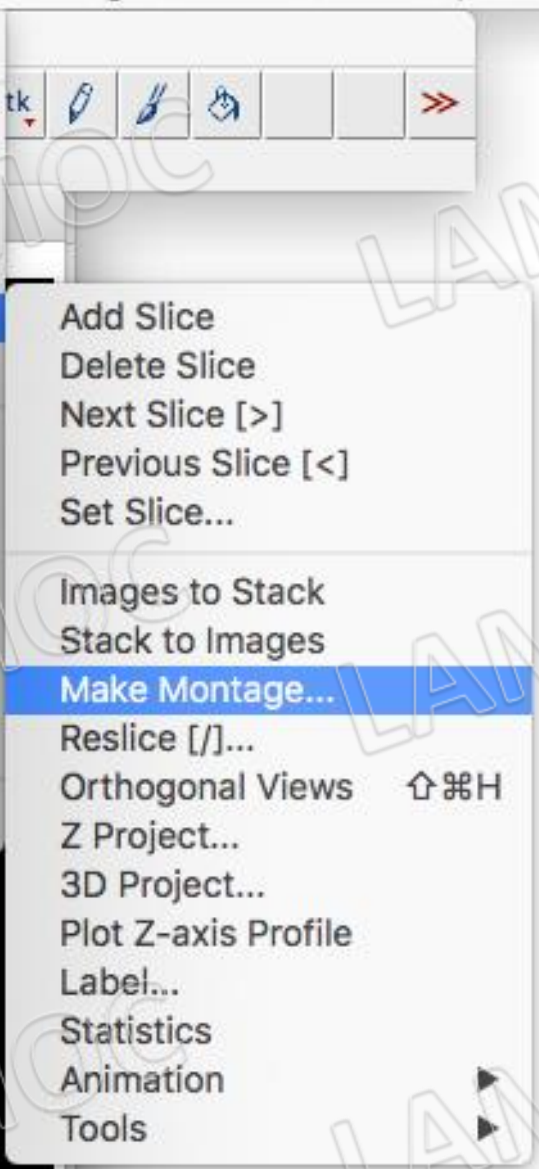


Combined Stacks (50%)

1/10; 1200x512 pixels; RGB; 23MB





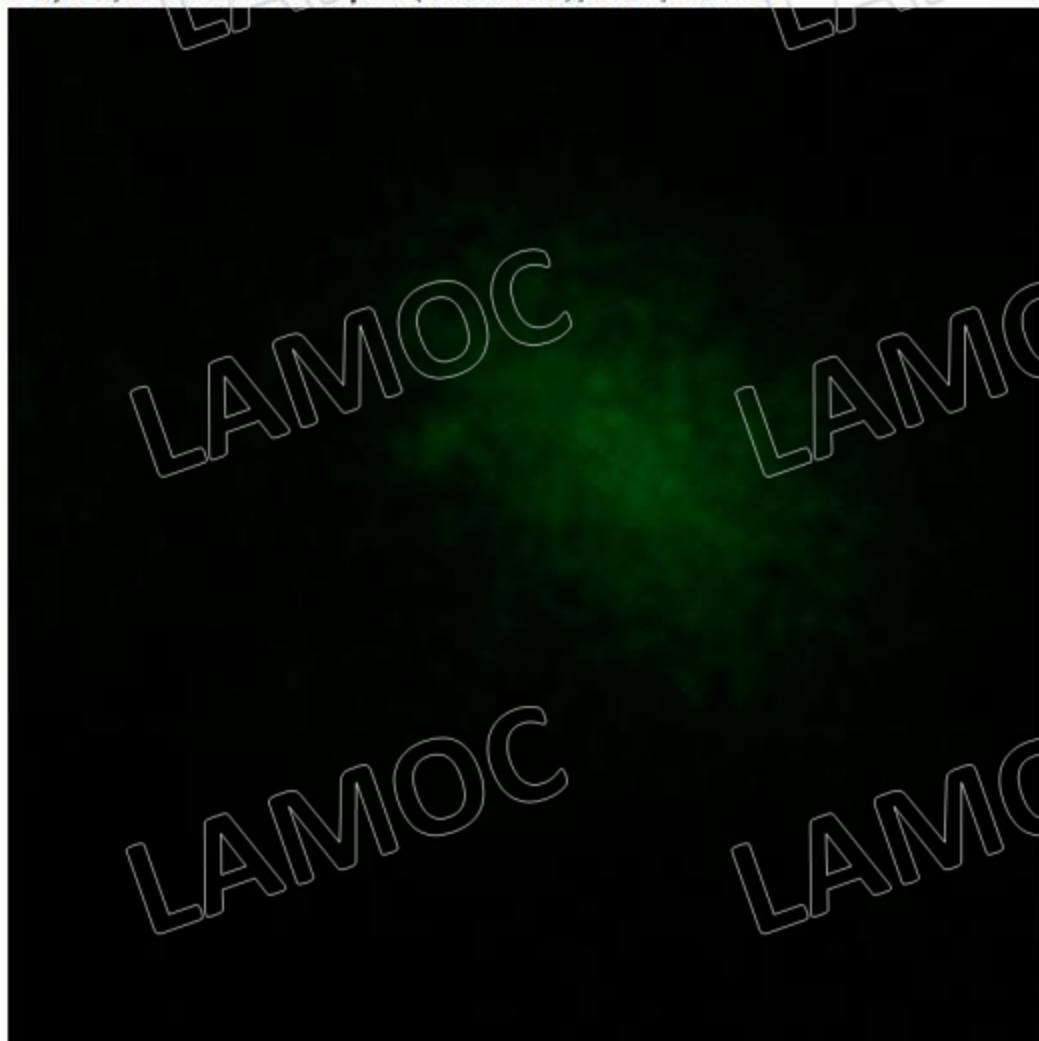




x=69, y=13, z=24, value=000,000,000 (black)

C2-06 confocal-series.tif

25/25; 21.78x21.78 μ m (400x400); RGB; 15MB



Make Montage

Columns: 5

Rows: 5

Scale Factor: 0.25

First Slice: 1

Last Slice: 25

Increment: 1

Border Width: 0

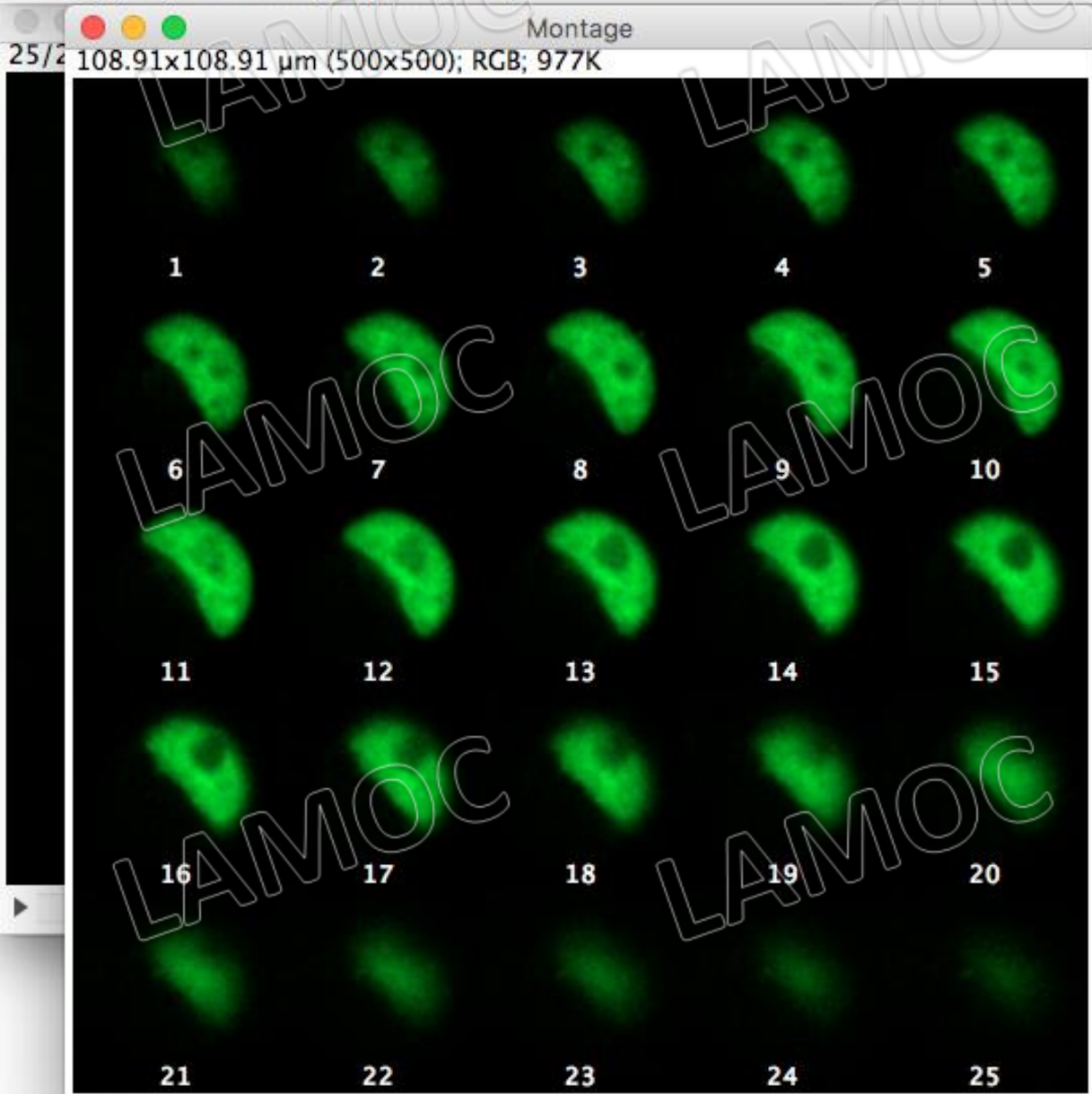
Font Size: 12

☐ Label Slices

☐ Use Foreground Color

Cancel

OK

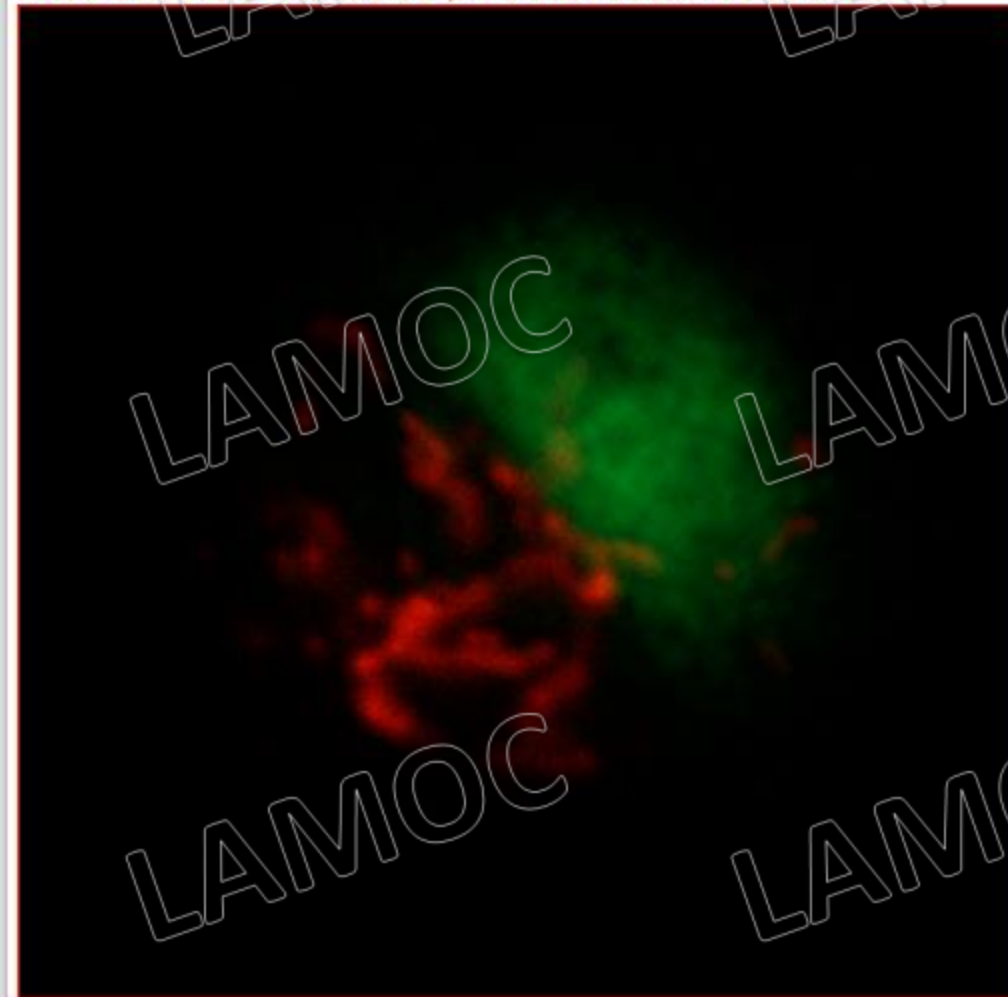




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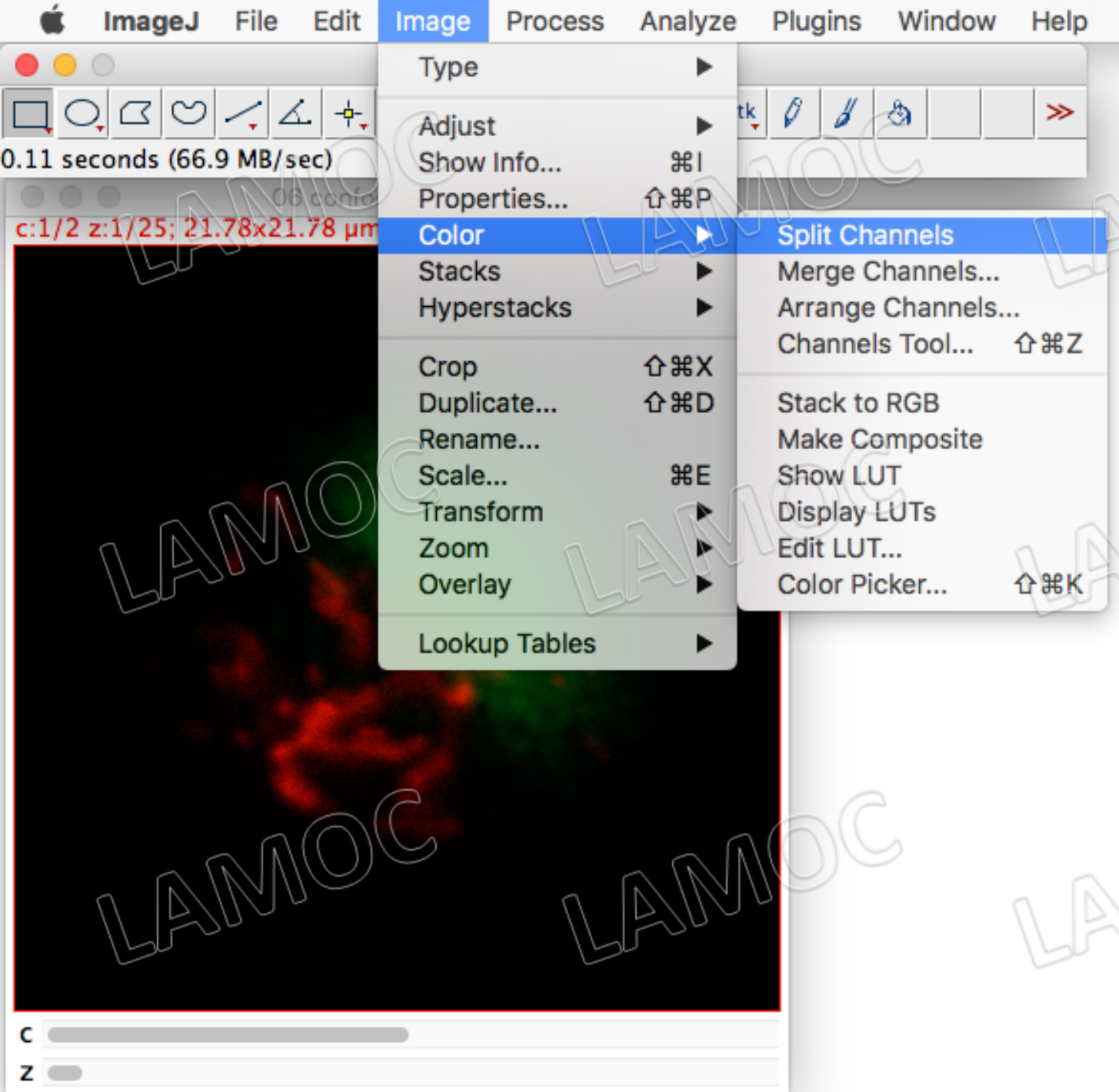
06 confocal-series.tif

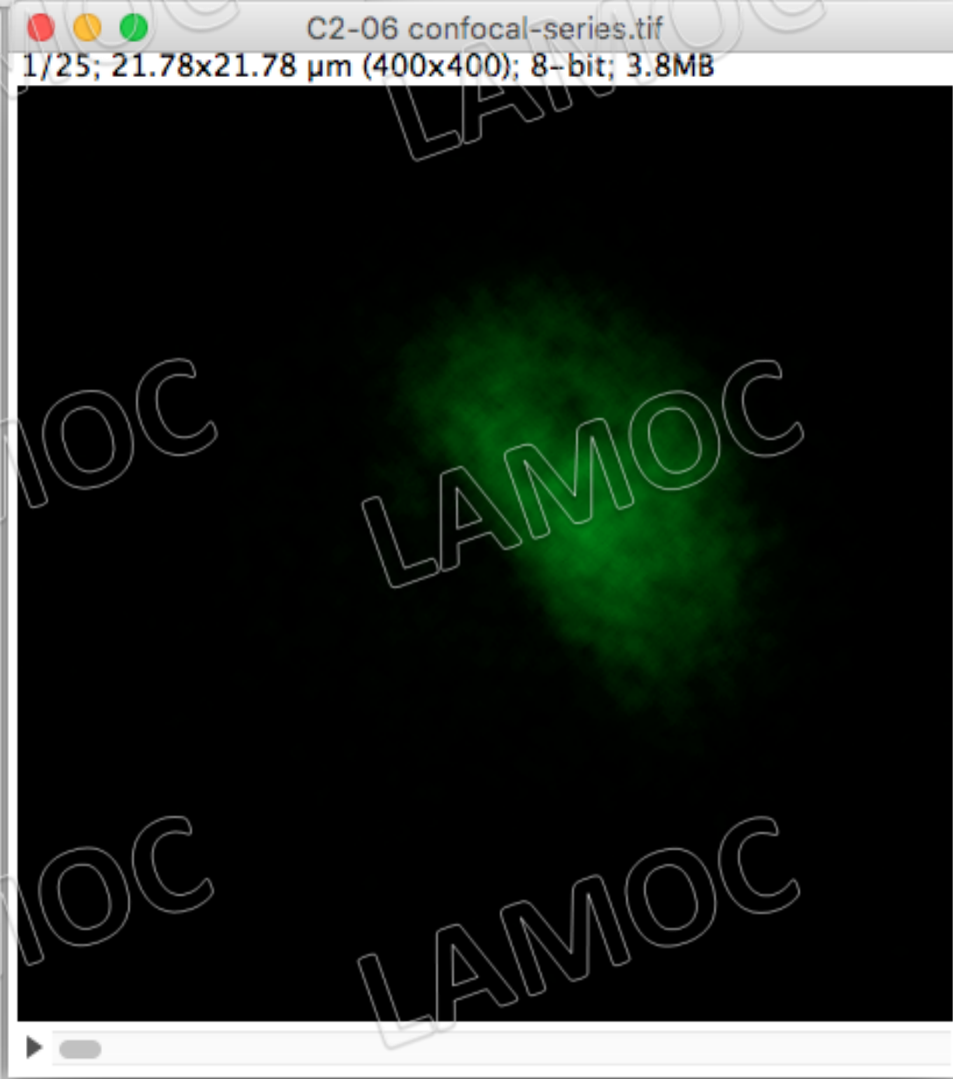
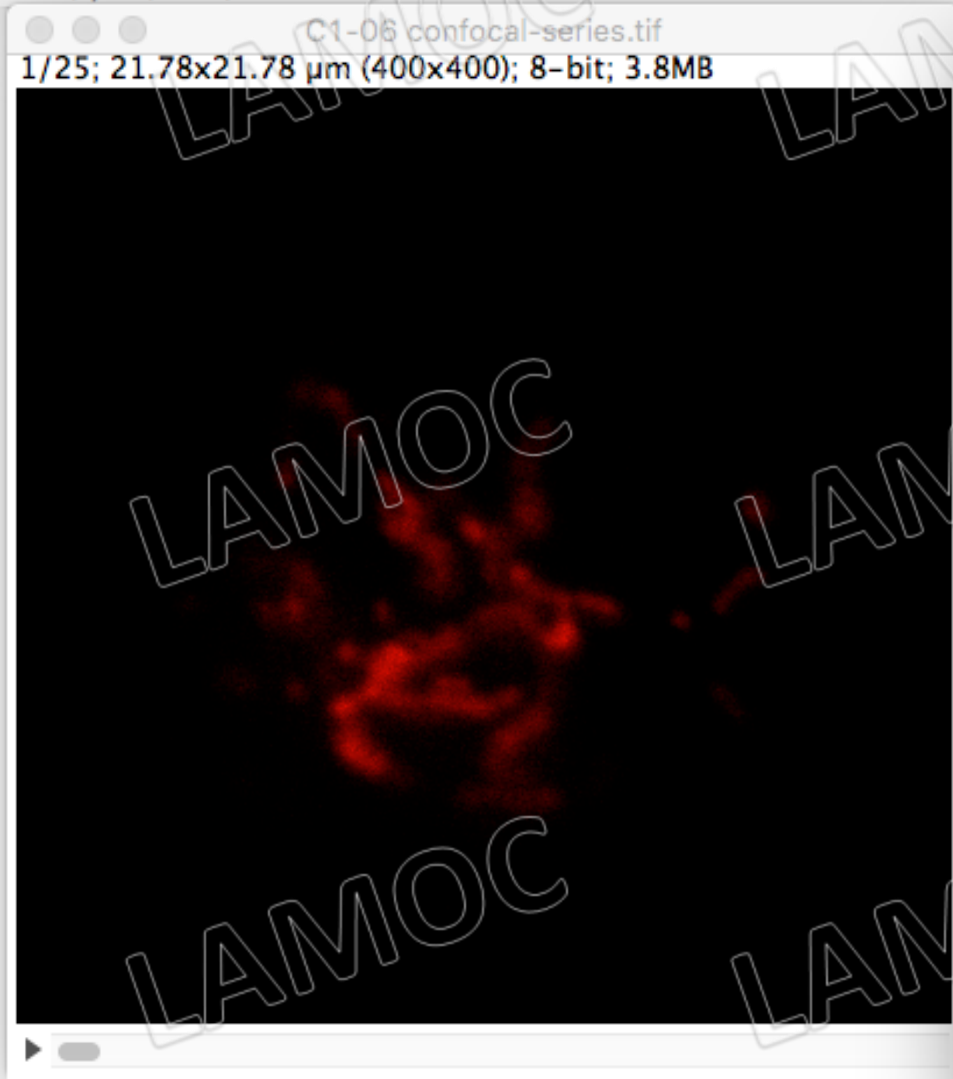
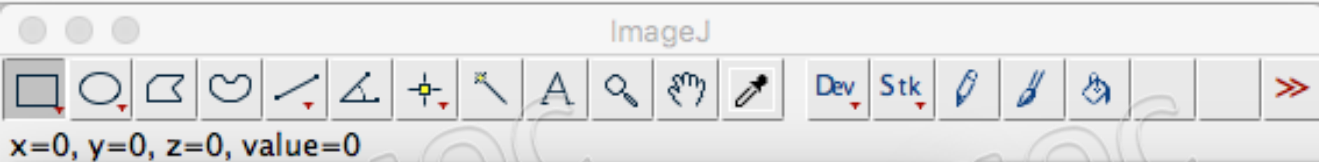
c:1/2 z:1/25; 21.78x21.78 μm (400x400); 8-bit; 7.6MB

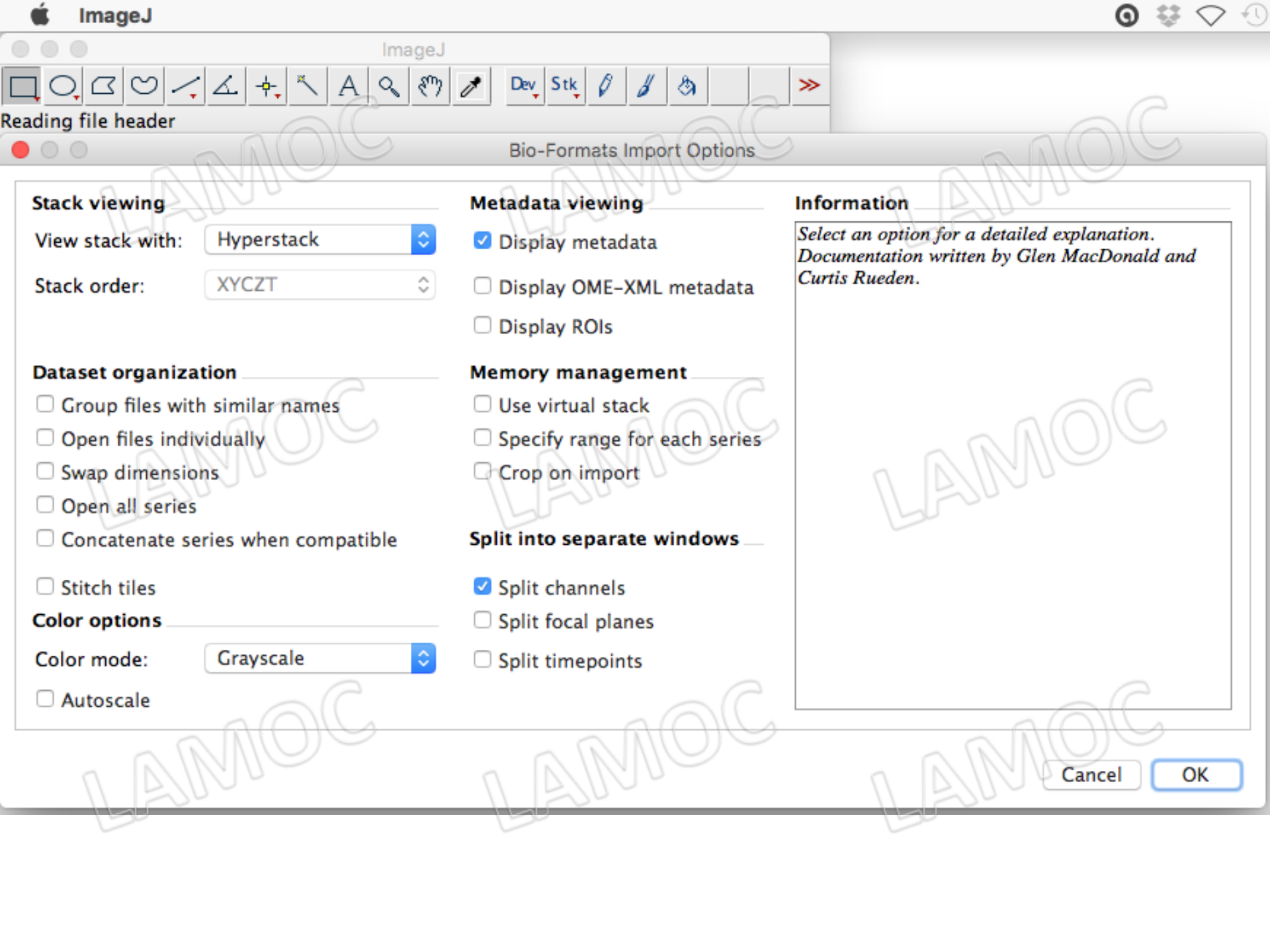


C ☐

Z ☐







Stack viewing

View stack with: Hyperstack

Stack order: XYCZT

Dataset organization

- ☐ Group files with similar names
- ☐ Open files individually
- ☐ Swap dimensions
- ☐ Open all series
- ☐ Concatenate series when compatible

☐ Stitch tiles

Color options

Color mode: Grayscale

☐ Autoscale

Metadata viewing

- ☒ Display metadata
- ☐ Display OME-XML metadata
- ☐ Display ROIs

Memory management

- ☐ Use virtual stack
- ☐ Specify range for each series
- ☐ Crop on import

Split into separate windows

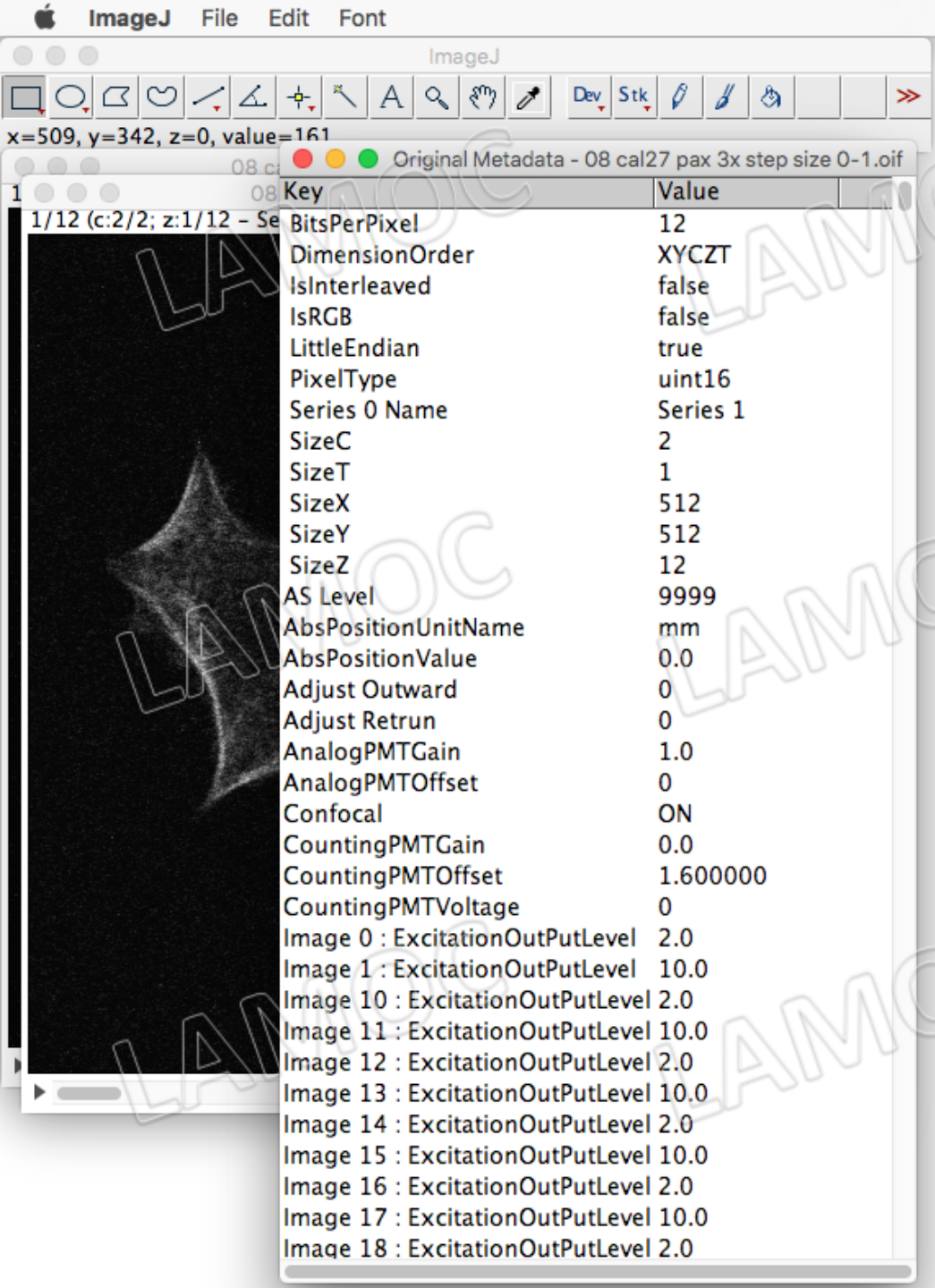
- ☒ Split channels
- ☐ Split focal planes
- ☐ Split timepoints

Information

*Select an option for a detailed explanation.
Documentation written by Glen MacDonald and
Curtis Rueden.*

Cancel

OK

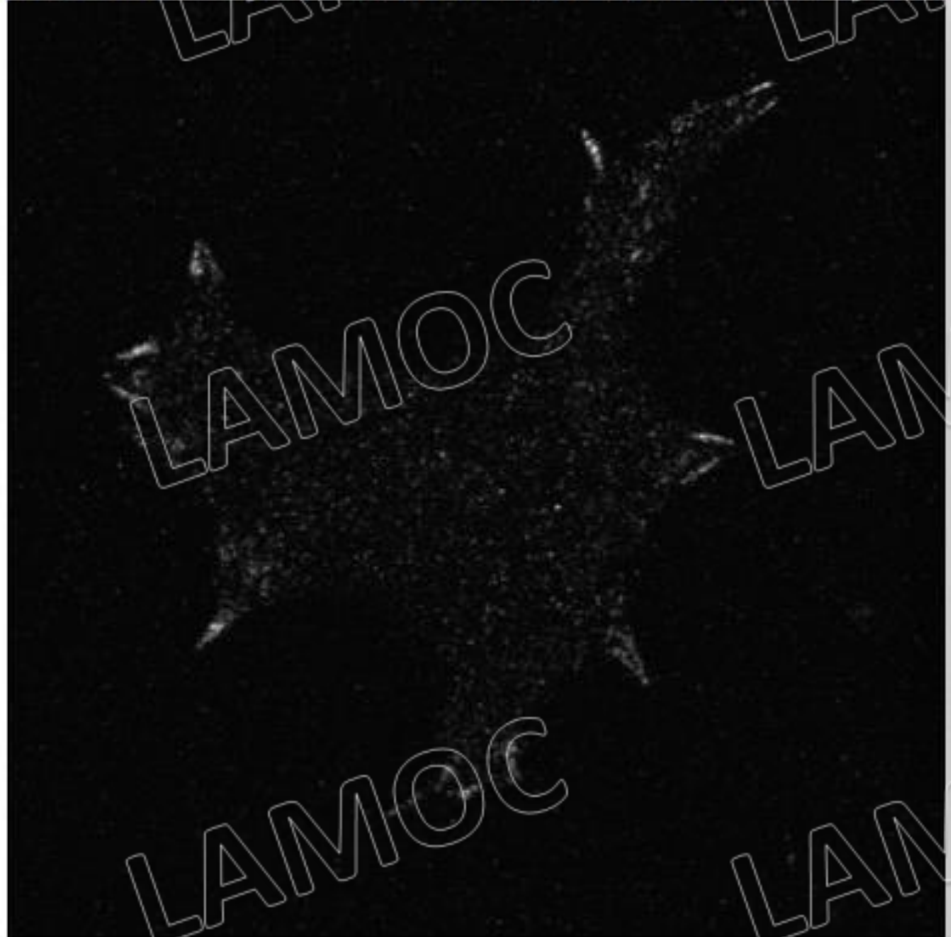




x=316, y=1, z=0, value=271

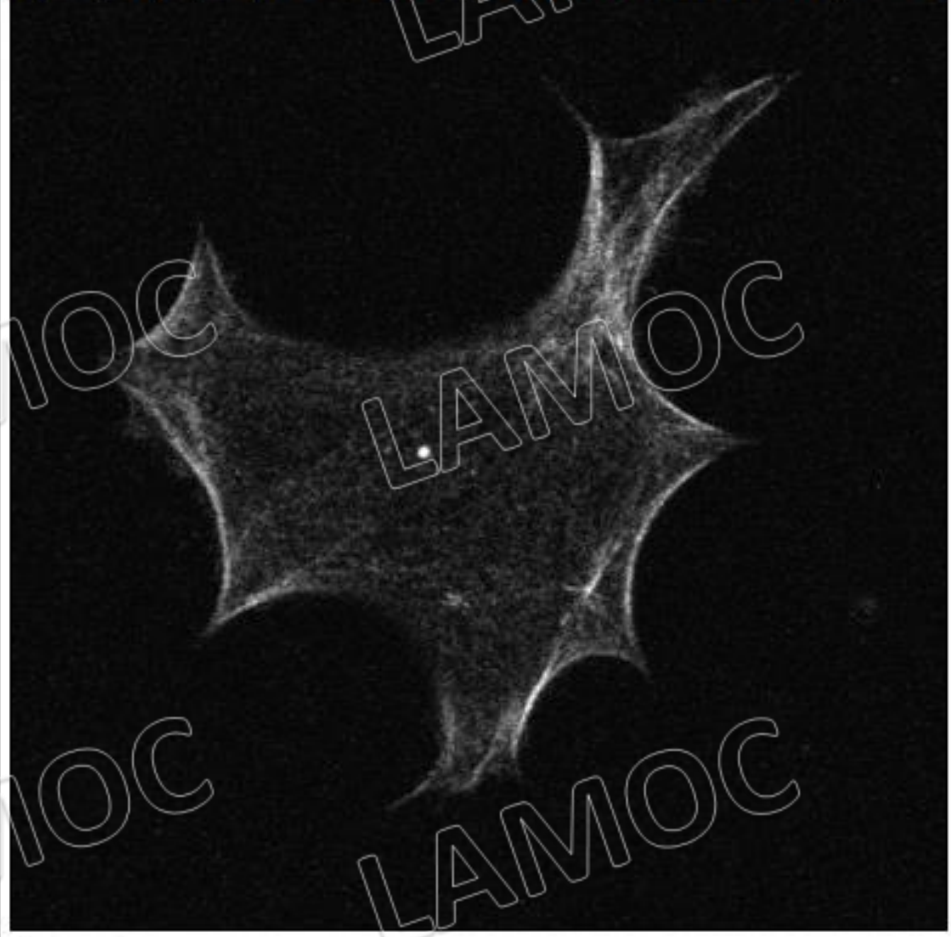
08 cal27 pax 3x step size 0-1.oif - C=0 (75%)

1/12 (c:1/2; z:1/12 - Series 1); 70.66x70.66 microns (512x512)



08 cal27 pax 3x step size 0-1.oif - C=1 (75%)

1/12 (c:2/2; z:1/12 - Series 1); 70.66x70.66 microns (512x512)

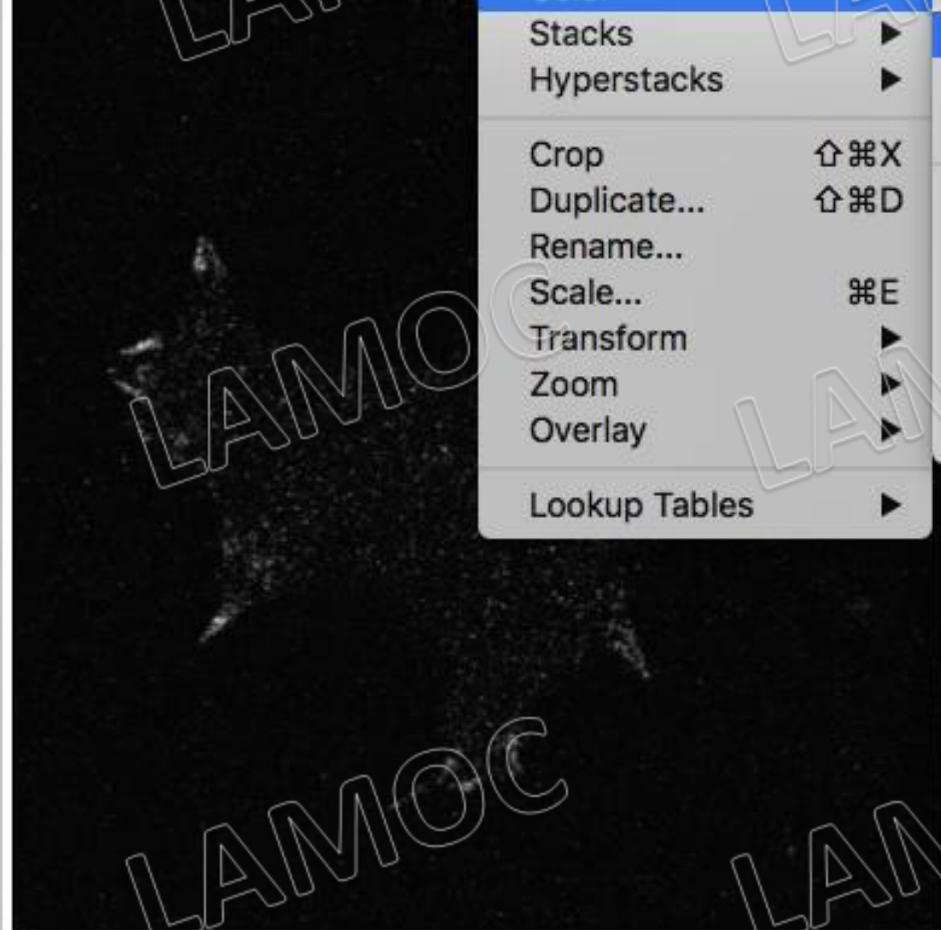




Scrolling tool (or press space bar)

08 cal27 pax 3x step size 0-1.oif - C=1 (75%)

1/12 (c:1/2; z:1/12 - Series 1)



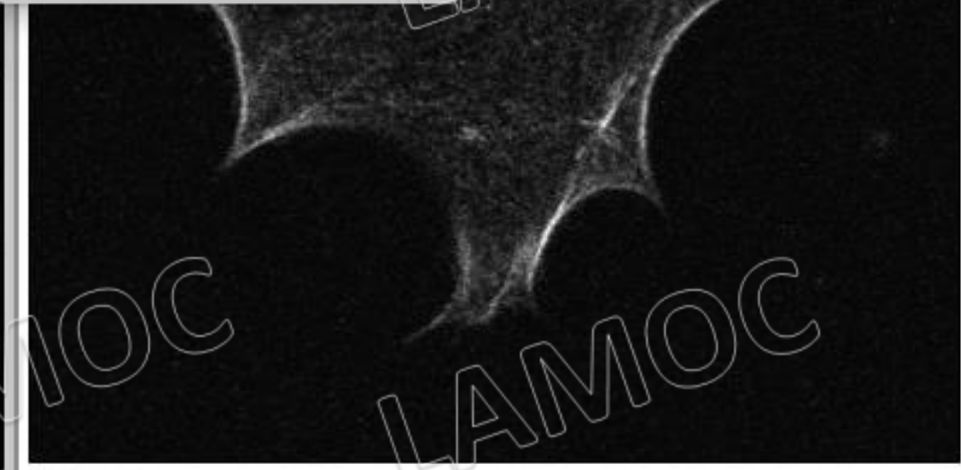
- Type ▶
- Adjust ▶
- Show Info... ⌘I
- Properties... ⇧⌘P
- Color** ▶
- Stacks ▶
- Hyperstacks ▶
- Crop ⇧⌘X
- Duplicate... ⇧⌘D
- Rename...
- Scale... ⌘E
- Transform ▶
- Zoom ▶
- Overlay ▶
- Lookup Tables ▶



08 cal27 pax 3x step size 0-1.oif - C=1 (75%)

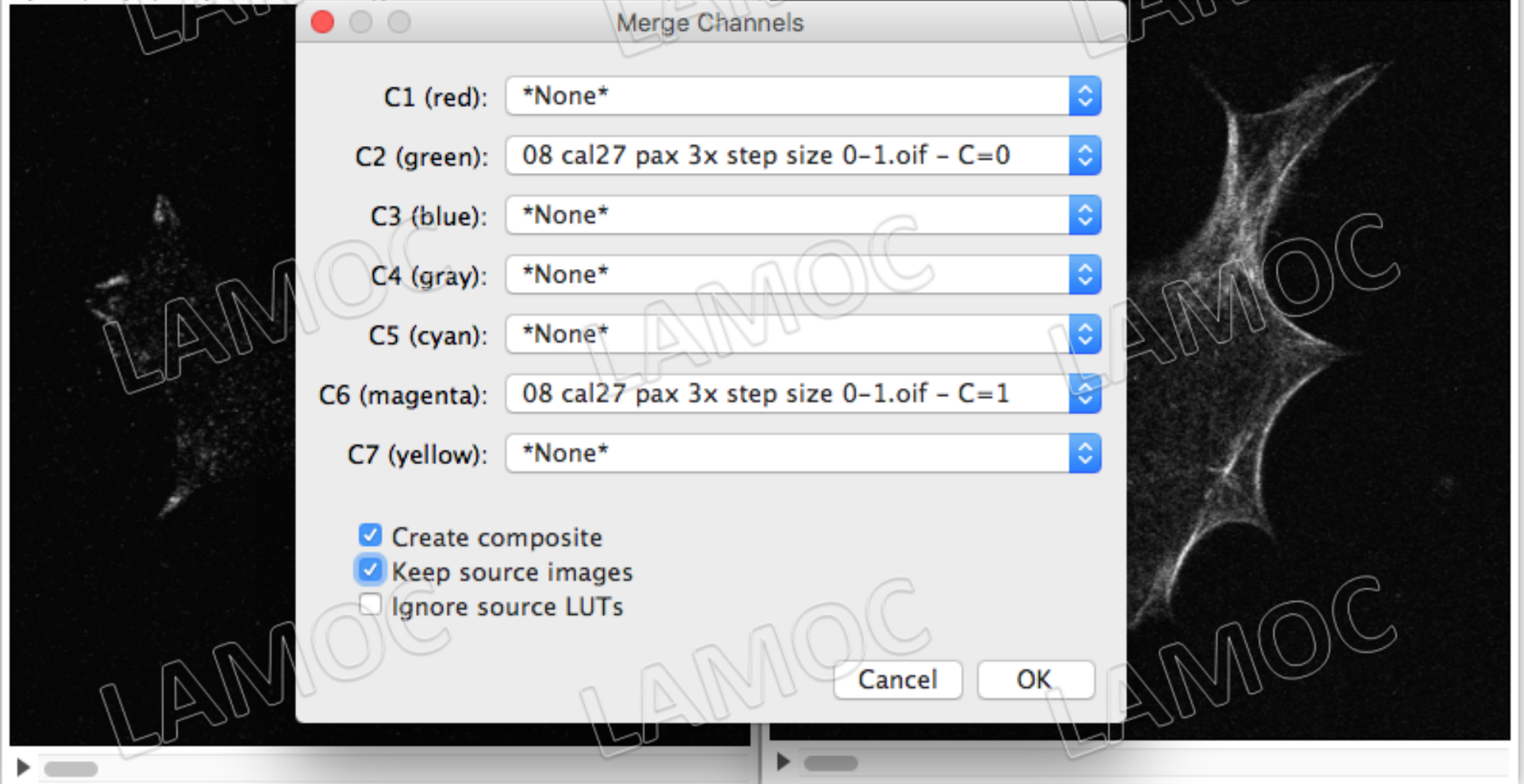
1; 70.66x70.66 microns (512x512)

- Split Channels
- Merge Channels...**
- Arrange Channels...
- Channels Tool... ⇧⌘Z
- Stack to RGB
- Make Composite
- Show LUT
- Display LUTs
- Edit LUT...
- Color Picker... ⇧⌘K





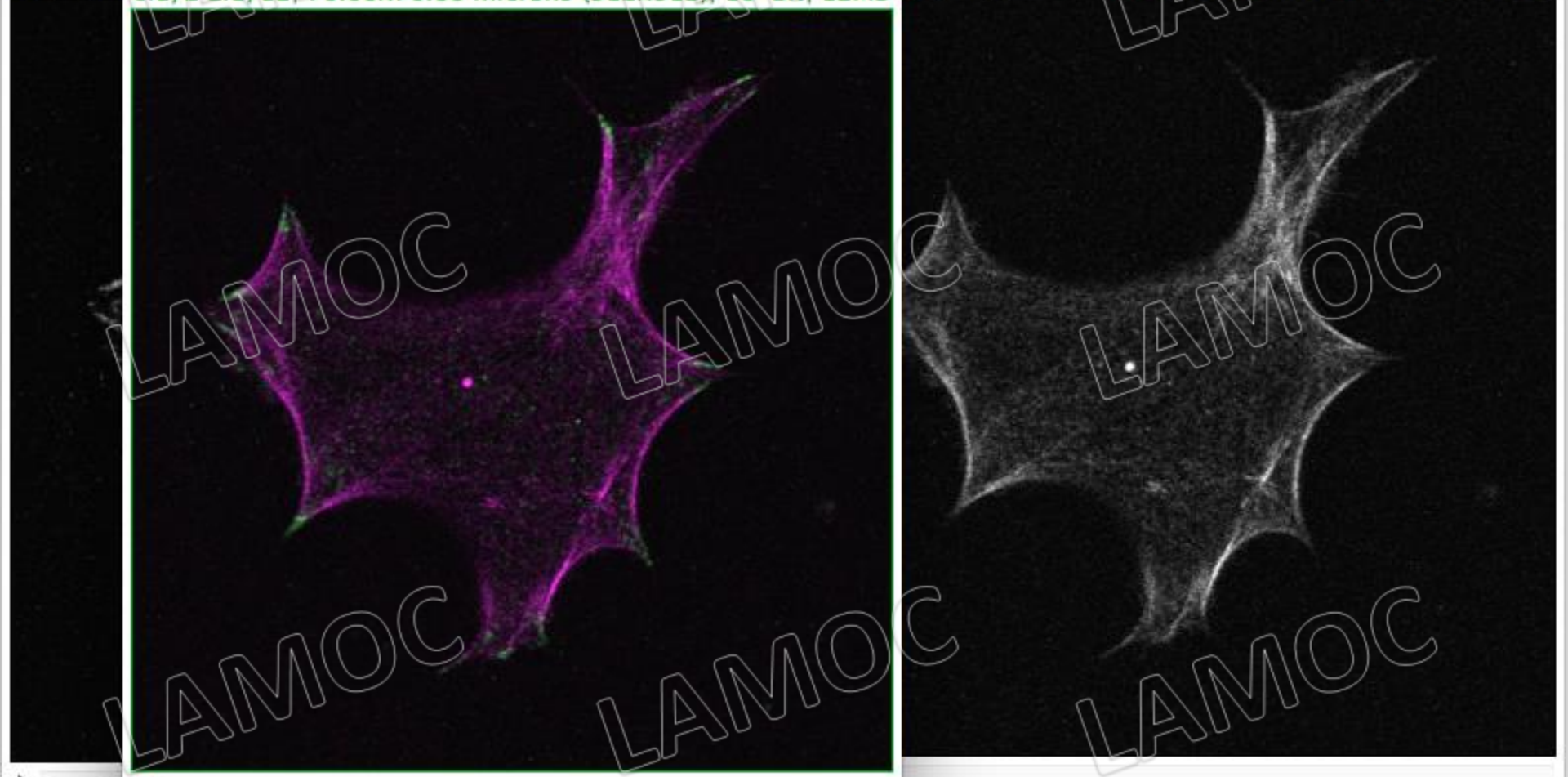
08 cal27 pax 3x step size 0-1.oif - C=0 (75%) 08 cal27 pax 3x step size 0-1.oif - C=1 (75%)
 1/12 (c:1/2; z:1/12 - Series 1); 70.66x70.66 microns (512x512) 1/12 (c:2/2; z:1/12 - Series 1); 70.66x70.66 microns (512x512)



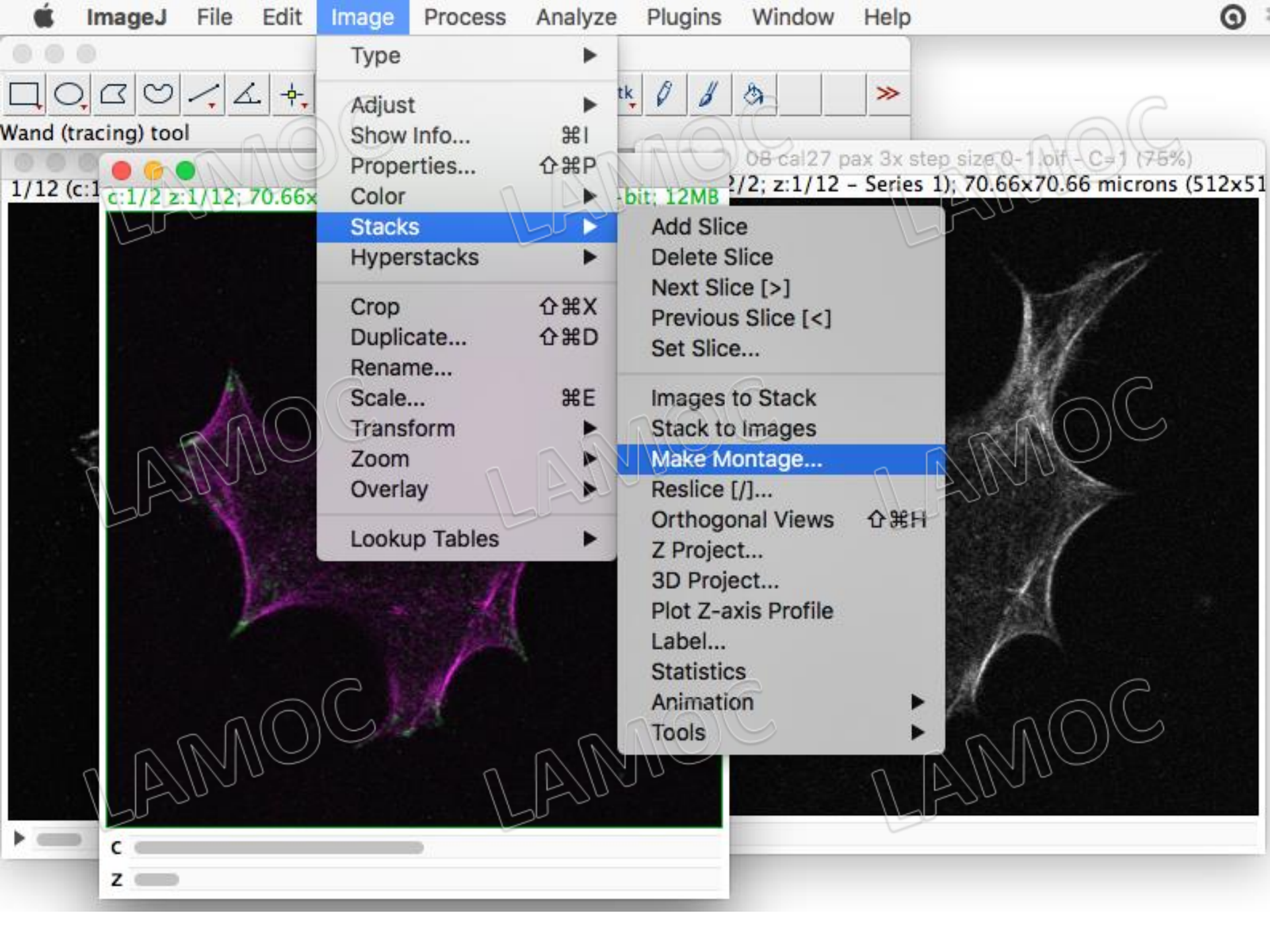


x=262, y=68, z=0, value=173

Composite (75%) 08-cal27 pax 3x step size 0-1.tif - C=1 (75%)
1/12 (c:1/2 z:1/12; 70.66x70.66 microns (512x512); 16-bit; 12MB) 2/2; z:1/12 - Series 1); 70.66x70.66 microns (512x512)



C
Z





x=265, y=42, z=0, value=135

Composite (75%) 08 cal27 pax 3x s
1/12 (c:1 c:1/2 z:1/12; 70.66x70.66 microns (512x512); 16-bit; 12MB 2/2; z:1/12 - Series

Make Montage

Columns: 4

Rows: 3

Scale Factor: 0.25

Increment: 1

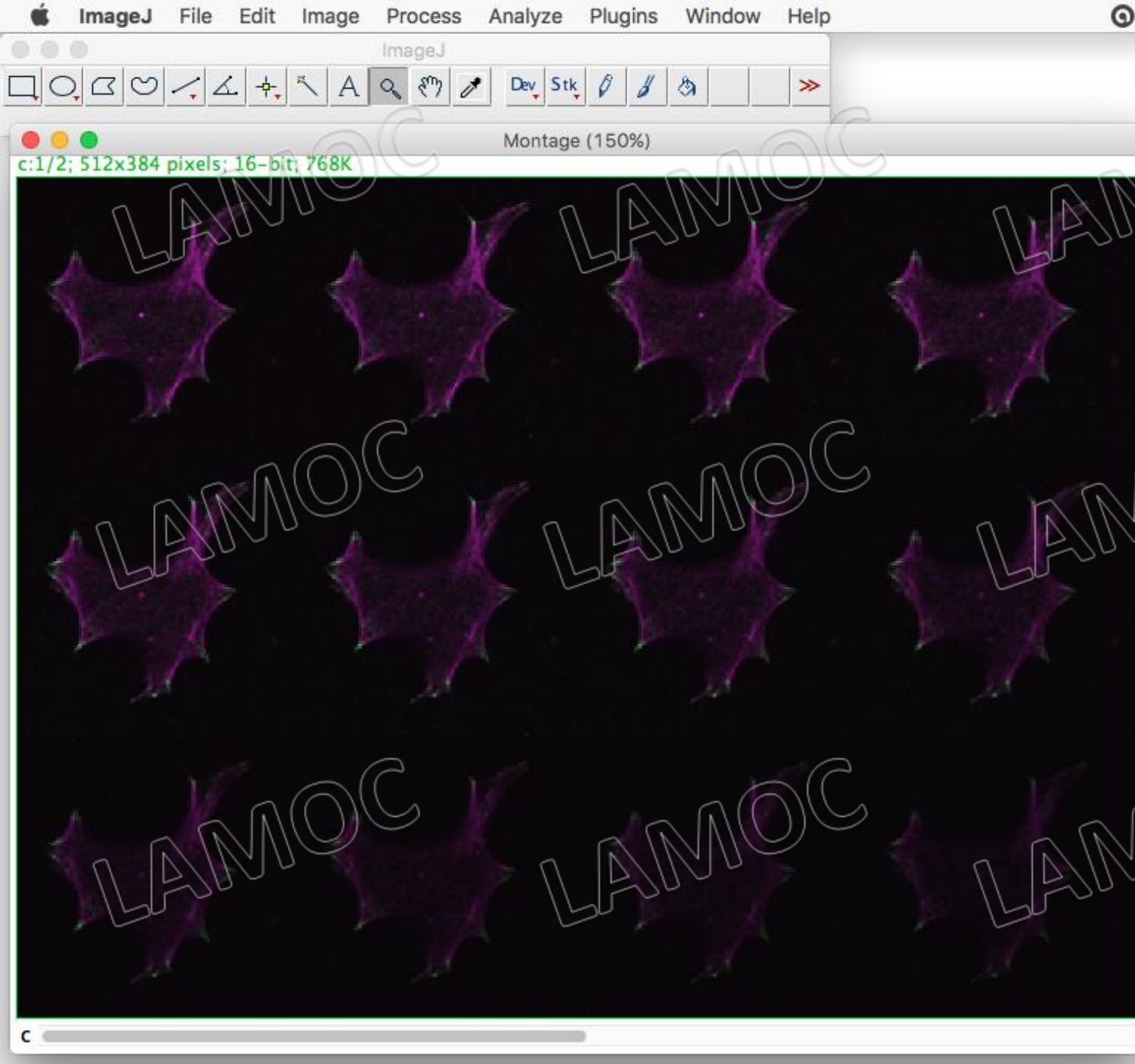
Border Width: 0

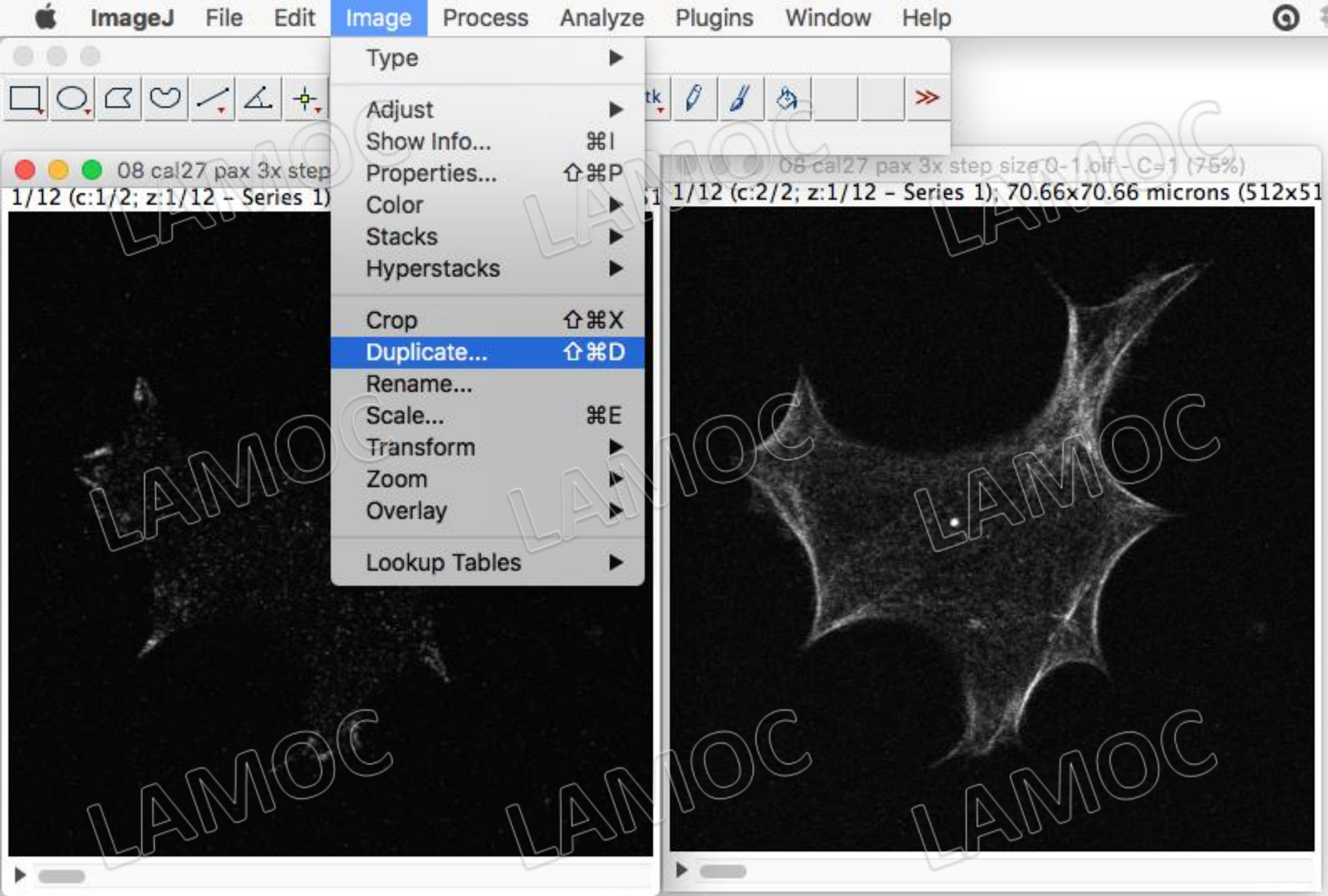
Font Size: 12

☐ Label Slices

☐ Use Foreground Color

Cancel OK

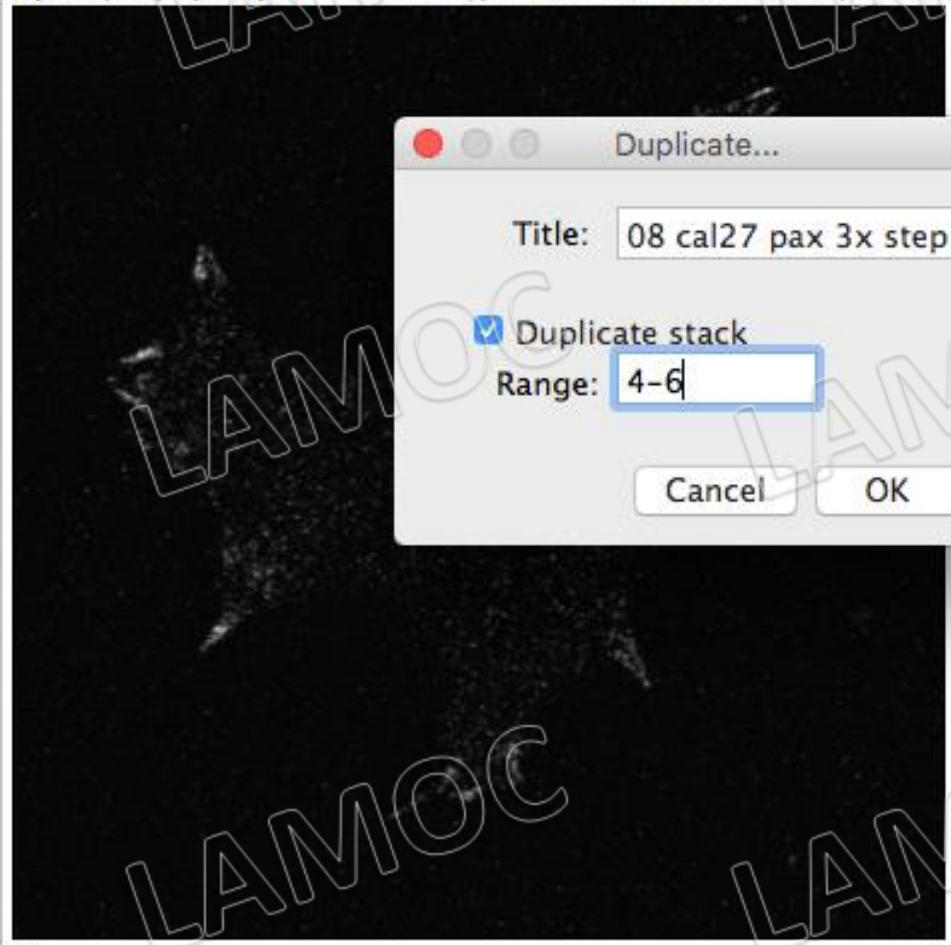




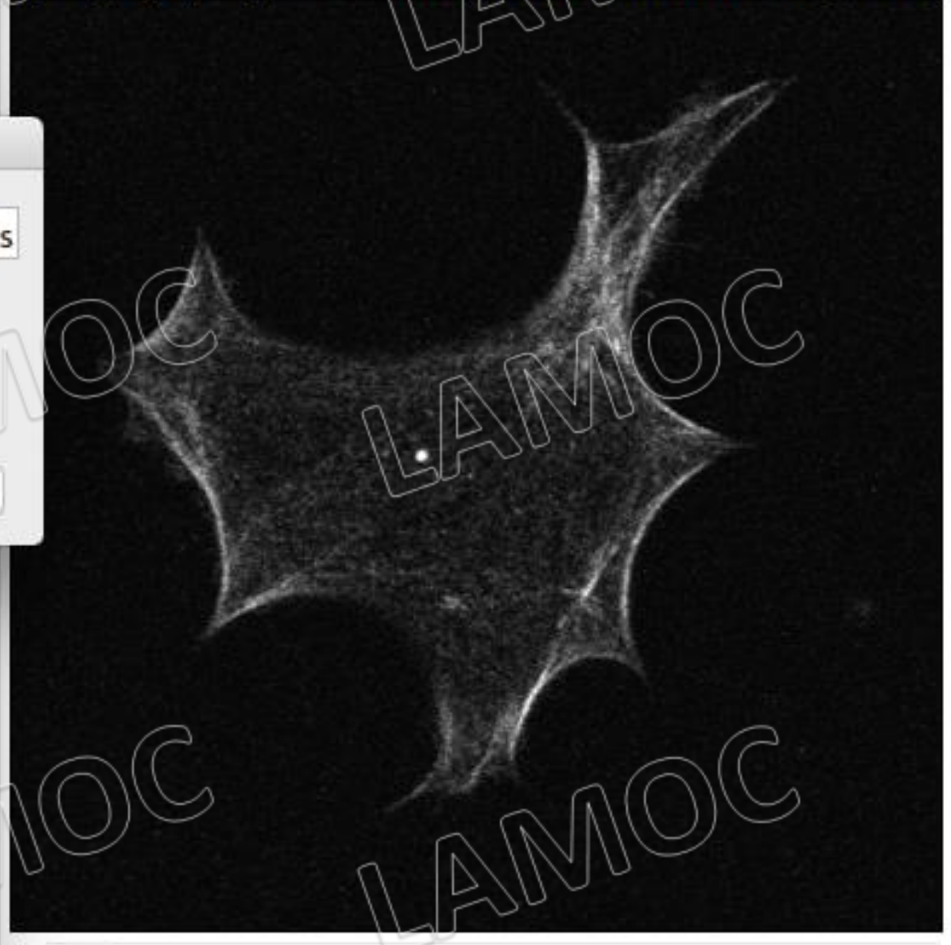


x=320, y=2, z=0, value=112

08 cal27 pax 3x step size 0-1.oif - C=0 (75%)
1/12 (c:1/2; z:1/12 - Series 1); 70.66x70.66 microns (512x512)



08 cal27 pax 3x step size 0-1.oif - C=1 (75%)
1/12 (c:2/2; z:1/12 - Series 1); 70.66x70.66 microns (512x512)



Duplicate...

Title: 08 cal27 pax 3x step s

☒ Duplicate stack

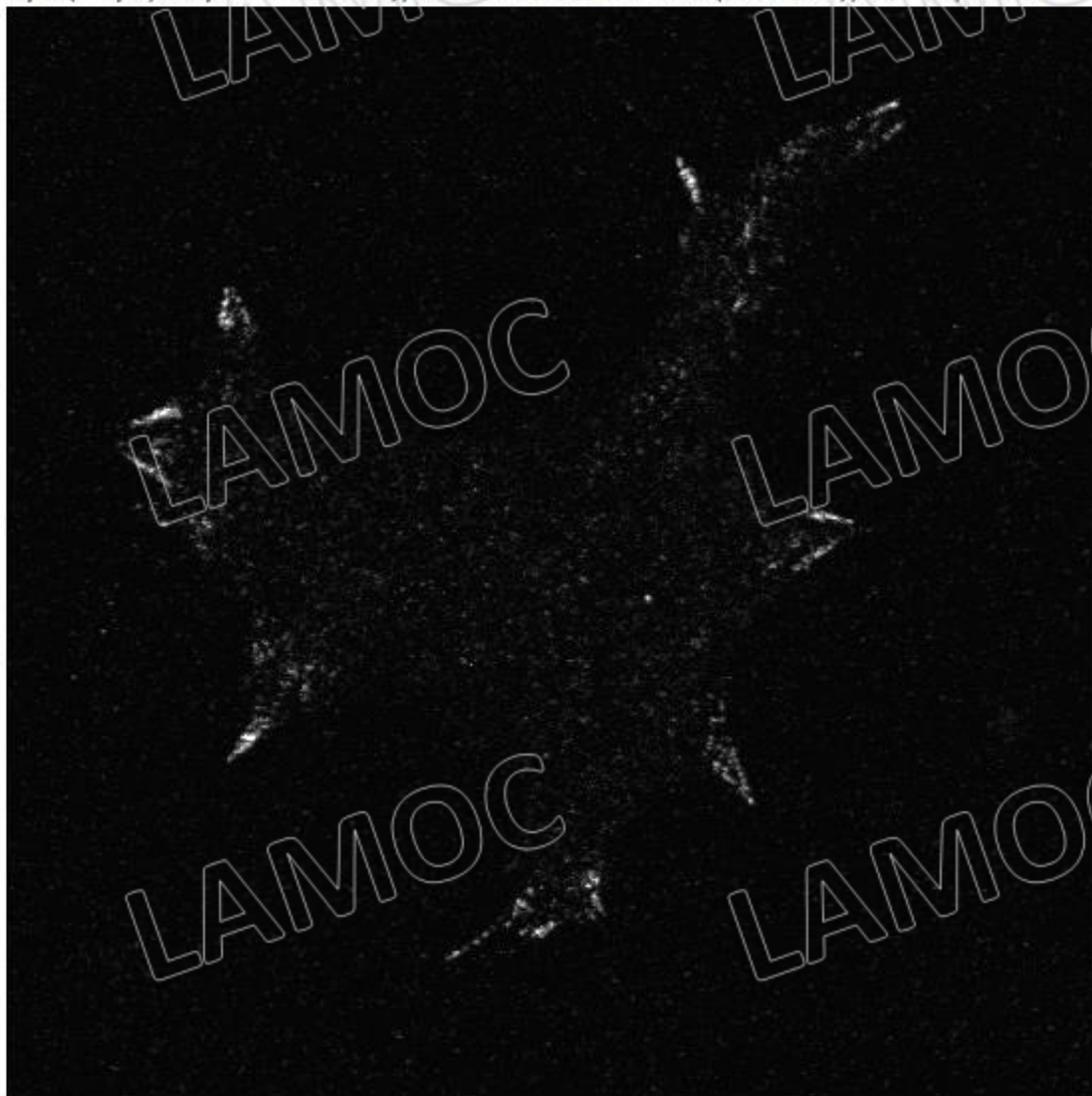
Range: 4-6

Cancel OK



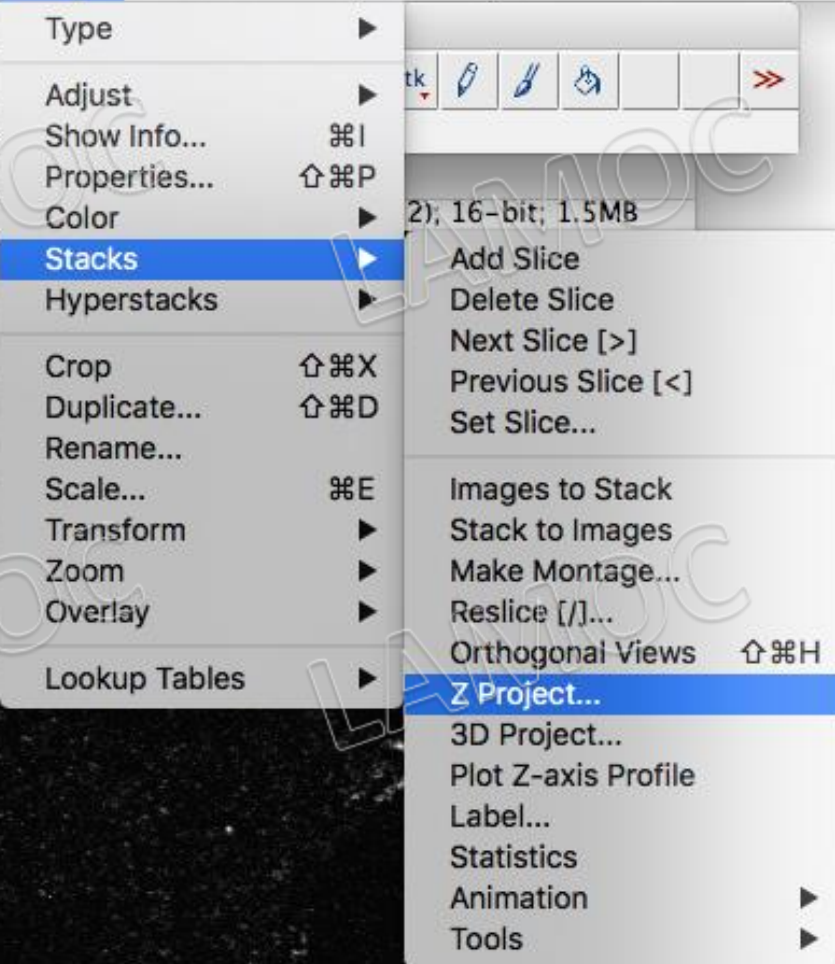
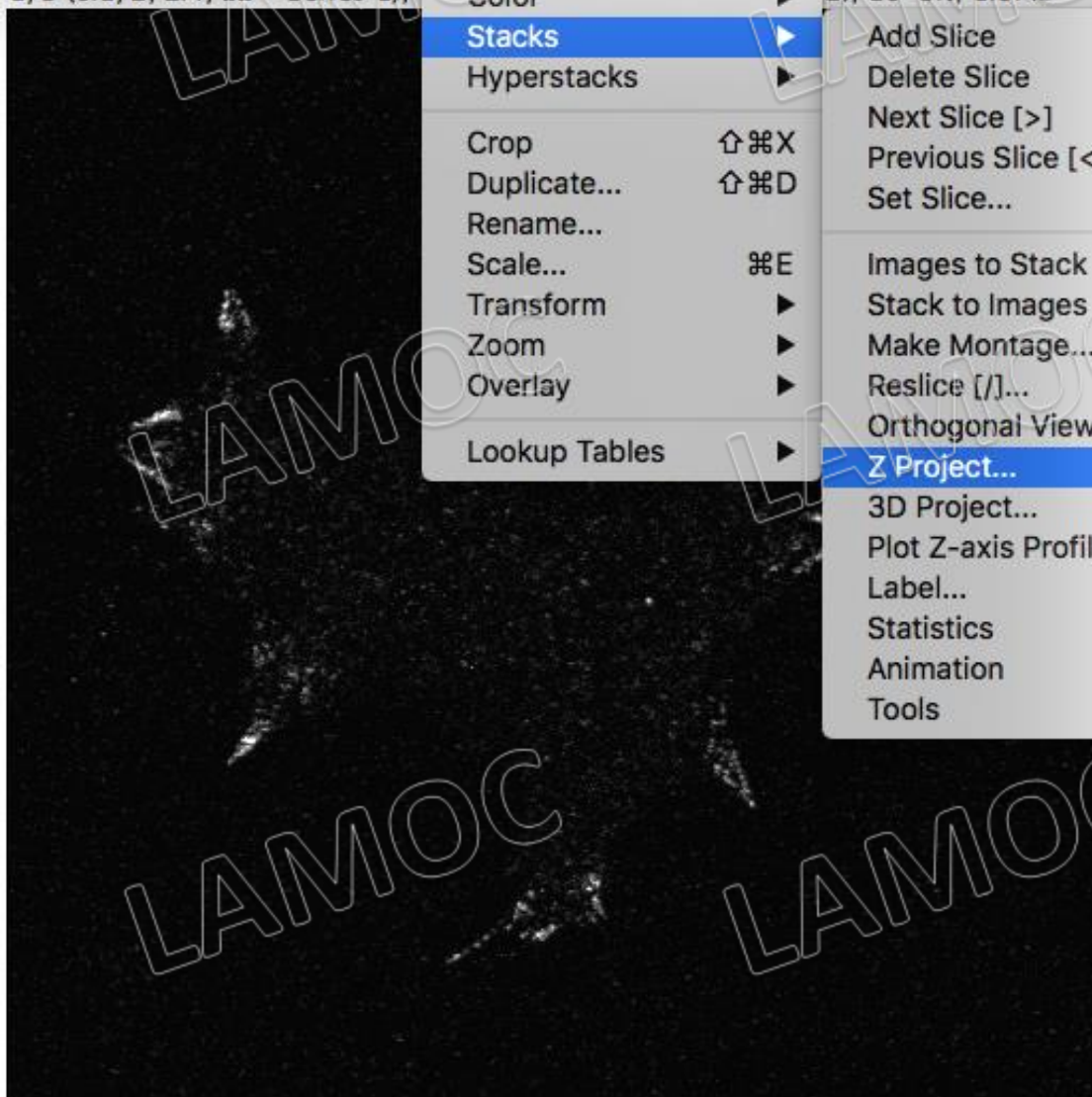
x=303, y=13, z=0, value=123

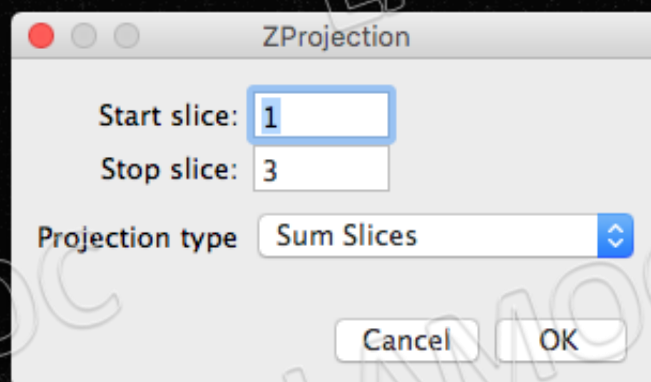
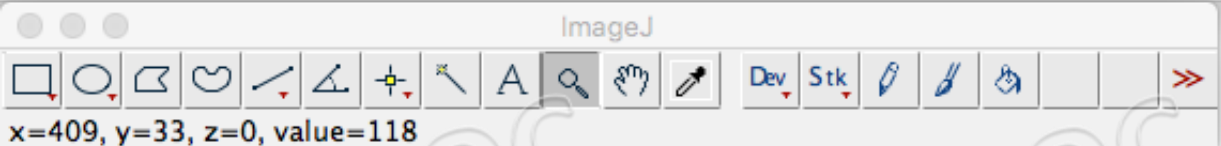
08 cal27 pax 3x step size 0-1.oif - C=0-1
1/3 (c:1/2; z:4/12 - Series 1); 70.66x70.66 microns (512x512); 16-bit; 1.5MB





1/3 (c:1/2; z:4/12 - Series 1);



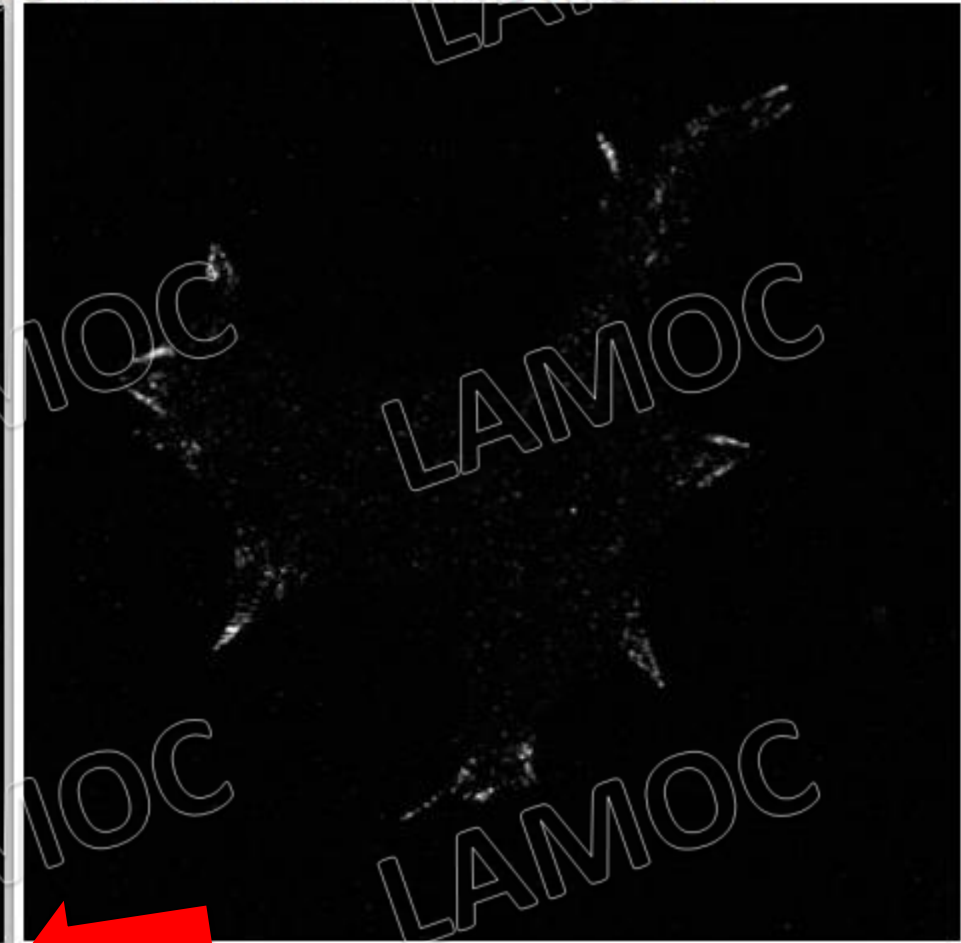
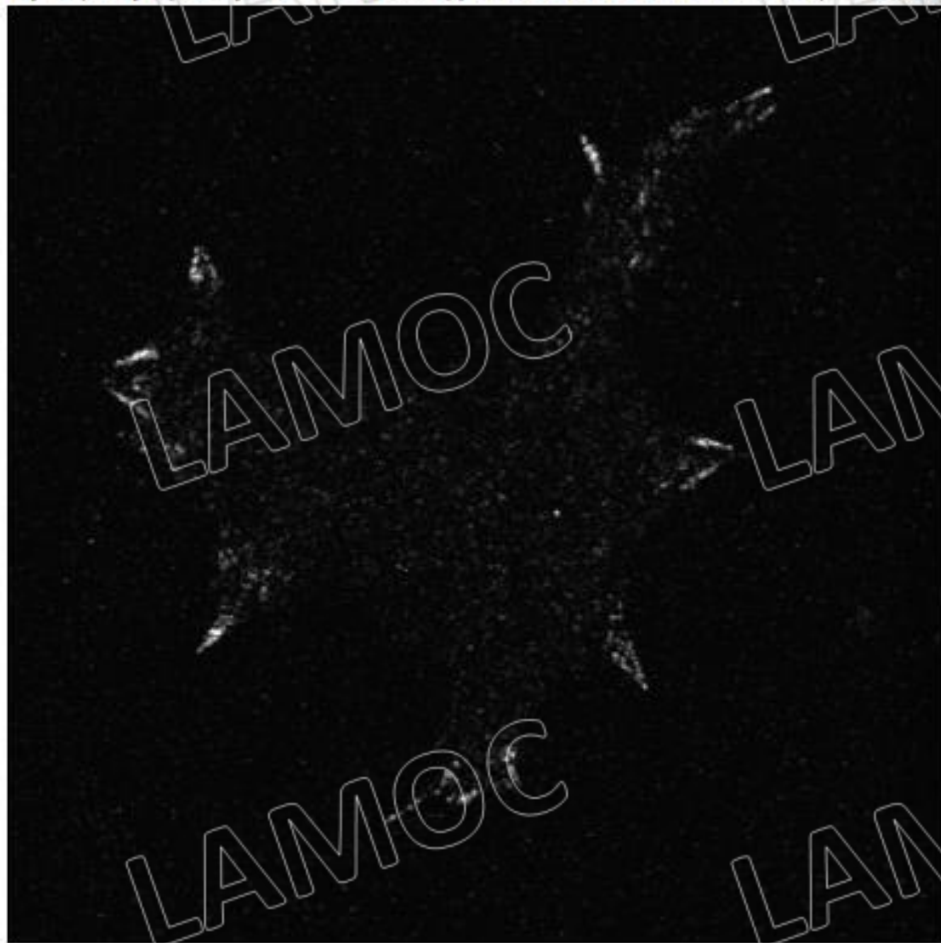


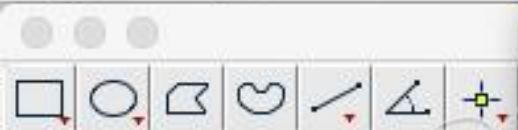


x=333, y=8, value=362.0

08 cal27 pax 3x step size 0-1.oif - C=0-1 (75%) SUM_08 cal27 pax 3x step size 0-1.oif - C=0-1 (75%)

1/3 (c:1/2; z:4/12 - Series 1); 70.66x70.66 microns (512x512) 70.66x70.66 microns (512x512); 32-bit; 1MB

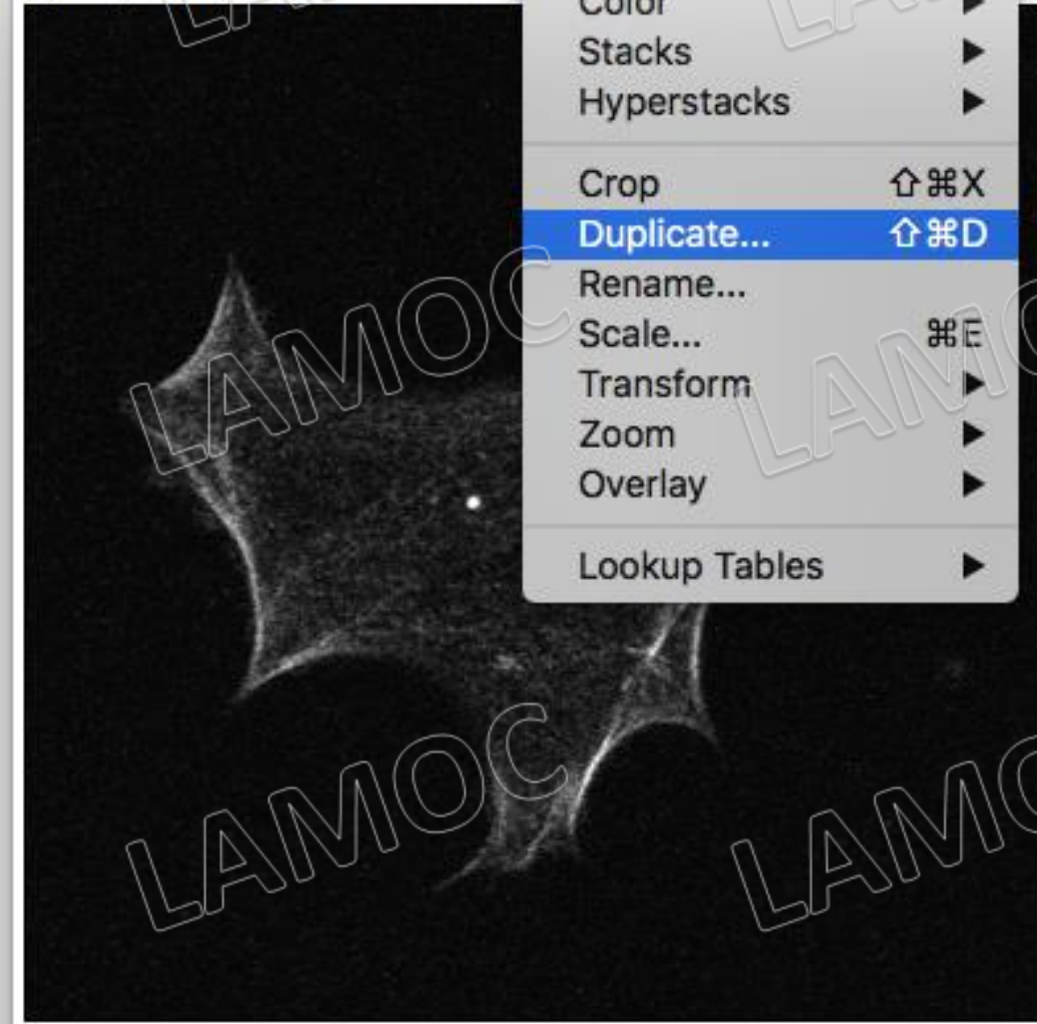




Point or multi-point (right click)

08 cal27 pax 3x step

1/12 (c:2/2; z:1/12 - Series 1)



- Type ▶
- Adjust ▶
- Show Info... ⌘I
- Properties... ⌘P
- Color ▶
- Stacks ▶
- Hyperstacks ▶
- Crop ⌘X
- Duplicate... ⌘D**
- Rename...
- Scale... ⌘E
- Transform ▶
- Zoom ▶
- Overlay ▶
- Lookup Tables ▶



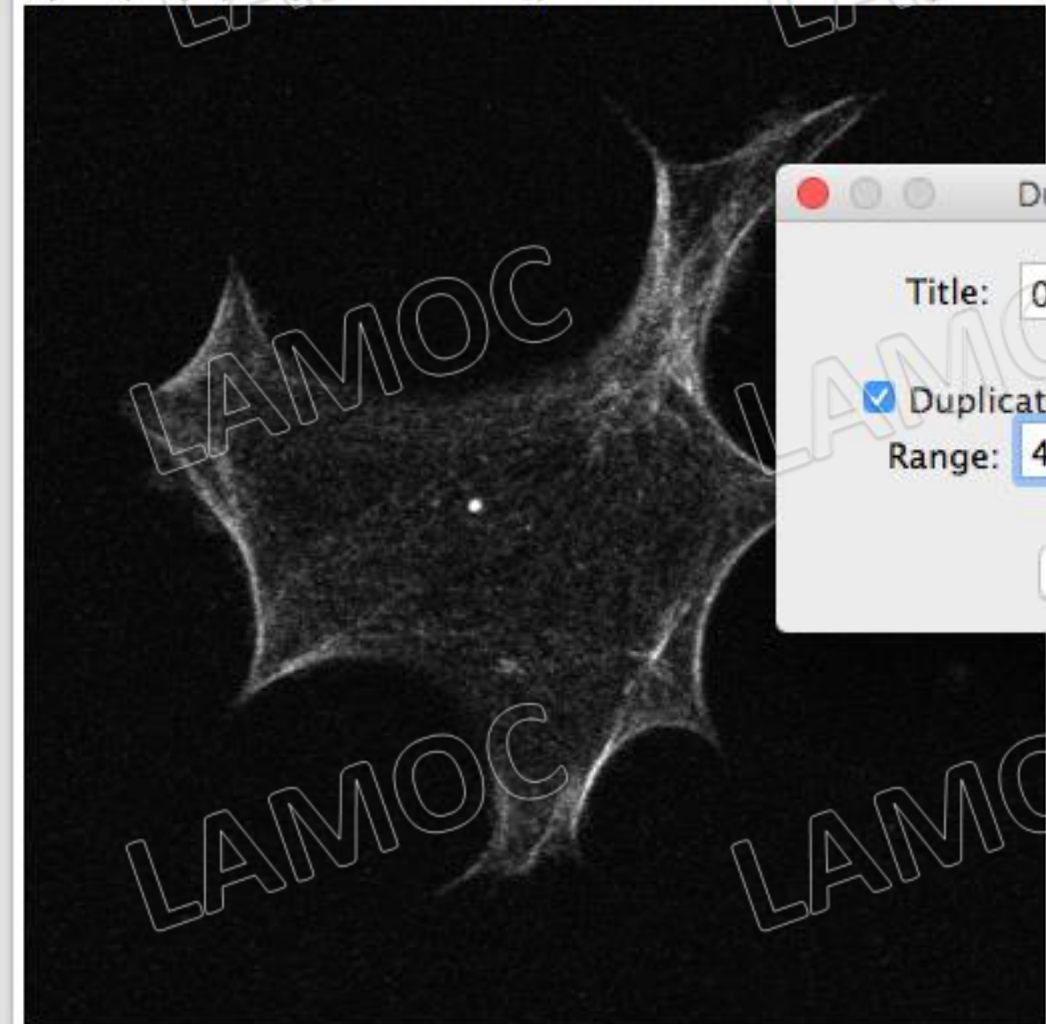
1/12 (c:2/2; z:1/12 - Series 1)





x=146. v=5. z=0. value=139

08 cal27 pax 3x step size 0-1.tif - C=1 (75%)
1/12 (c:2/2; z:1/12 - Series 1); 70.66x70.66 microns (512x512)



Duplicate...

Title: 08 cal27 pax 3x step s

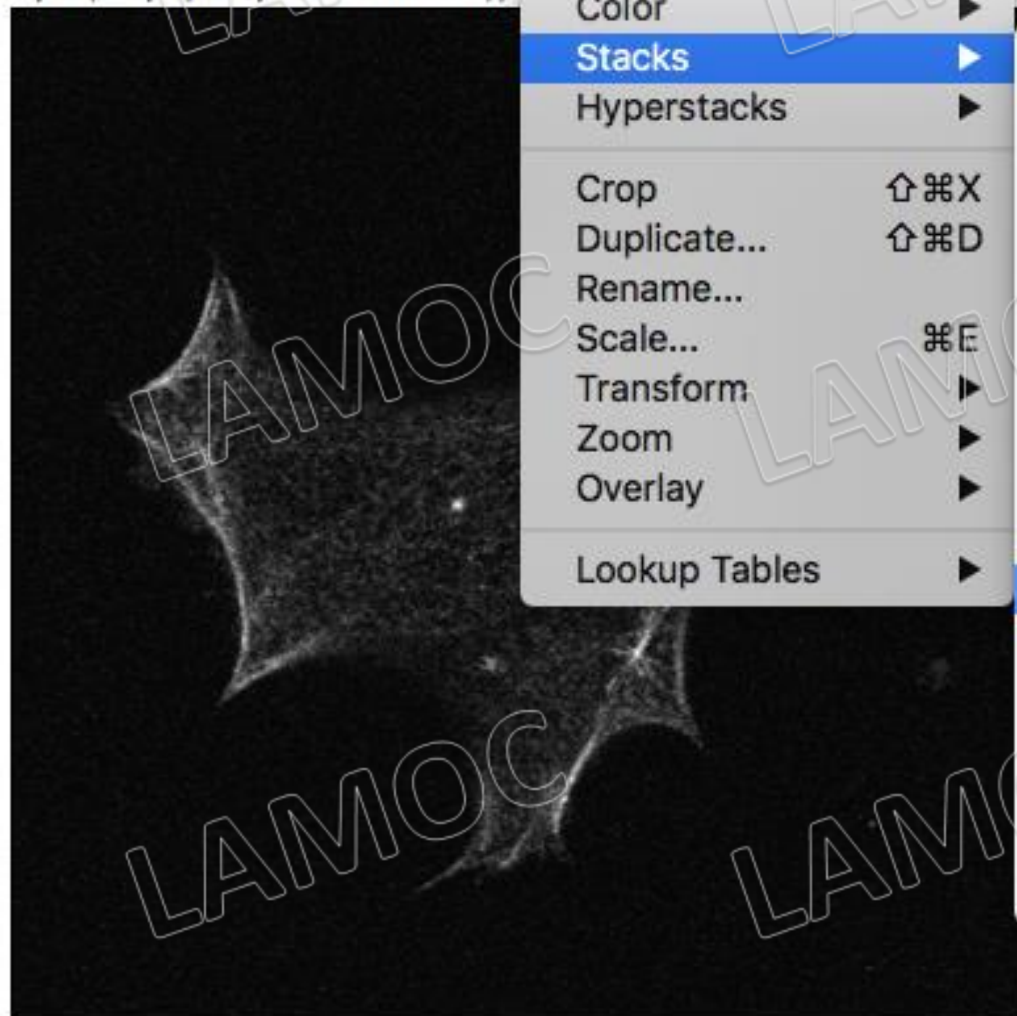
☒ Duplicate stack

Range: 4-6

Cancel OK

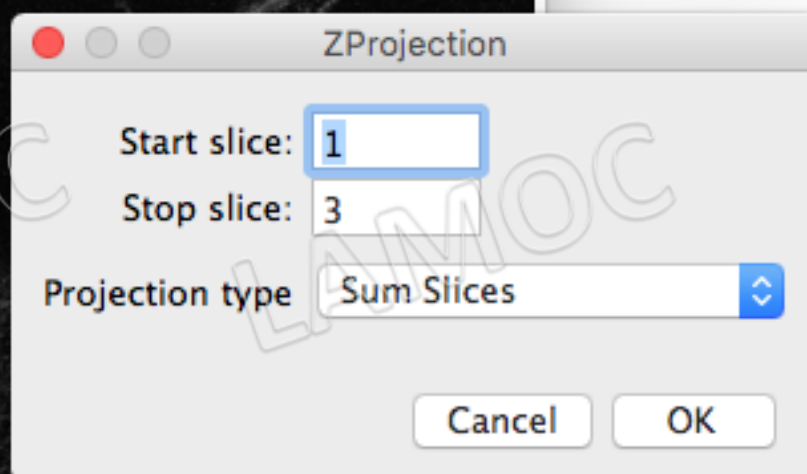
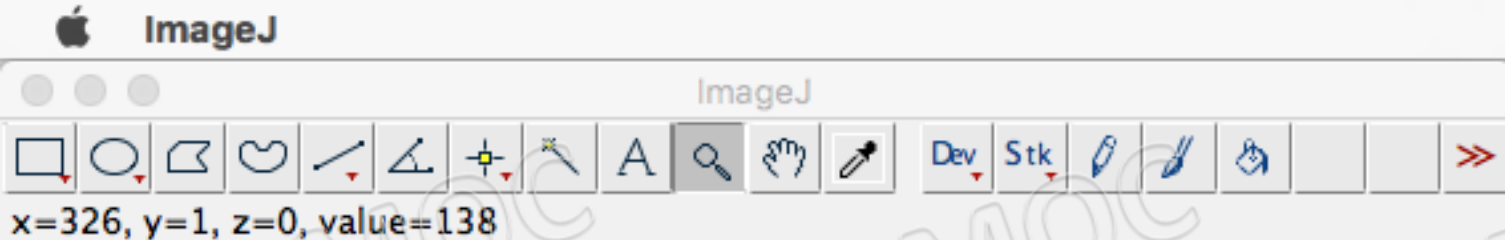


08 cal27 pax 3x step
1/3 (c:2/2; z:4/12 - Series 1);



- Type ▶
- Adjust ▶
- Show Info... ⌘I
- Properties... ⌘P
- Color ▶
- Stacks ▶**
- Hyperstacks ▶
- Crop ⌘X
- Duplicate... ⌘D
- Rename...
- Scale... ⌘E
- Transform ▶
- Zoom ▶
- Overlay ▶
- Lookup Tables ▶

- Add Slice
- Delete Slice
- Next Slice [>]
- Previous Slice [<]
- Set Slice...
- Images to Stack
- Stack to Images
- Make Montage...
- Reslice [/]...
- Orthogonal Views ⌘H
- Z Project...**
- 3D Project...
- Plot Z-axis Profile
- Label...
- Statistics
- Animation ▶
- Tools ▶

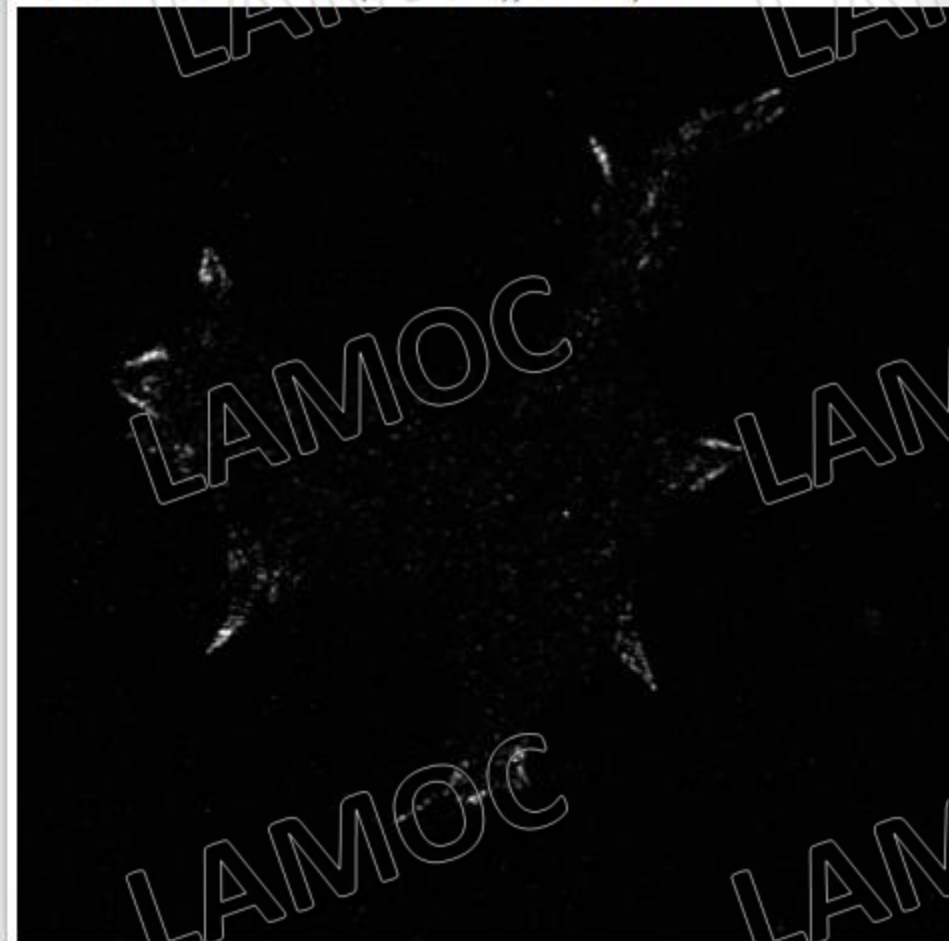


ImageJ



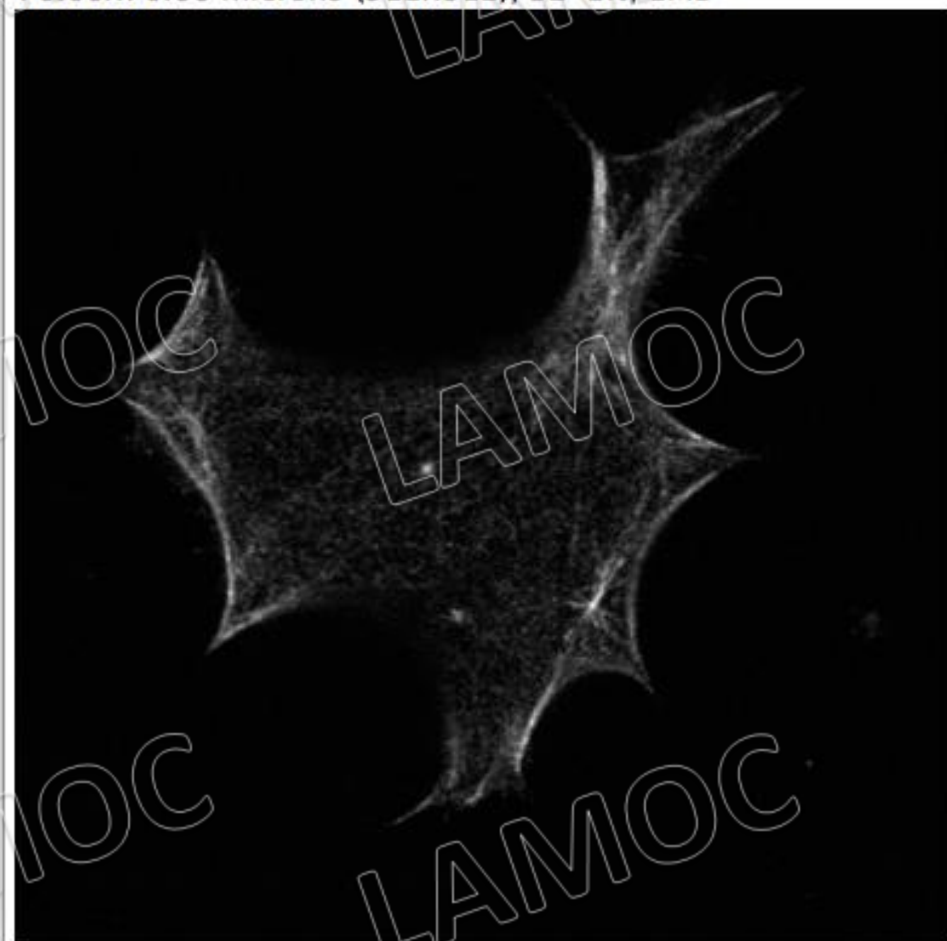
SUM_08_cal27_pax_3x_step_size_0-1.oif - C=0-1 (75%)

70.66x70.66 microns (512x512); 32-bit; 1MB



SUM_08_cal27_pax_3x_step_size_0-1.oif - C=1-1 (75%)

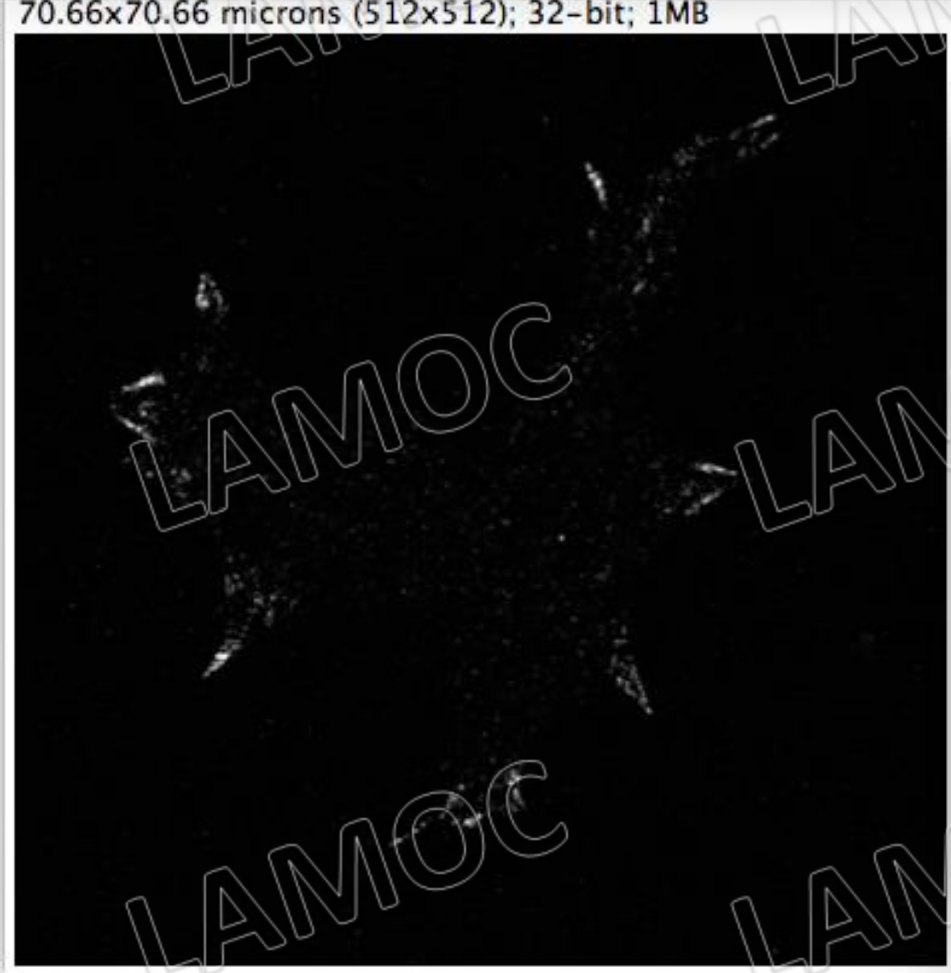
70.66x70.66 microns (512x512); 32-bit; 1MB



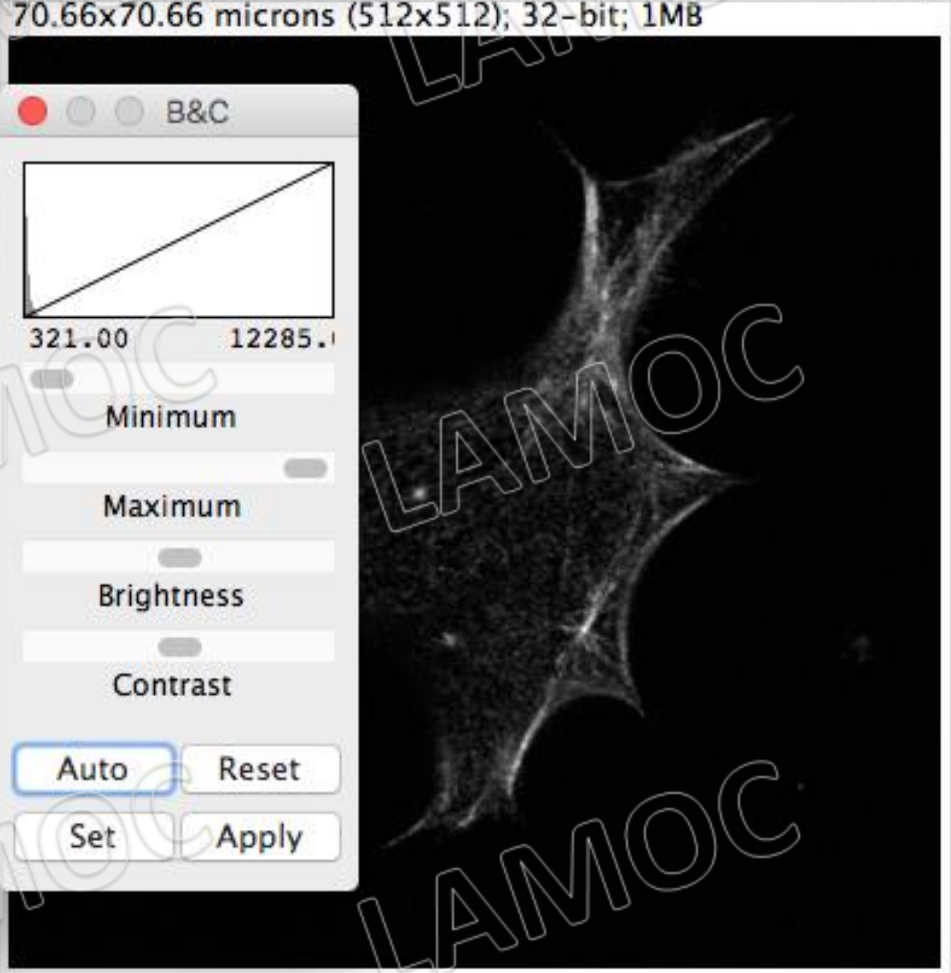


x=454, y=10, value=494.0

SUM_08_cal27_pax3x_step_size_0-1.tif - C=0-1 (75%)
70.66x70.66 microns (512x512); 32-bit; 1MB



SUM_08_cal27_pax3x_step_size_0-1.tif - C=1-1 (75%)
70.66x70.66 microns (512x512); 32-bit; 1MB





x=494, y=116, value=363.0

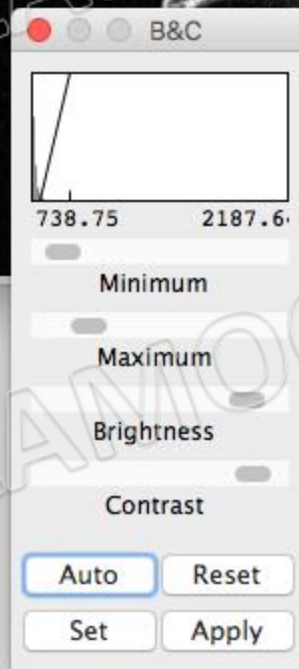
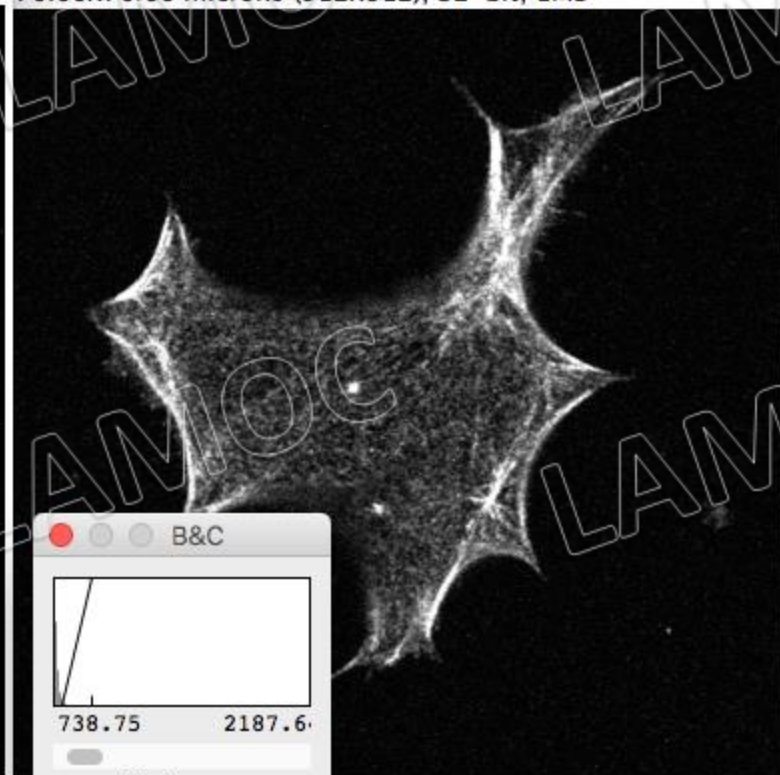
SUM_08 cal27 pax 3x step size 0-1.oif - C=0-1 (75%)

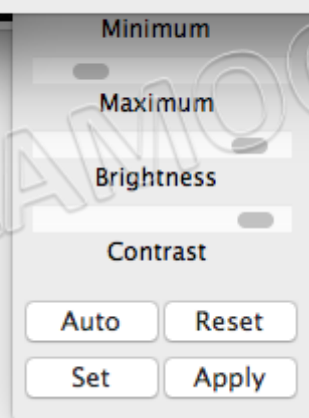
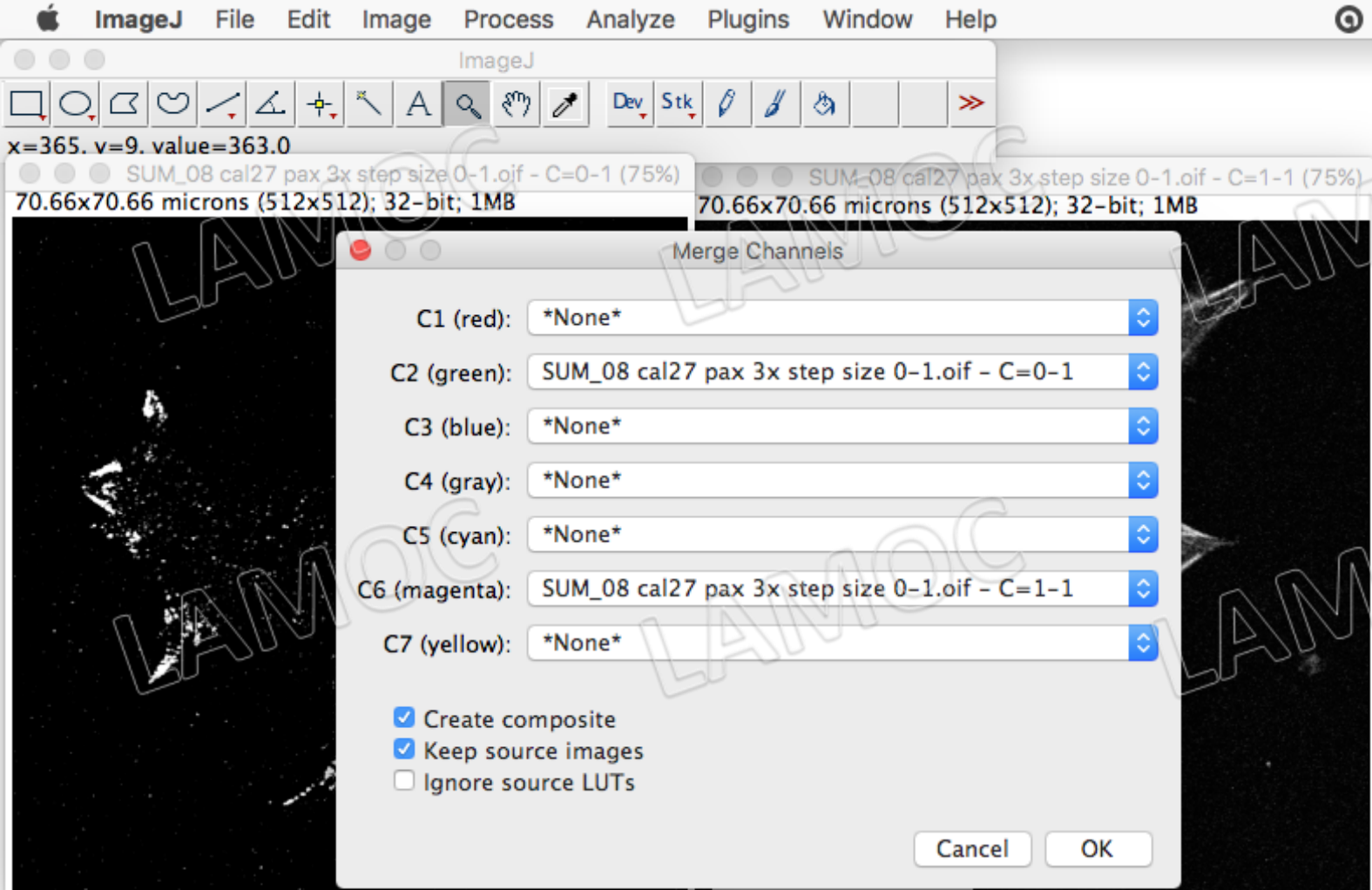
70.66x70.66 microns (512x512); 32-bit; 1MB



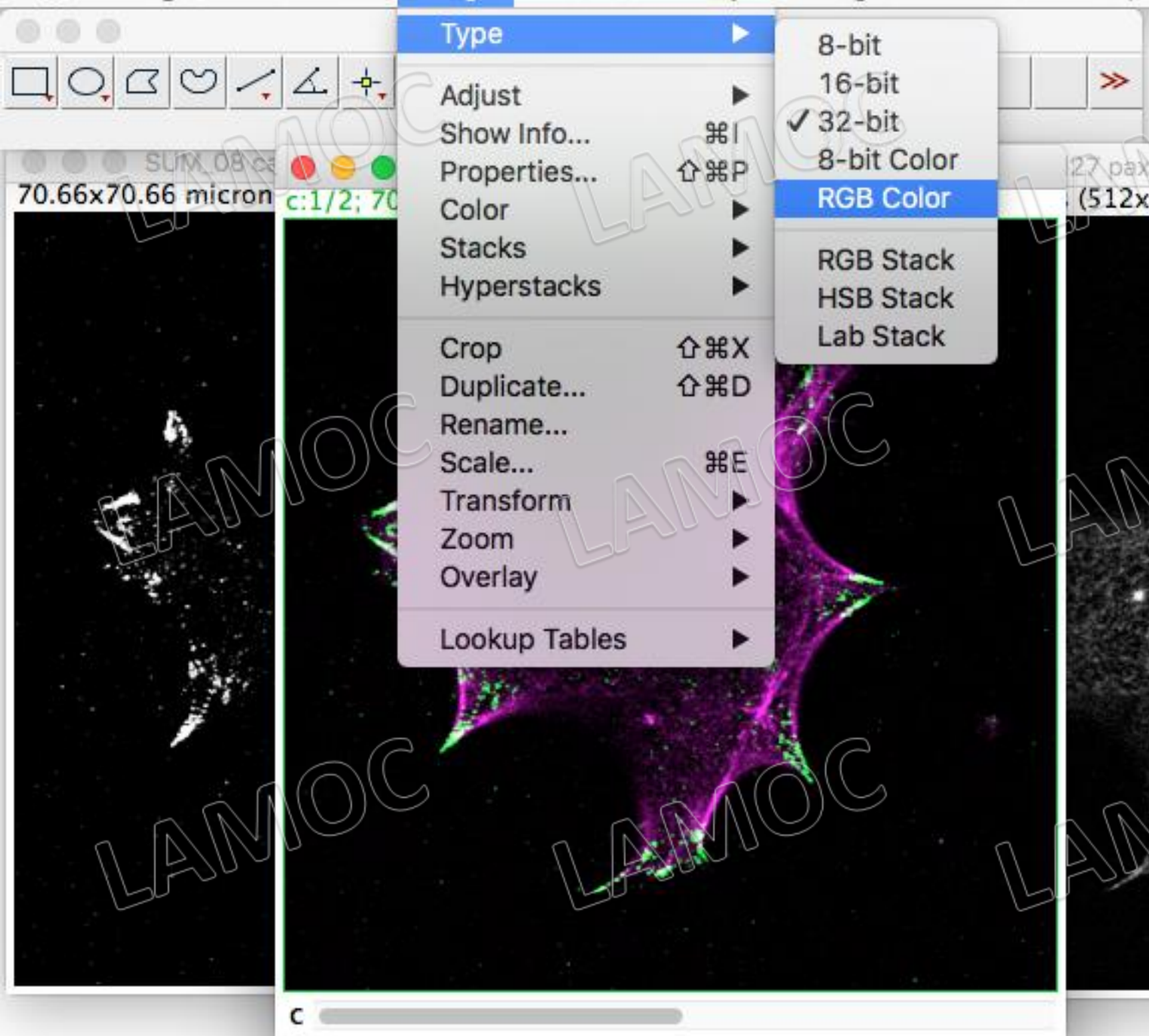
SUM_08 cal27 pax 3x step size 0-1.oif - C=1-1 (75%)

70.66x70.66 microns (512x512); 32-bit; 1MB



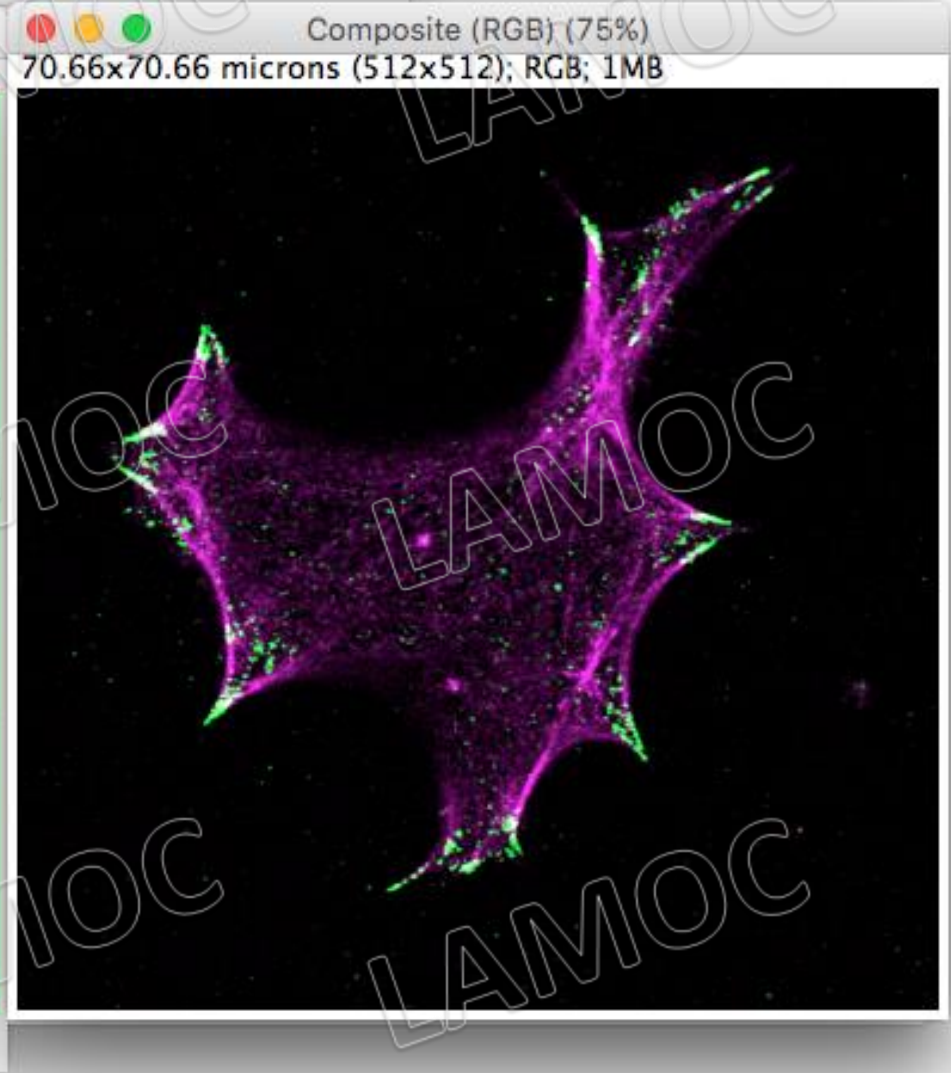
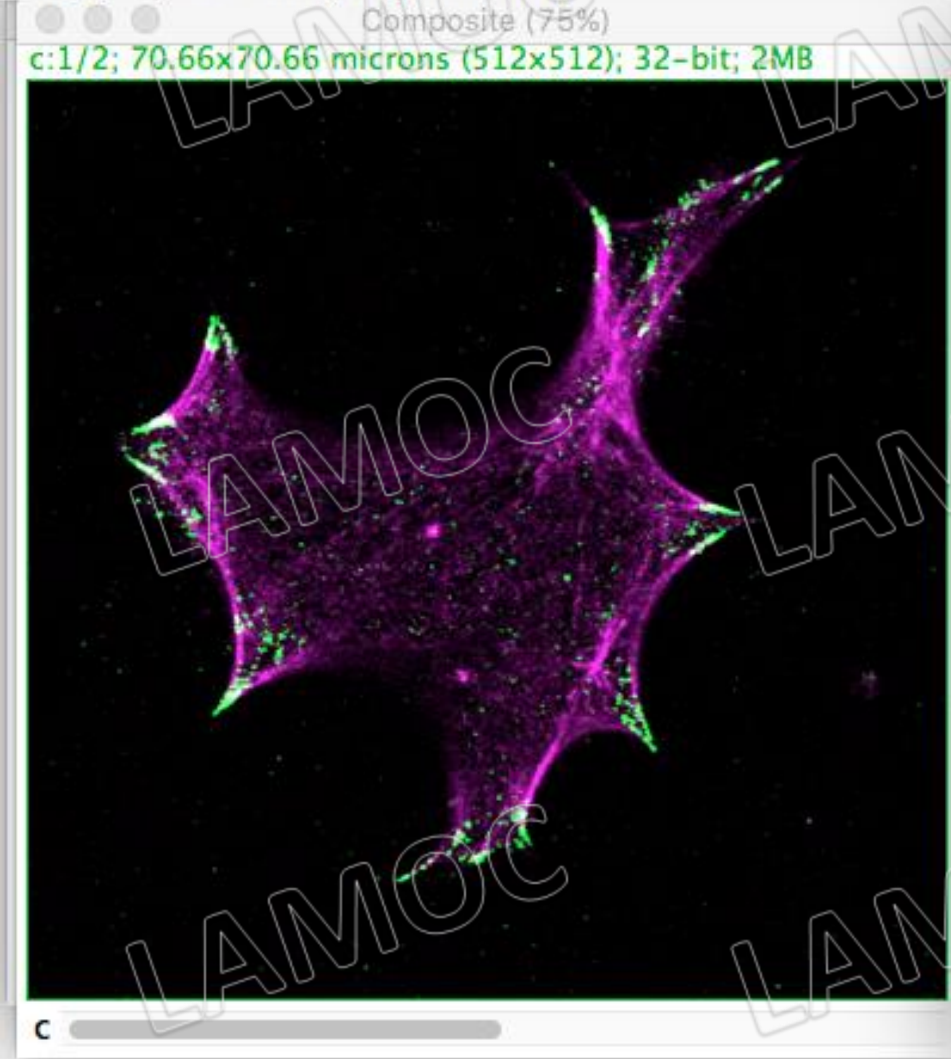






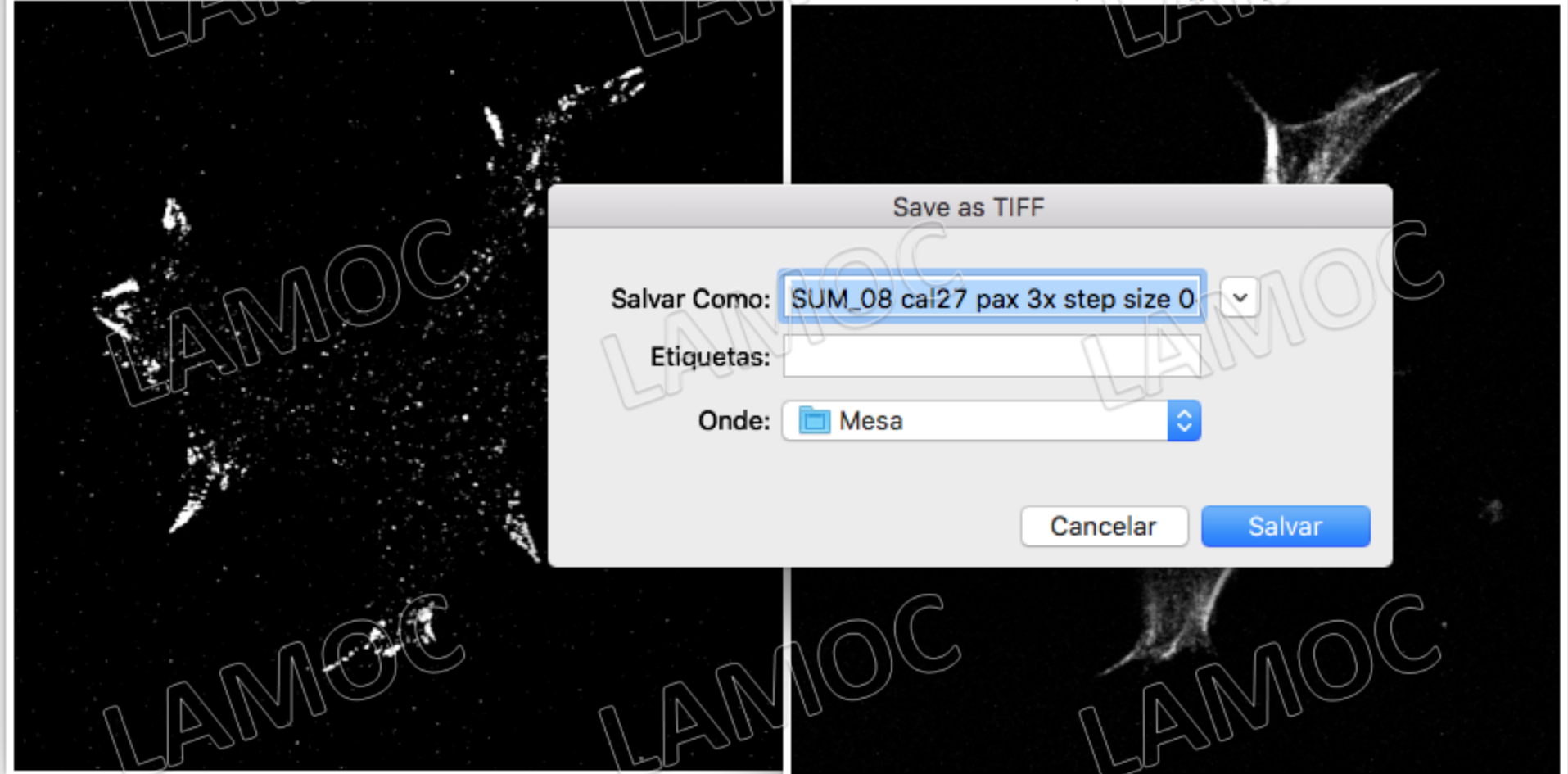


x=0, y=0, value=000,000,000 (black)





Tiff.....
 01 SUM_08 cal27 pax 3x step size 0-1.oif - C=0-...
 70.66x70.66 microns (512x512); RGB; 1MB
 SUM_08 cal27 pax 3x step size 0-1.oif - C=1-1 (75%)
 70.66x70.66 microns (512x512); RGB; 1MB



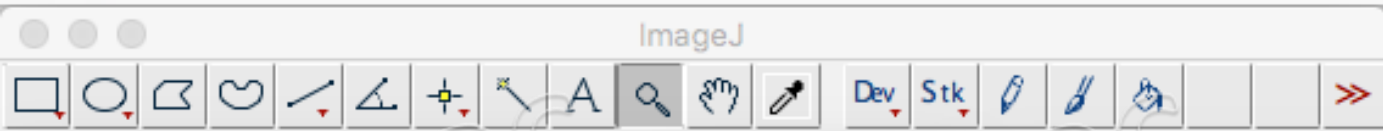
Save as TIFF

Salvar Como: SUM_08 cal27 pax 3x step size 0

Etiquetas:

Onde: Mesa

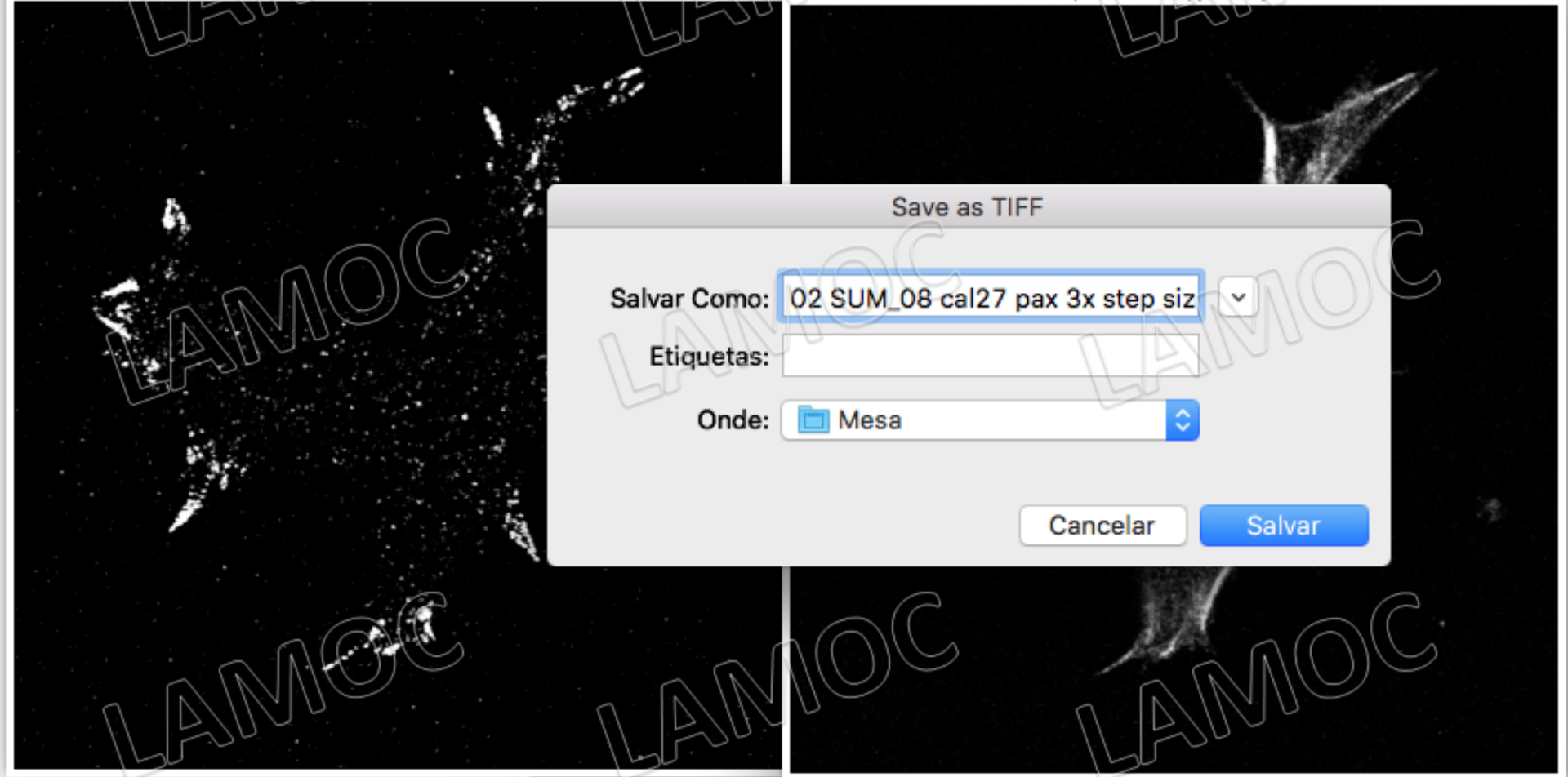
Cancelar Salvar



Tiff.....

01 SUM_08 cal27 pax 3x step size 0-1.oif - C=0-... 70.66x70.66 microns (512x512); RGB; 1MB

SUM_08 cal27 pax 3x step size 0-1.oif - C=1-1 (75%) 70.66x70.66 microns (512x512); RGB; 1MB



Save as TIFF

Salvar Como: 02 SUM_08 cal27 pax 3x step siz

Etiquetas:

Onde: Mesa

Cancelar Salvar



Tiff.....

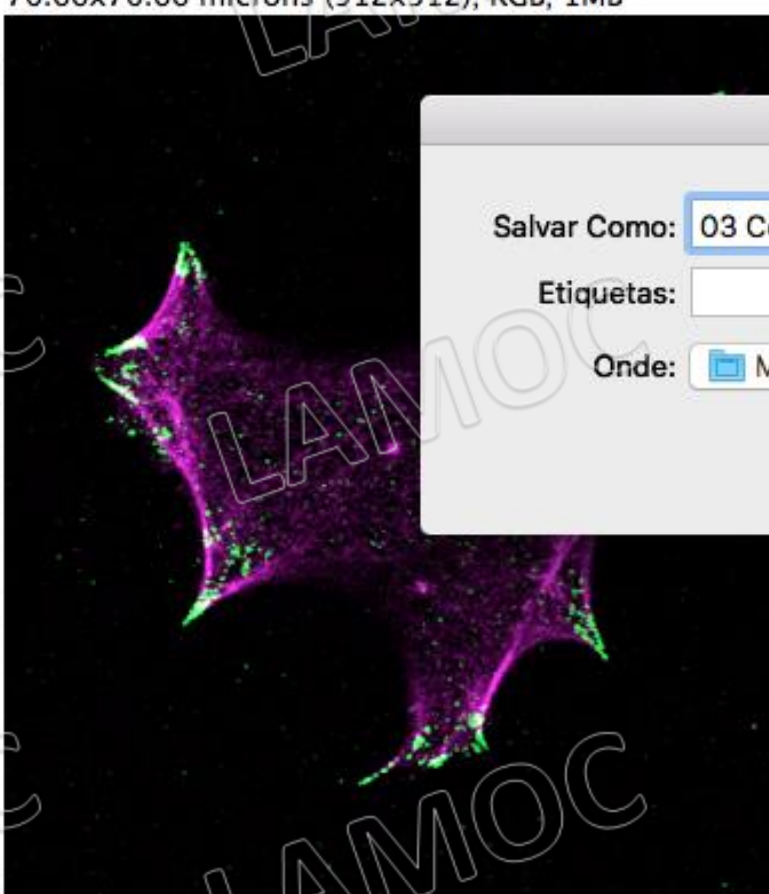
01 SUM_08 cal27 pax 3x

70.66x70.66 microns (512x512); R



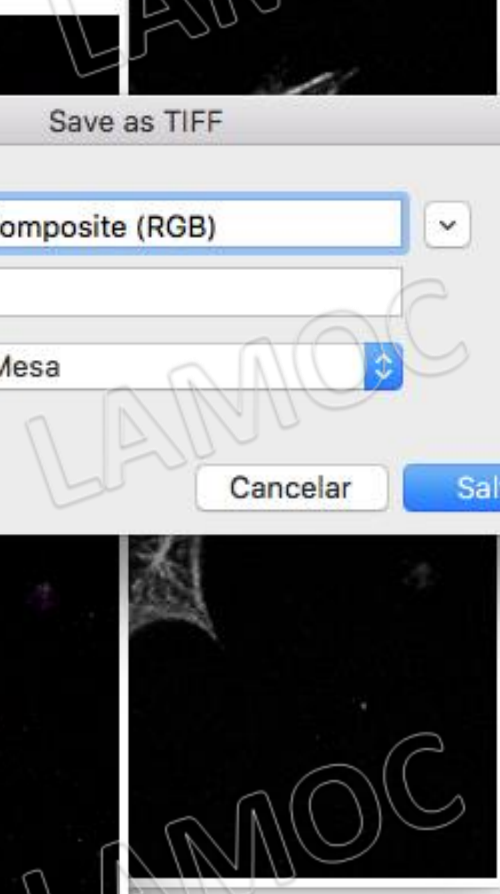
Composite (RGB) (75%)

70.66x70.66 microns (512x512); RGB; 1MB



step size 0-1.tif - C=1-

RGB; 1MB



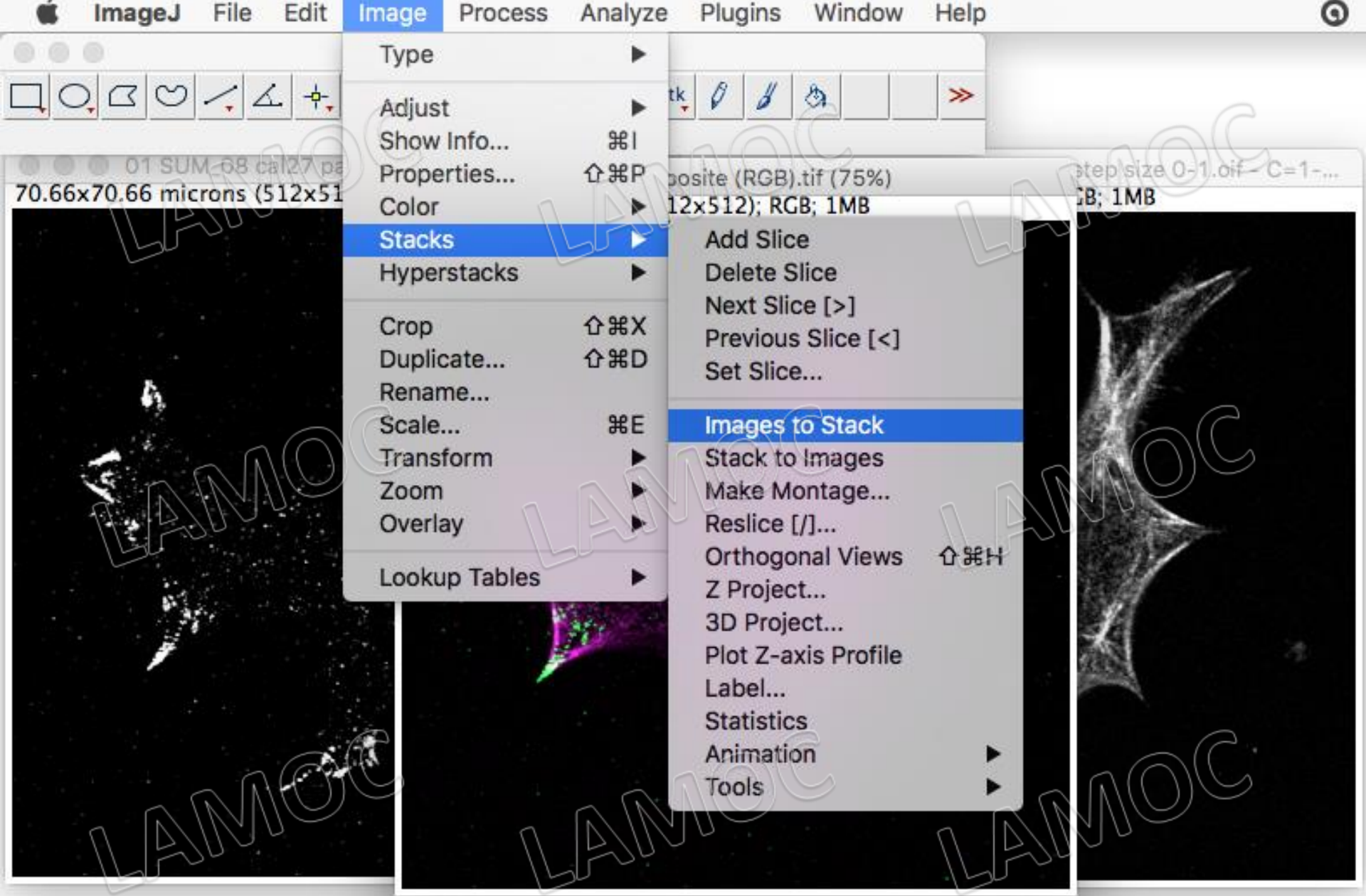
Save as TIFF

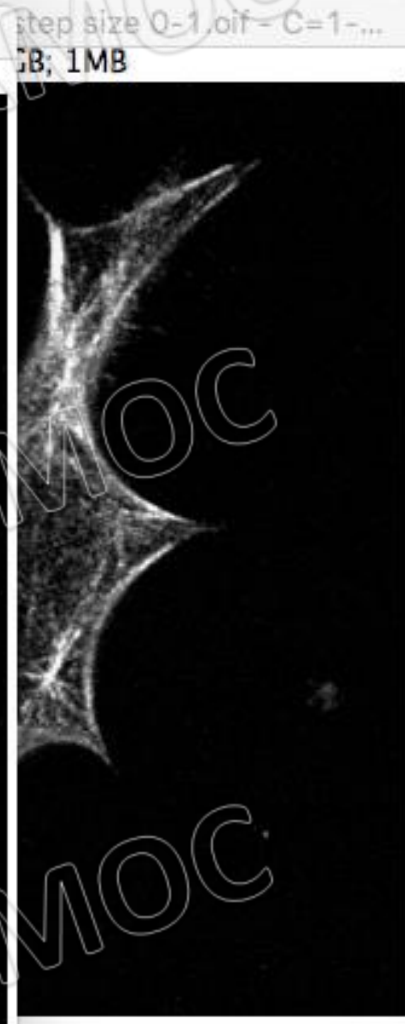
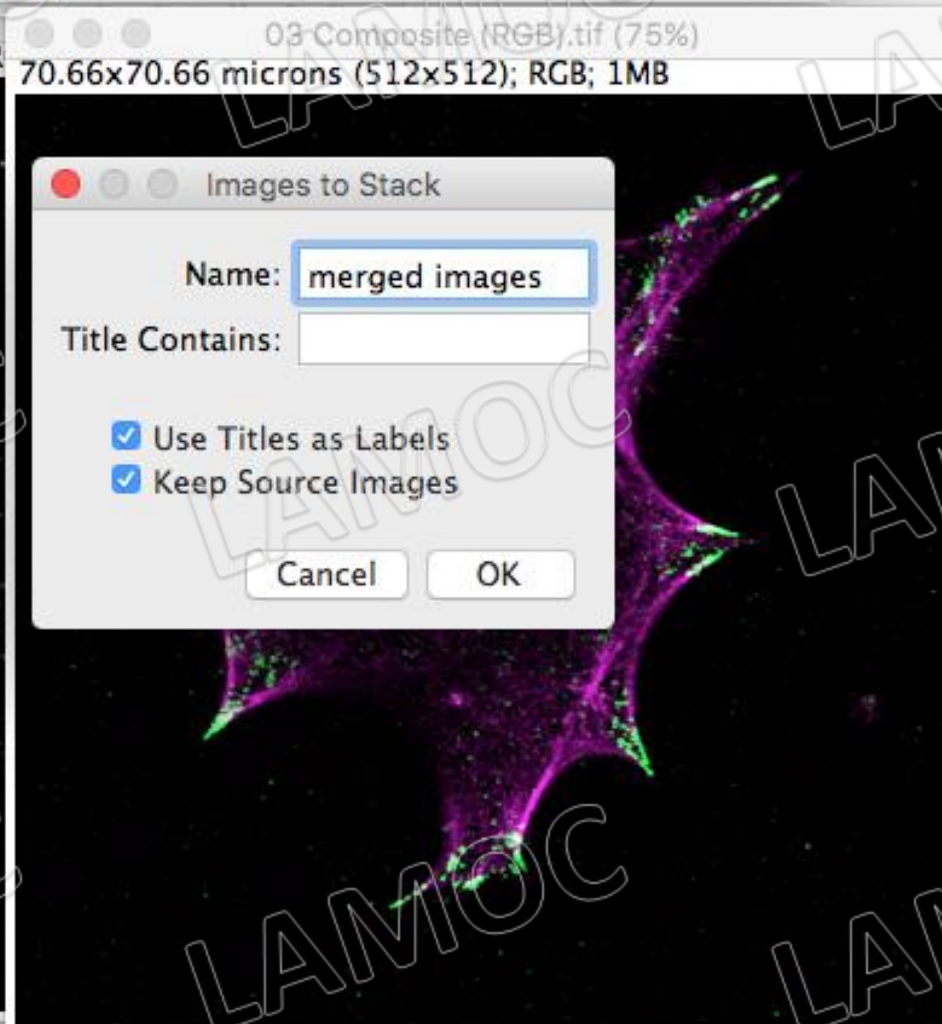
Salvar Como: 03 Composite (RGB) ▾

Etiquetas:

Onde: ▾

Cancelar Salvar





Images to Stack

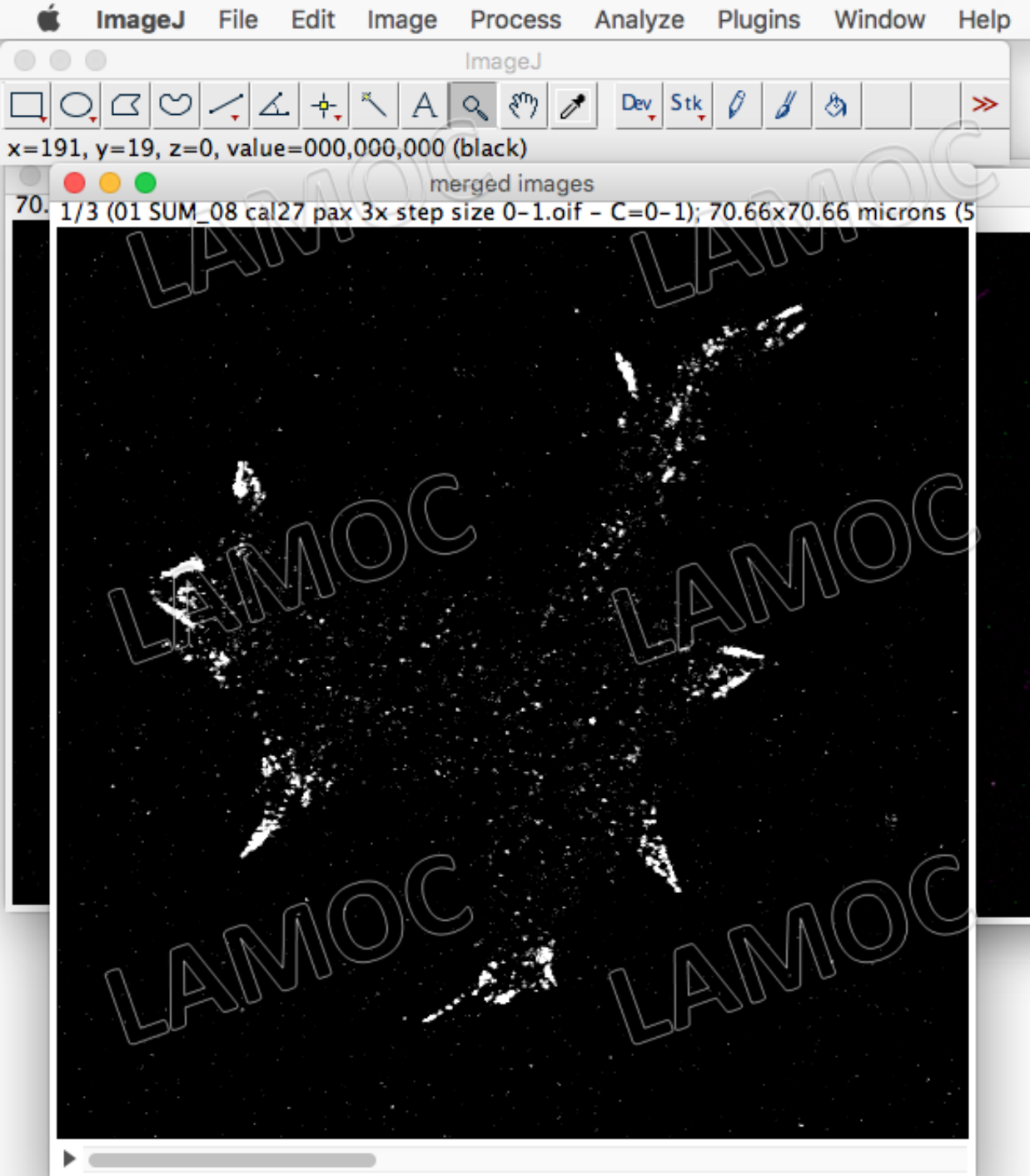
Name: merged images

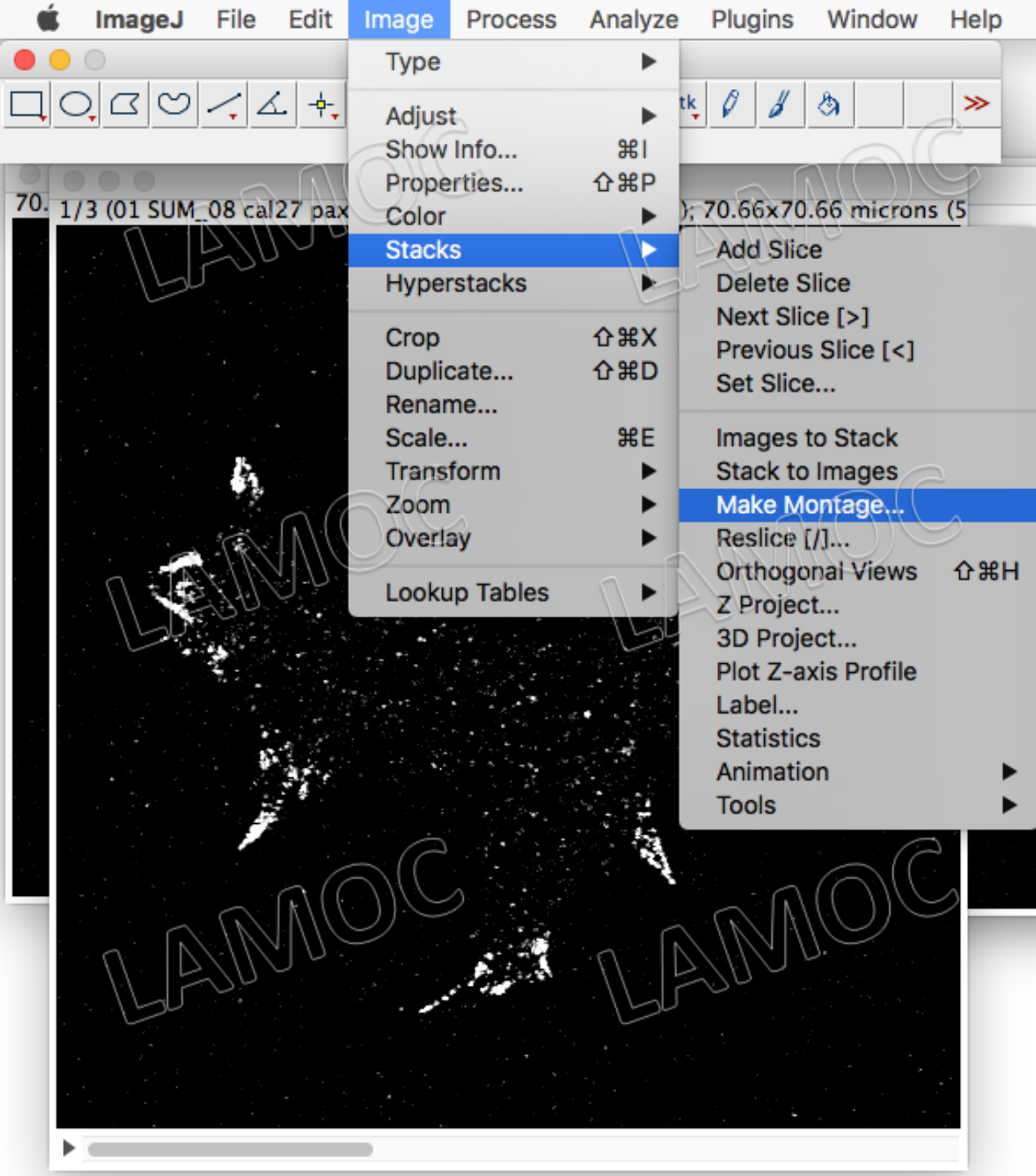
Title Contains:

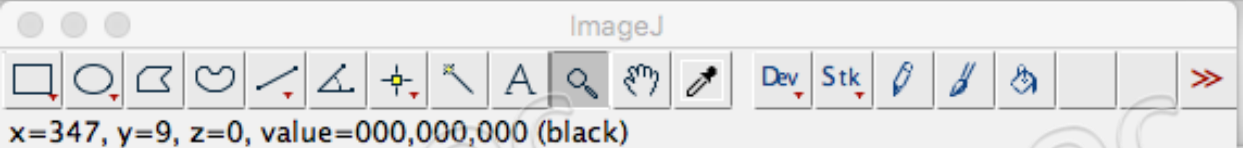
☒ Use Titles as Labels

☒ Keep Source Images

Cancel OK







merged images

70. 1/3 (01 SUM_08 cal27 pax 3x step size 0-1.oif - C=0-1); 70.66x70.66 microns (5

Make Montage

Columns:

Rows:

Scale Factor:

First Slice:

Last Slice:

Increment:

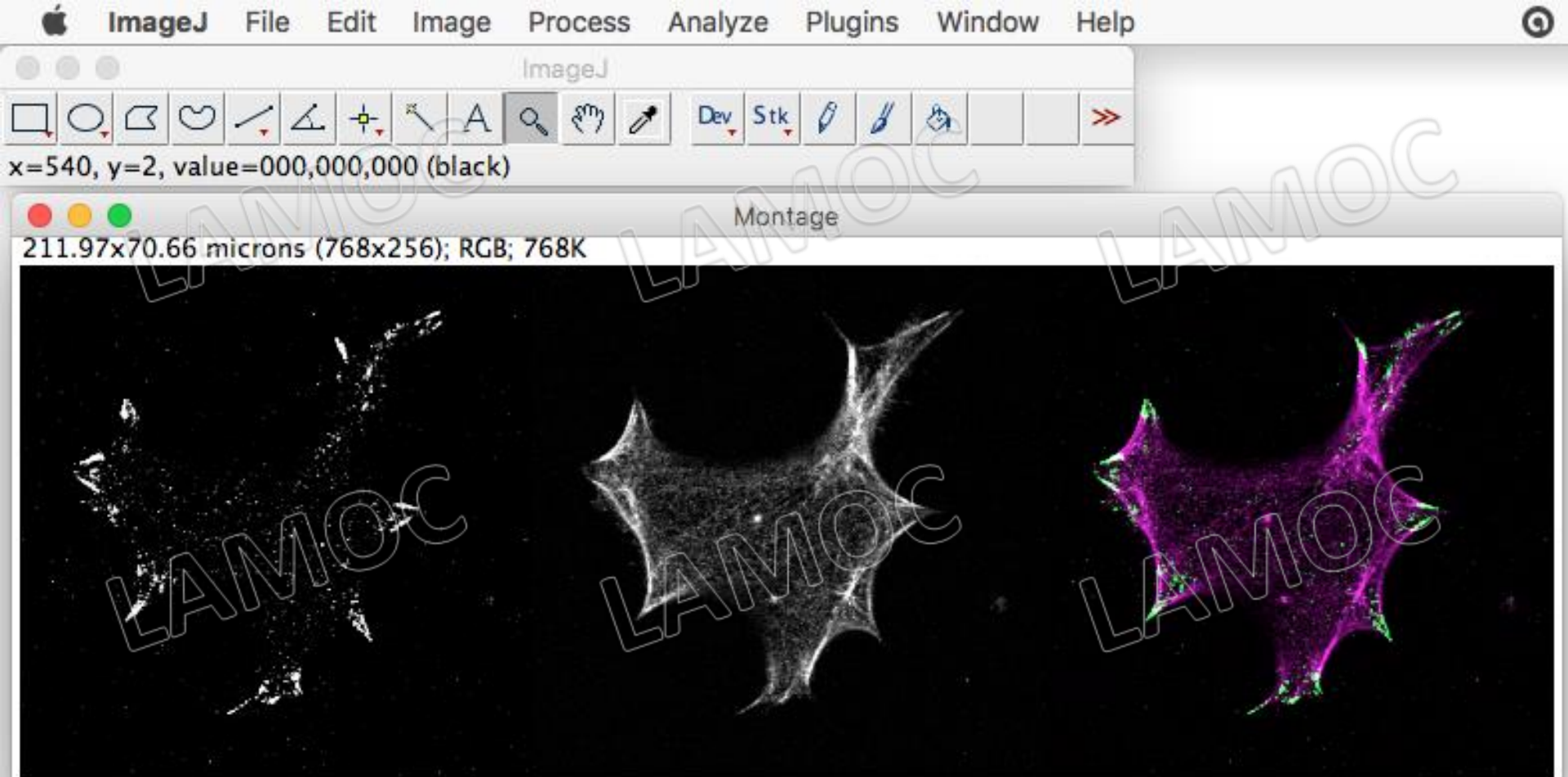
Border Width:

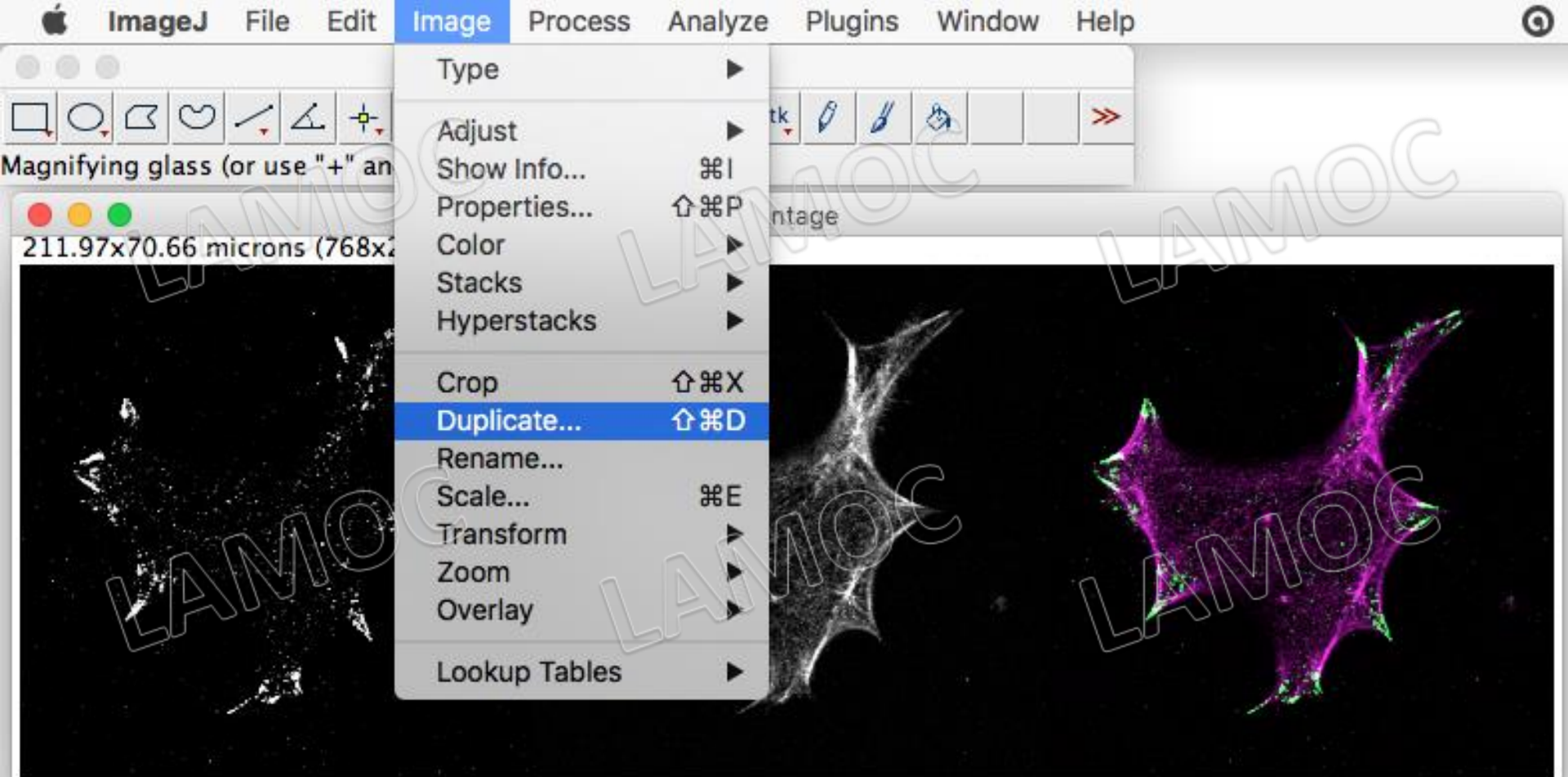
Font Size:

☐ Label Slices

☐ Use Foreground Color

Cancel OK





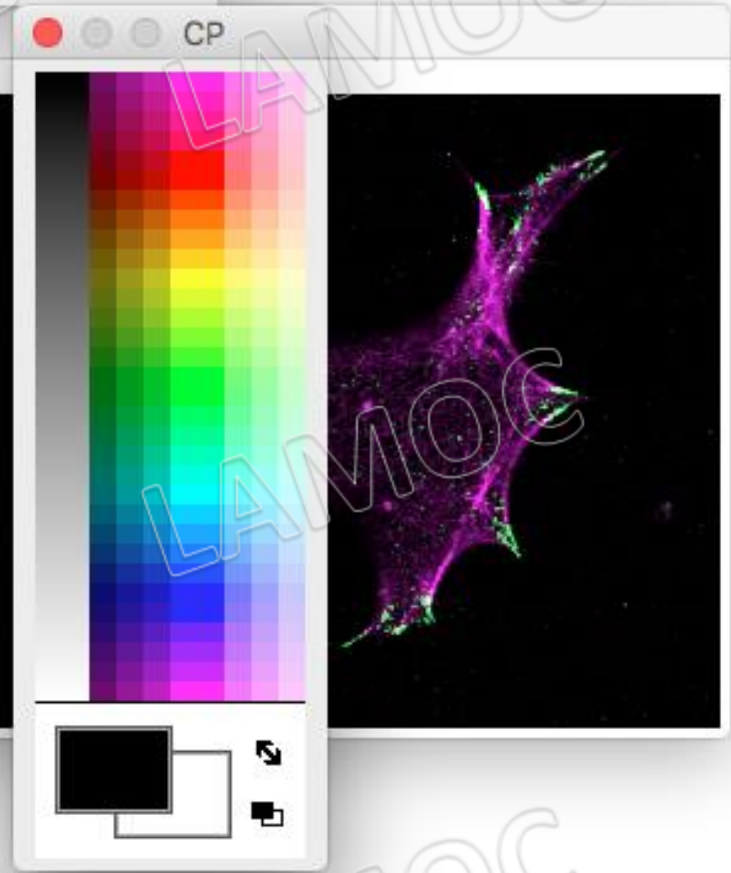


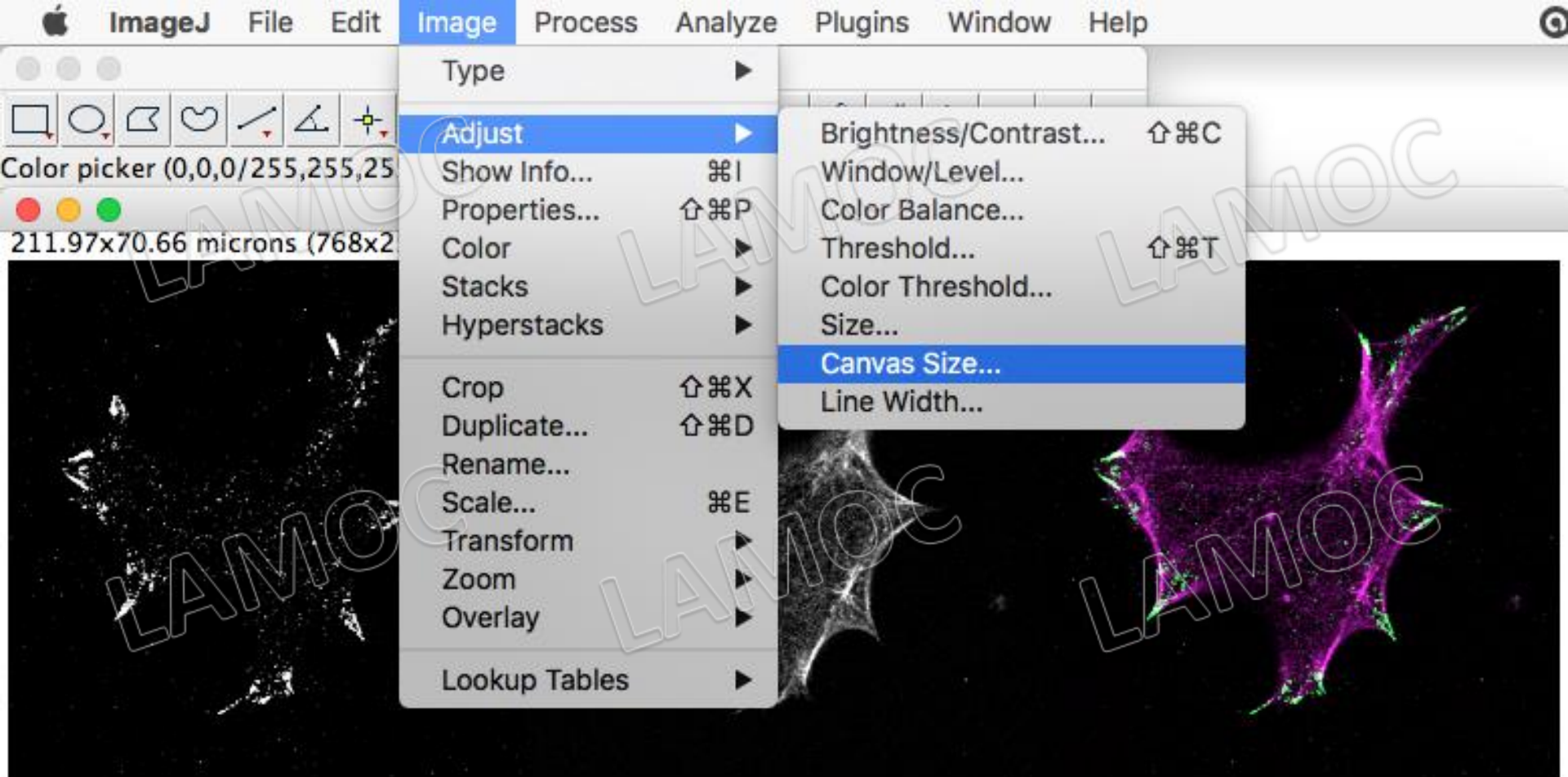
x=474, y=0, value=000,000,000 (black)

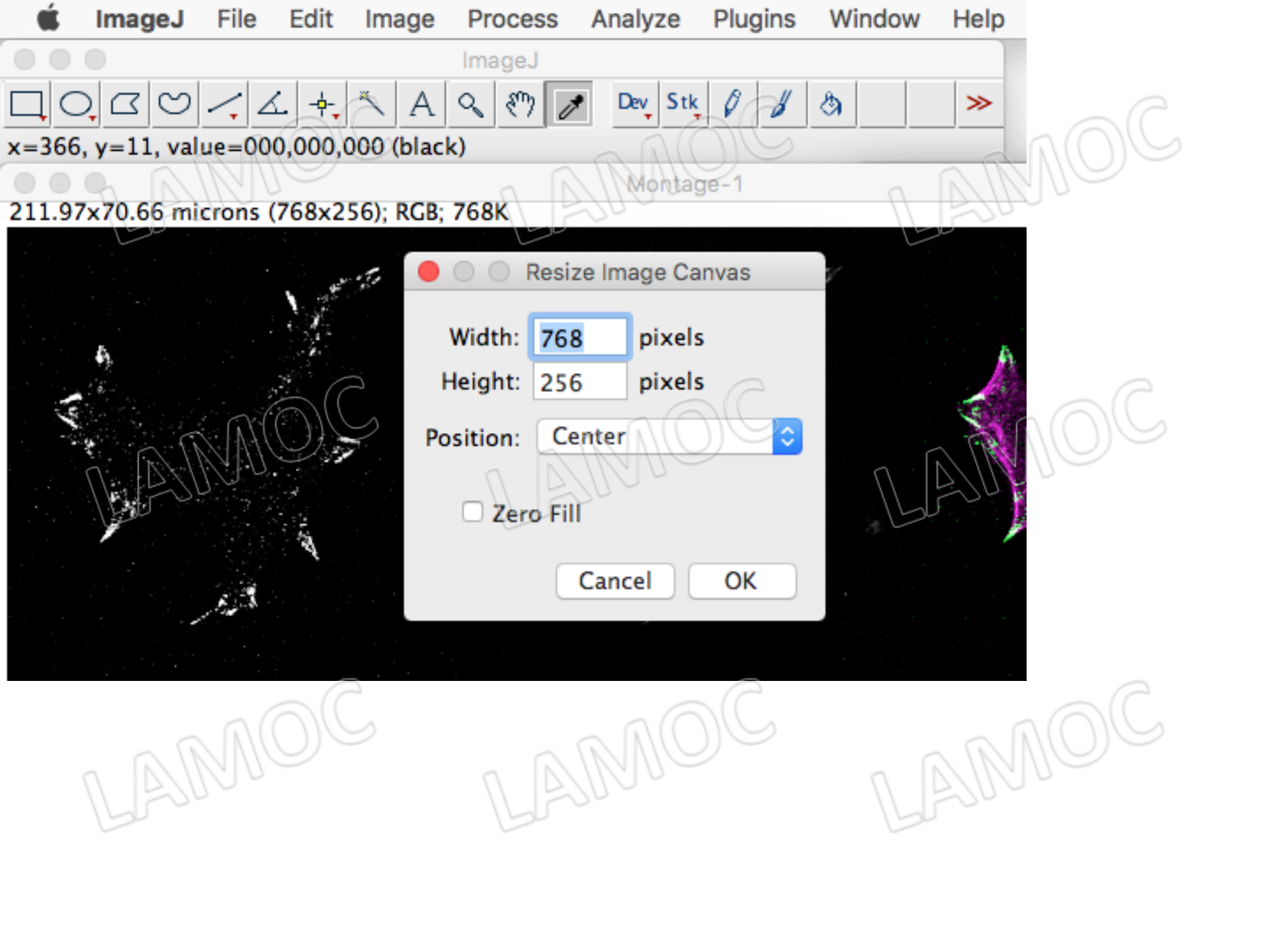


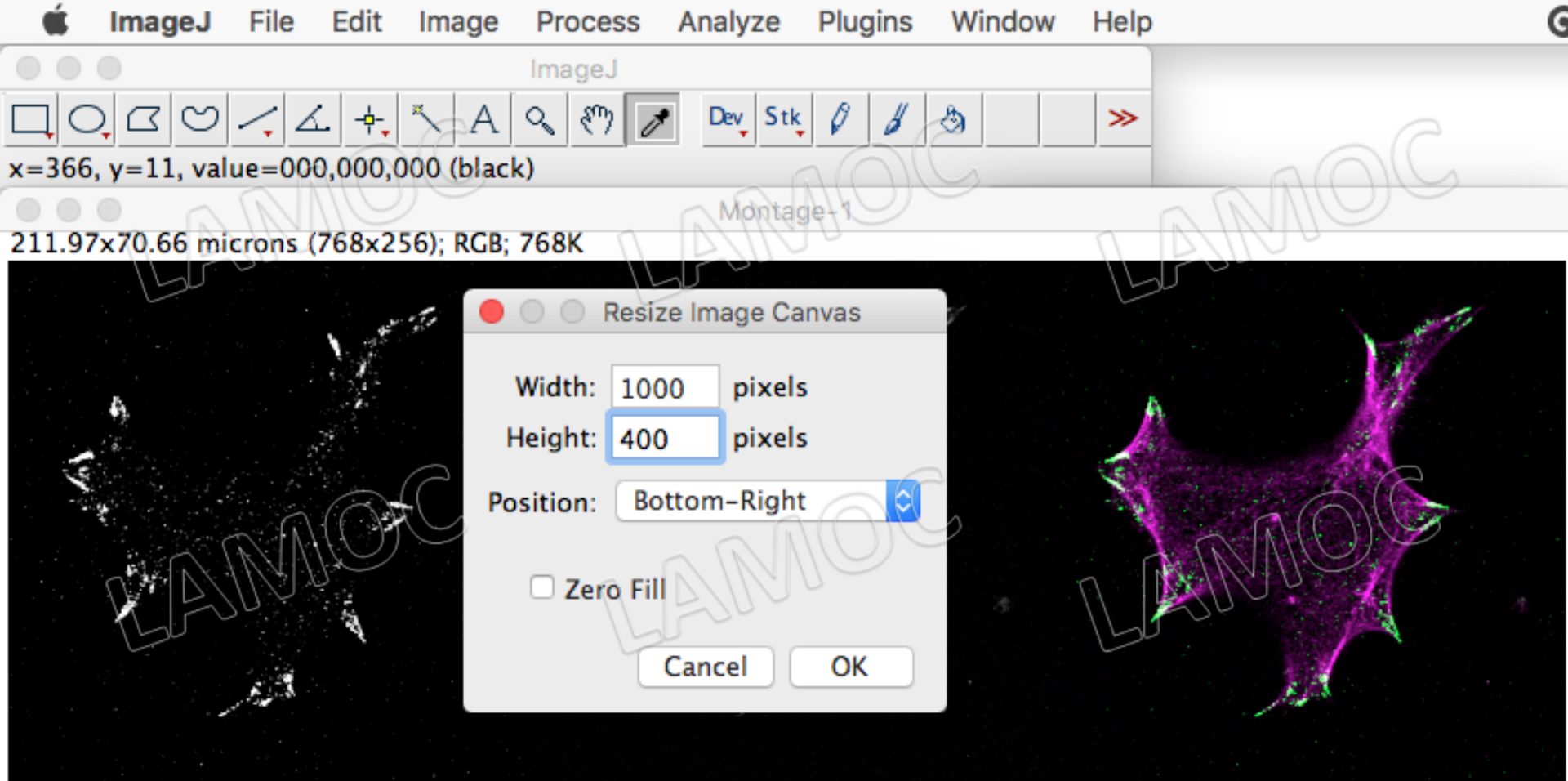
211.97x70.66 microns (768x256); RGB; 768K

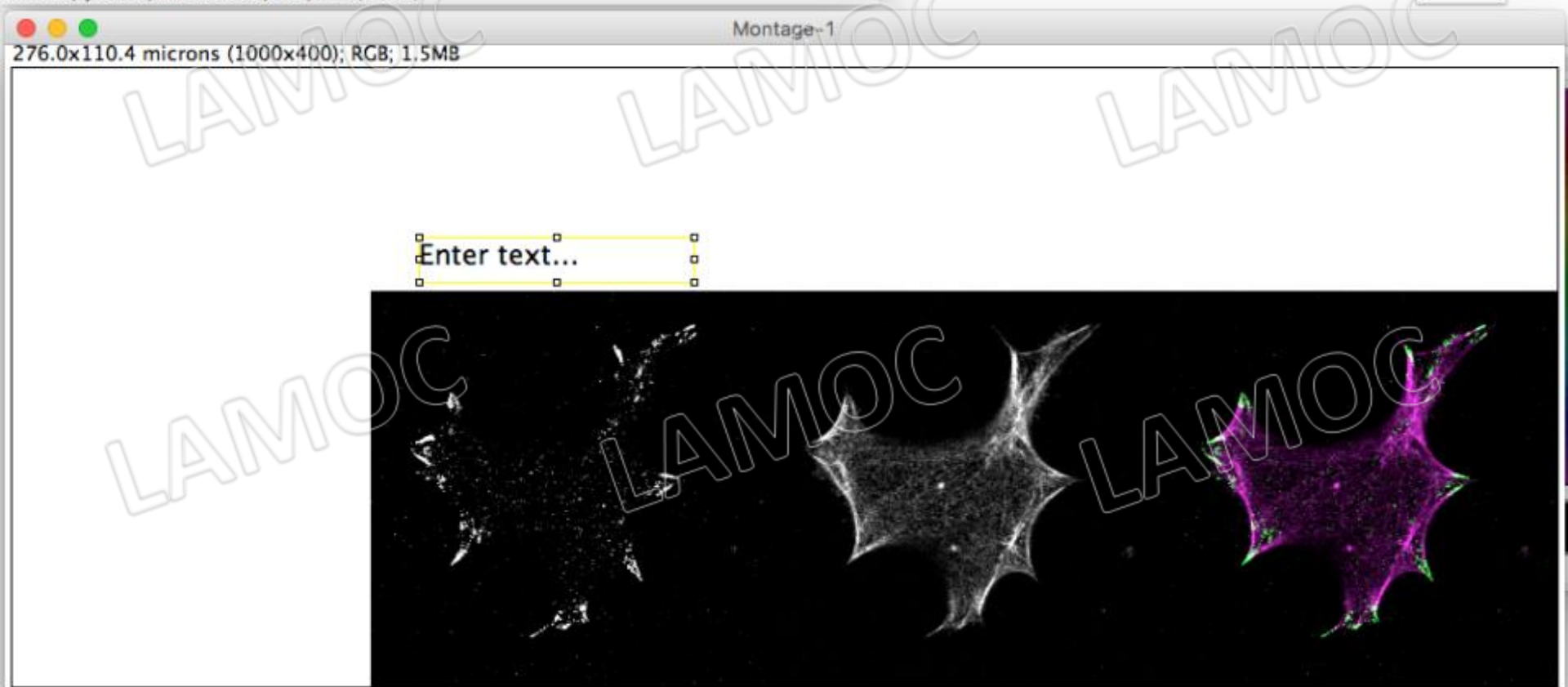
Montage-1

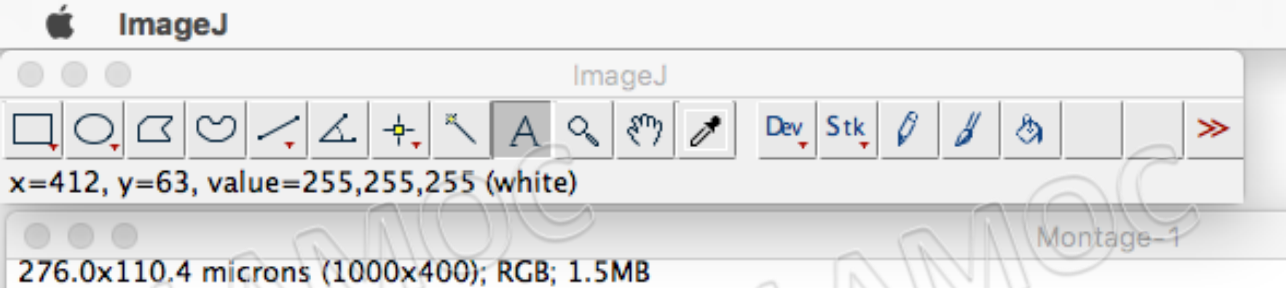




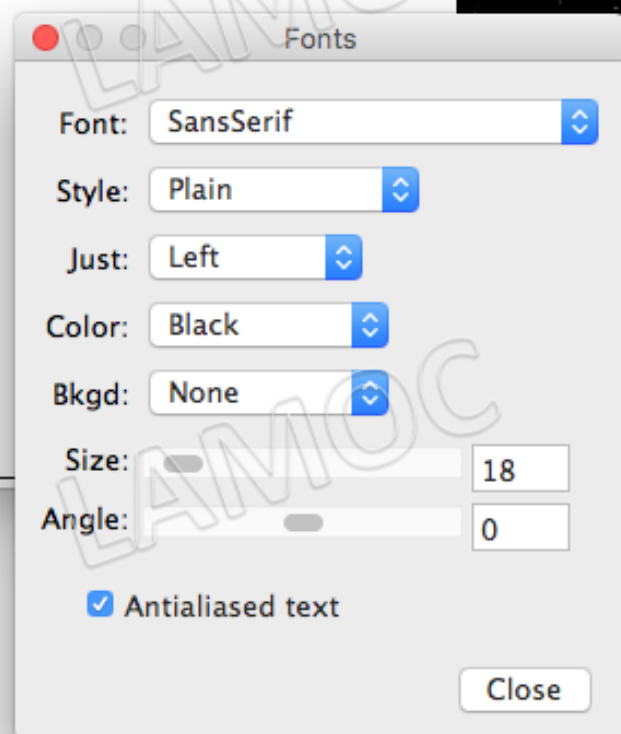
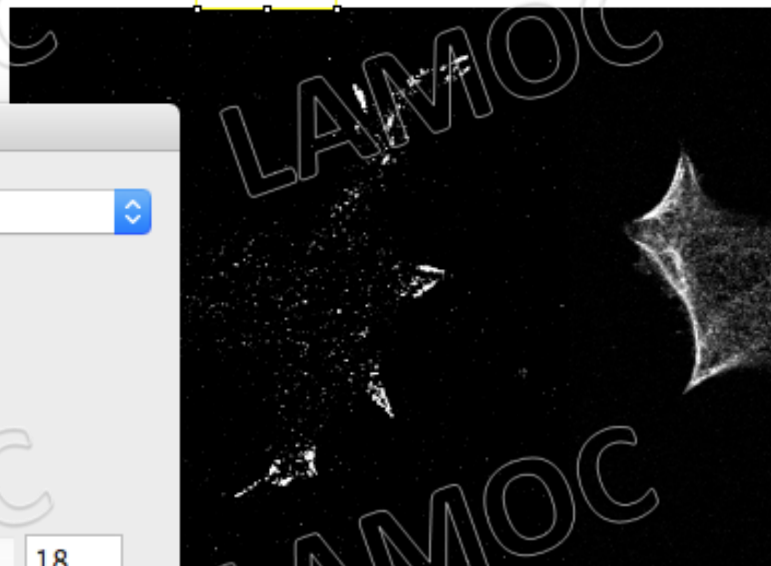






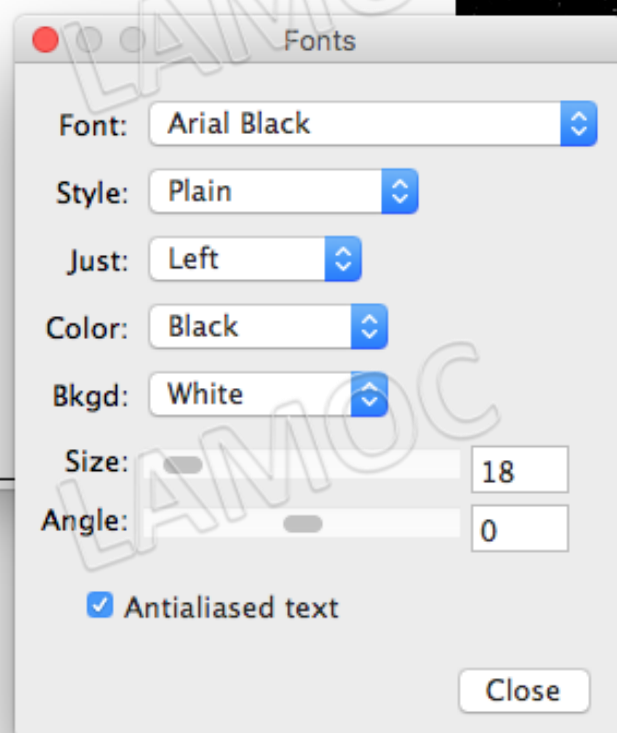
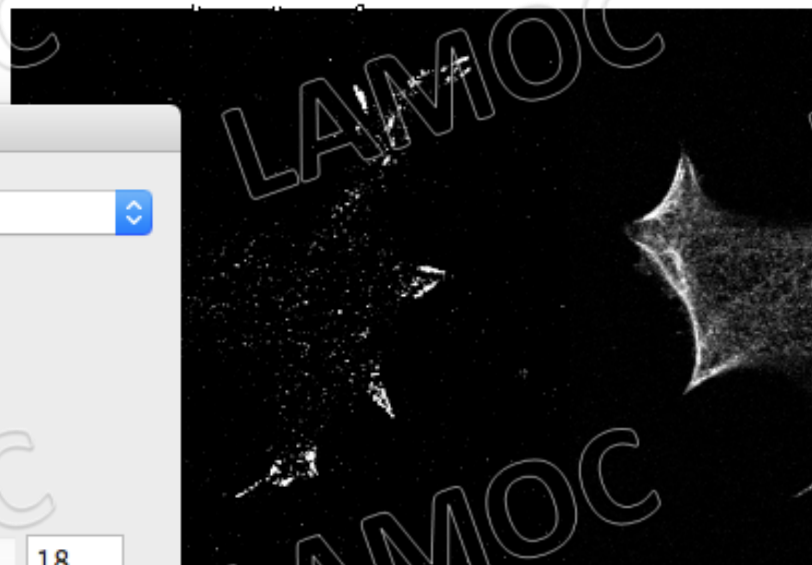


Paxillin





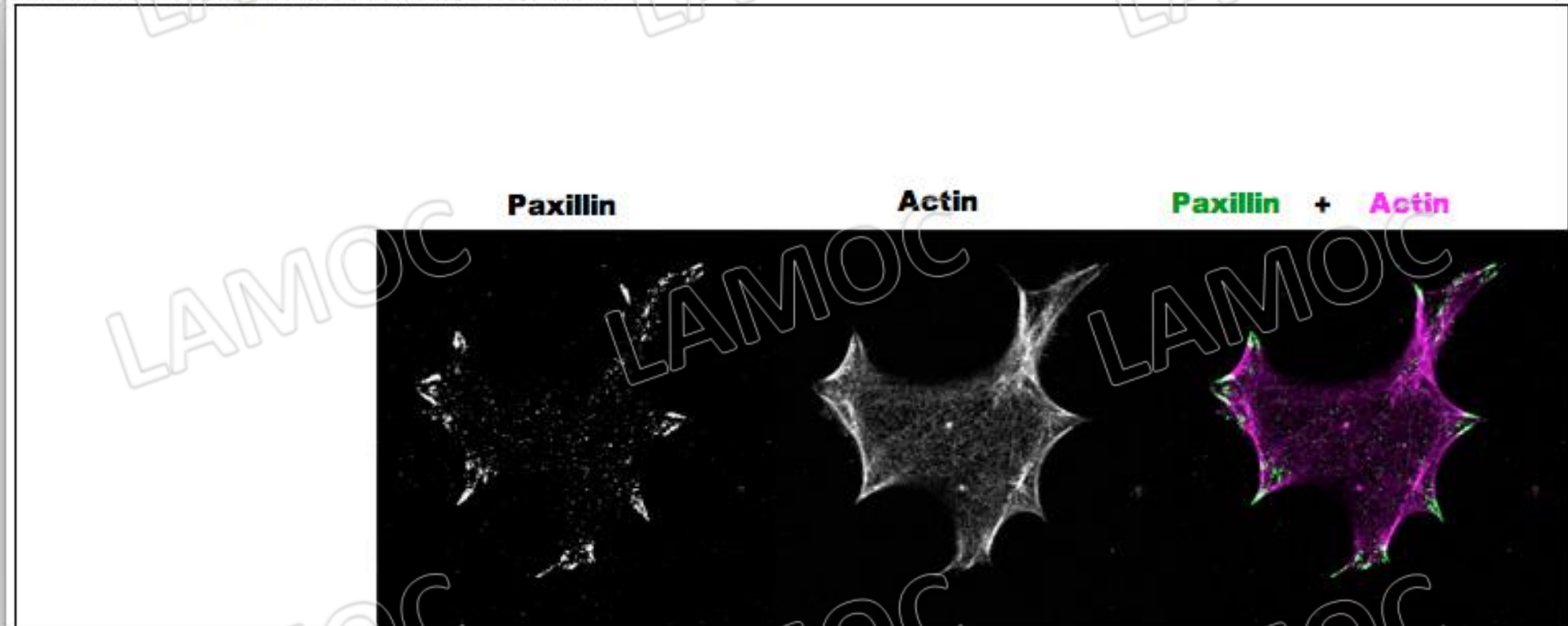
Paxillin





Montage-1 (75%)

276.0x110.4 microns (1000x400); RGB; 1.5MB

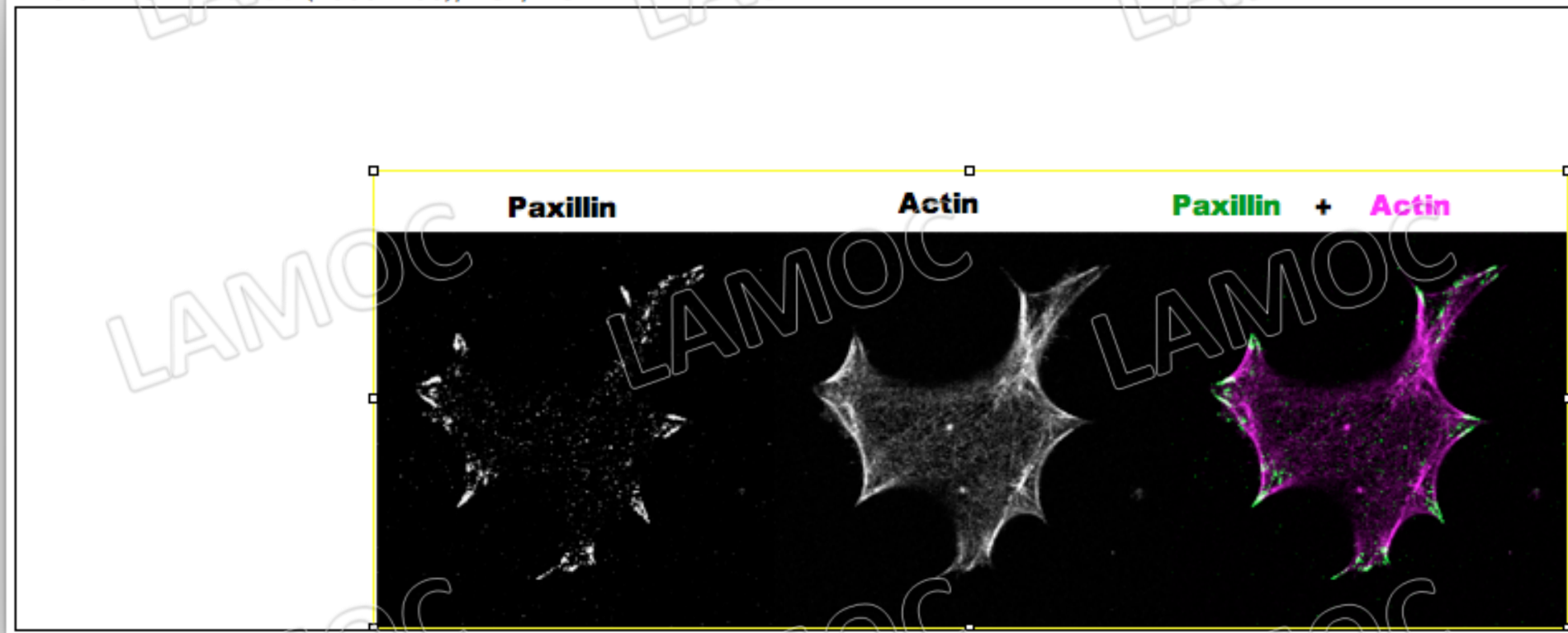


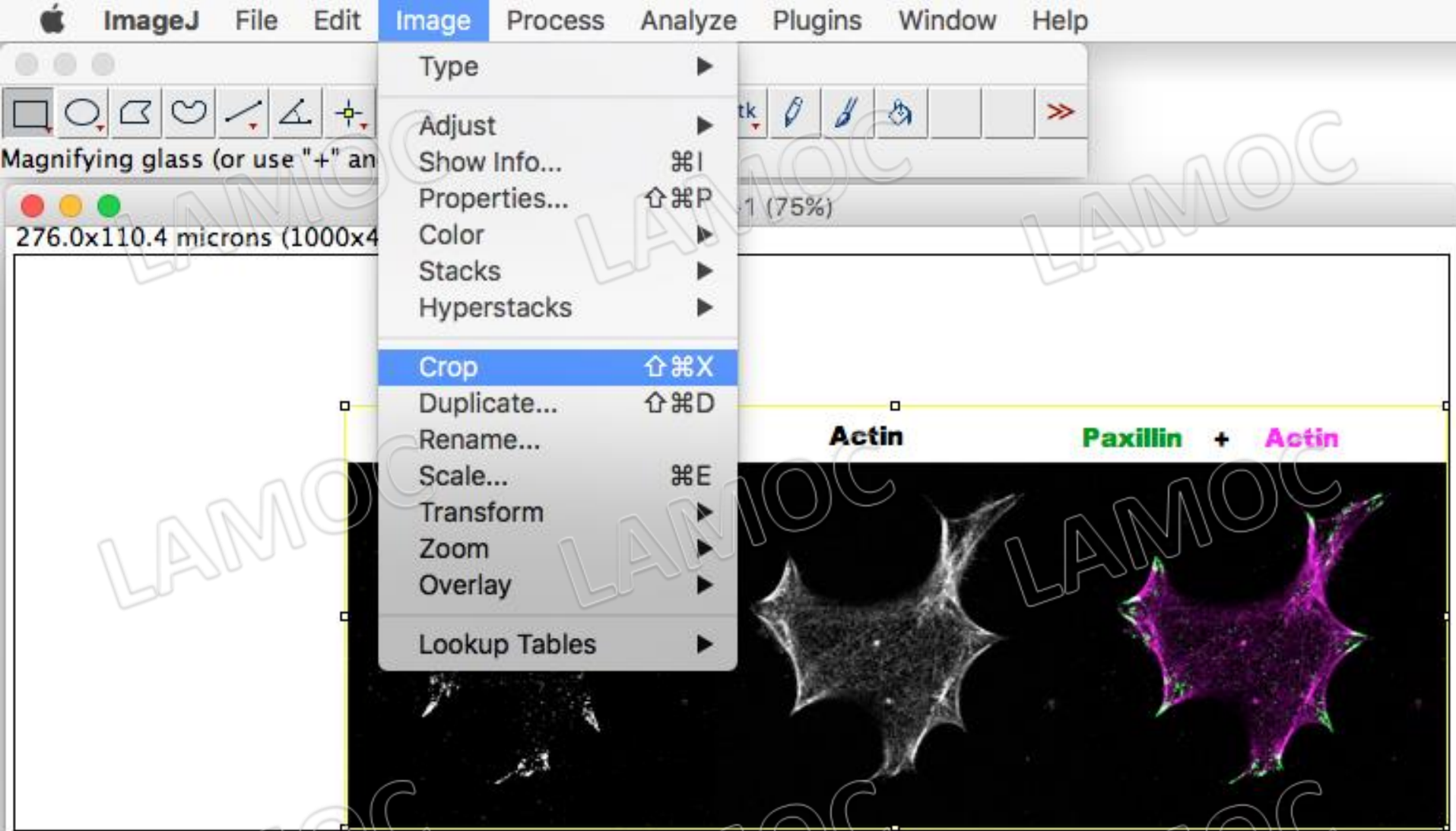


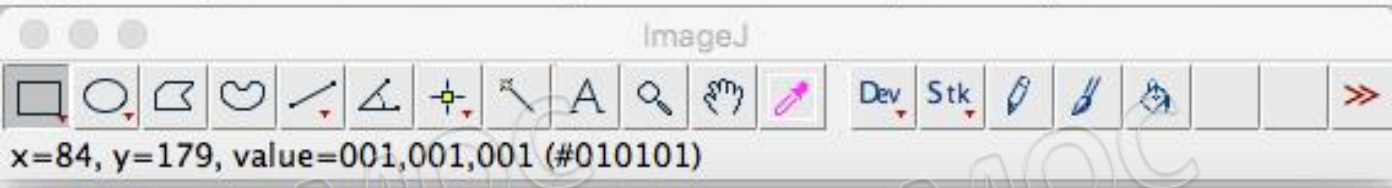
x=429, y=114, value=255,255,255 (white)

Montage-1 (75%)

276.0x110.4 microns (1000x400); RGB; 1.5MB







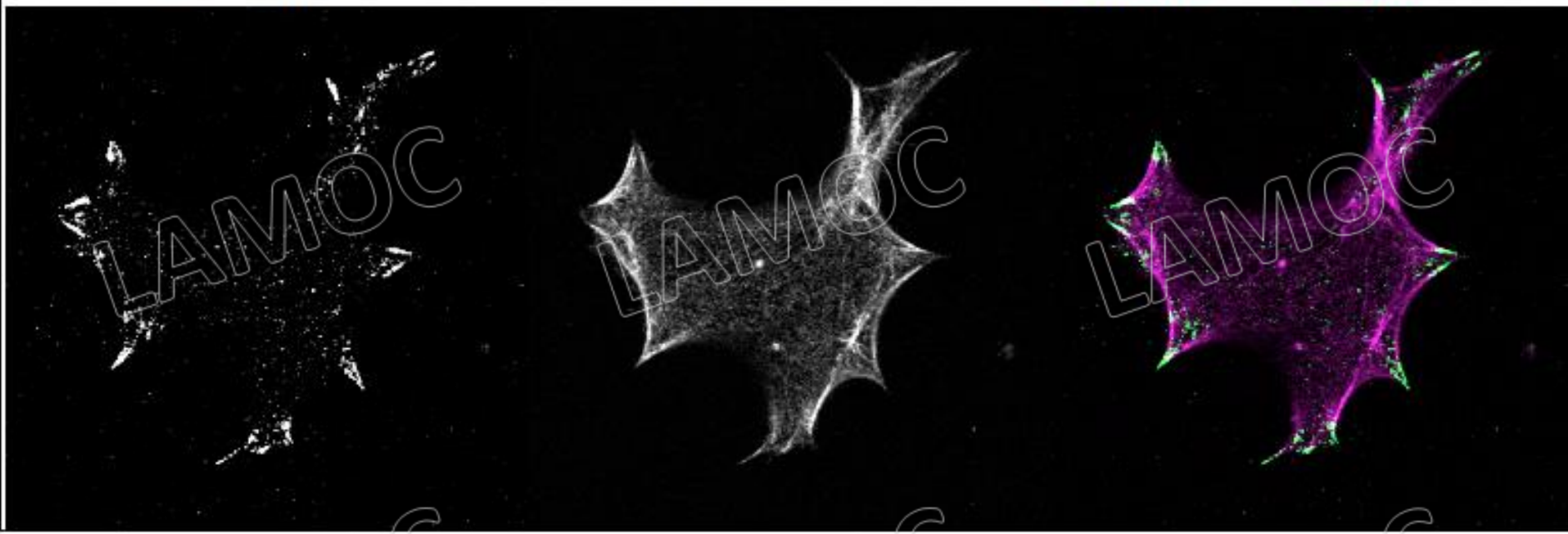
Montage-1

212.52x81.42 microns (770x295); RGB; 887K

Paxillin

Actin

Paxillin + Actin



LAMOC

LAMOC

LAMOC

LAMOC

LAMOC

LAMOC

LAMOC

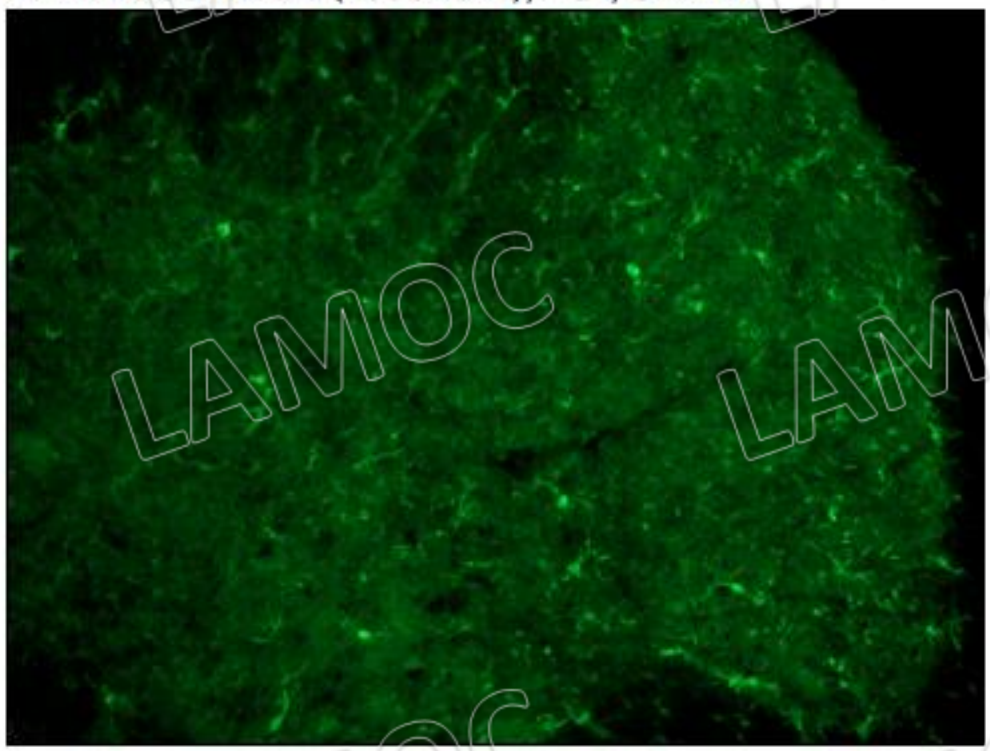
LAMOC

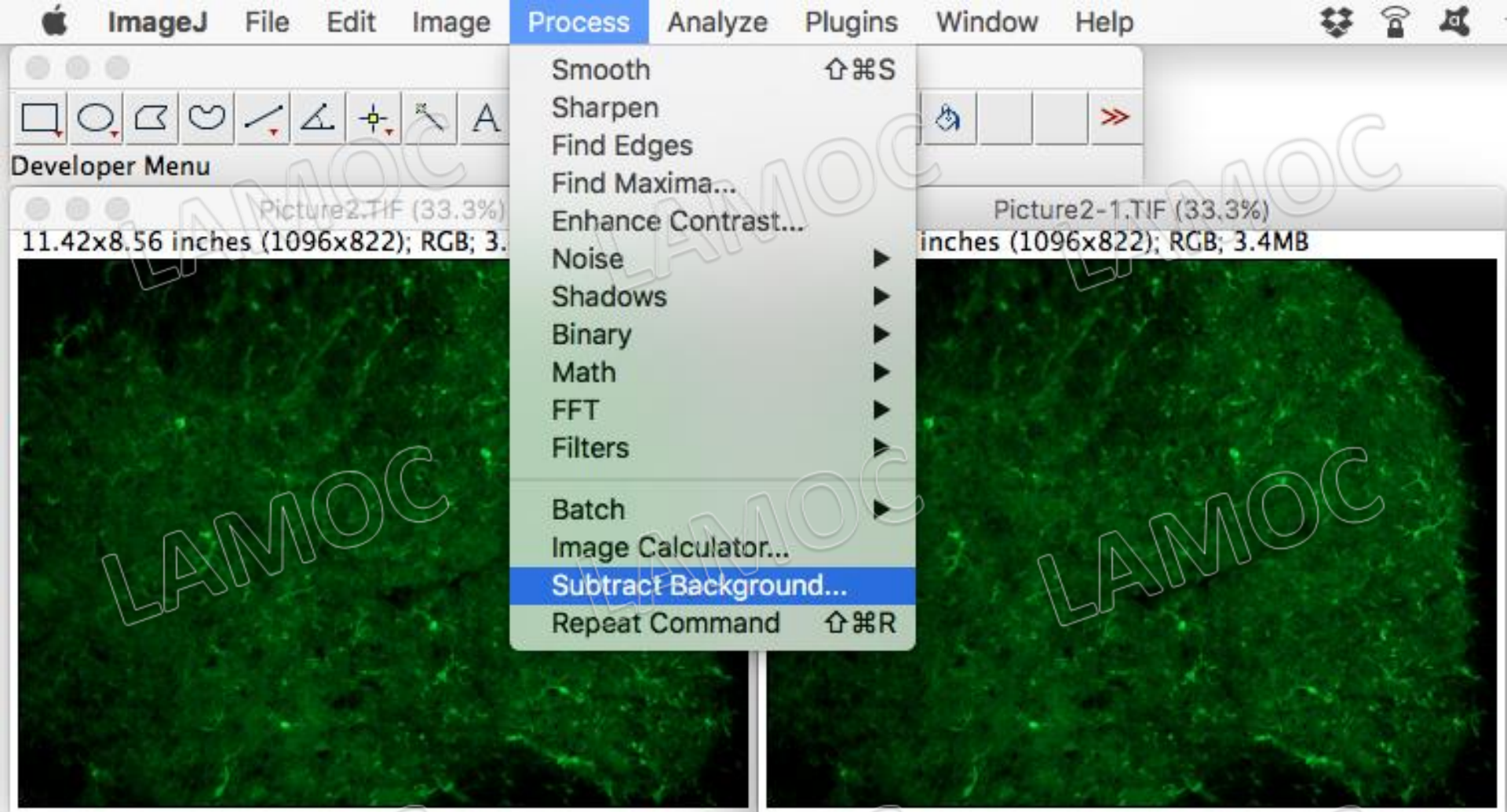
LAMOC



x=620, y=228, value=000,041,000 (#002900)

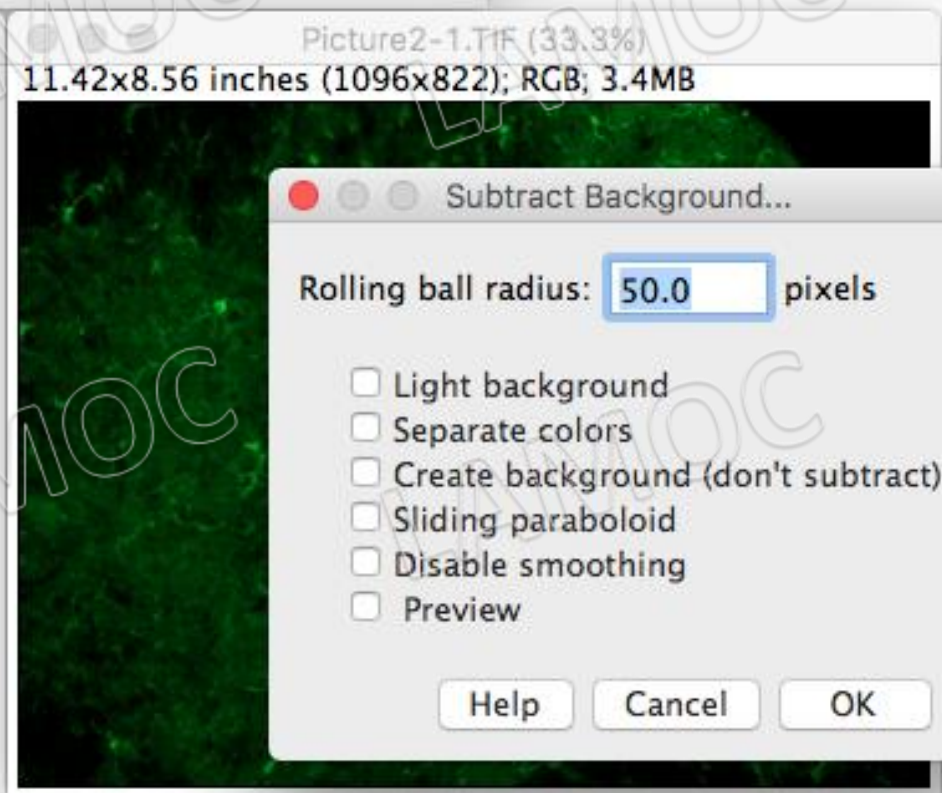
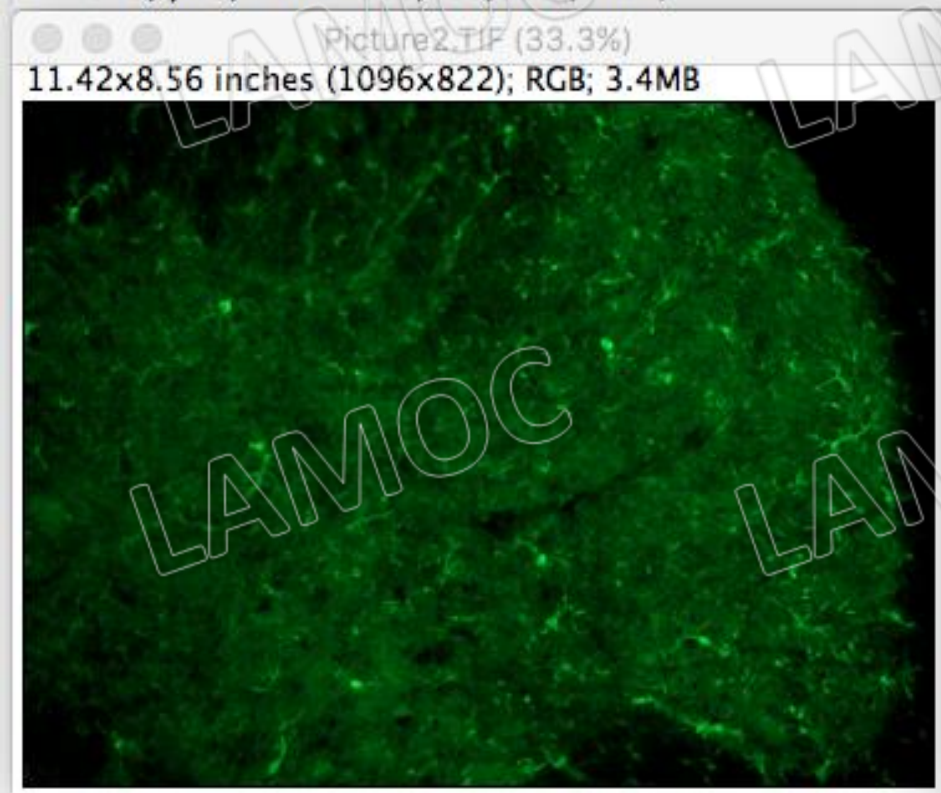
Picture2.TIF (33.3%)
11.42x8.56 inches (1096x822); RGB; 3.4MB







x=1029, y=3, value=000,000,000 (black)

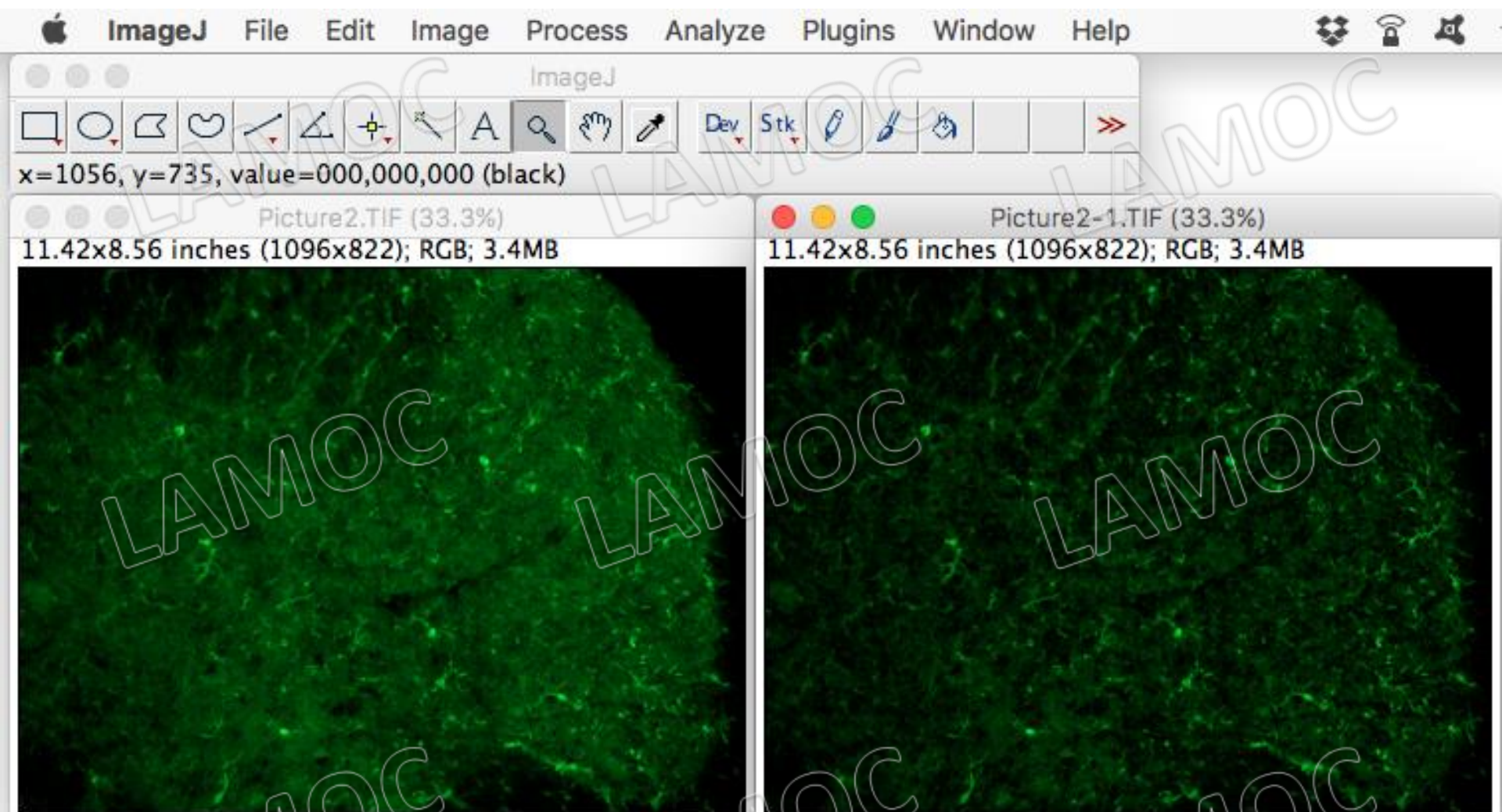


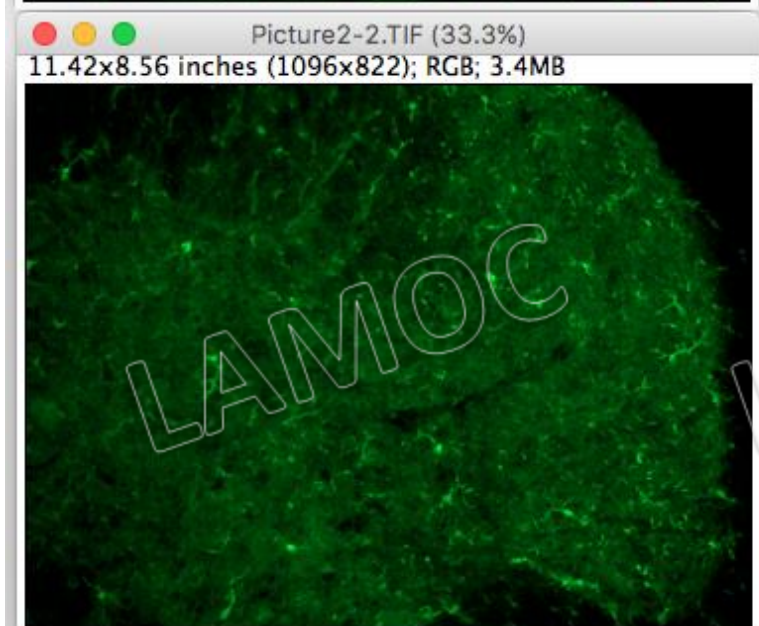
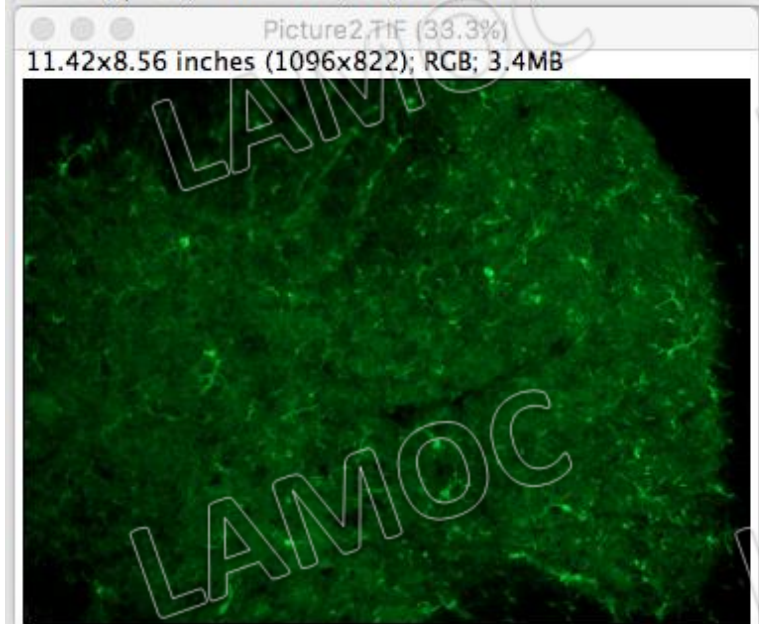
Subtract Background...

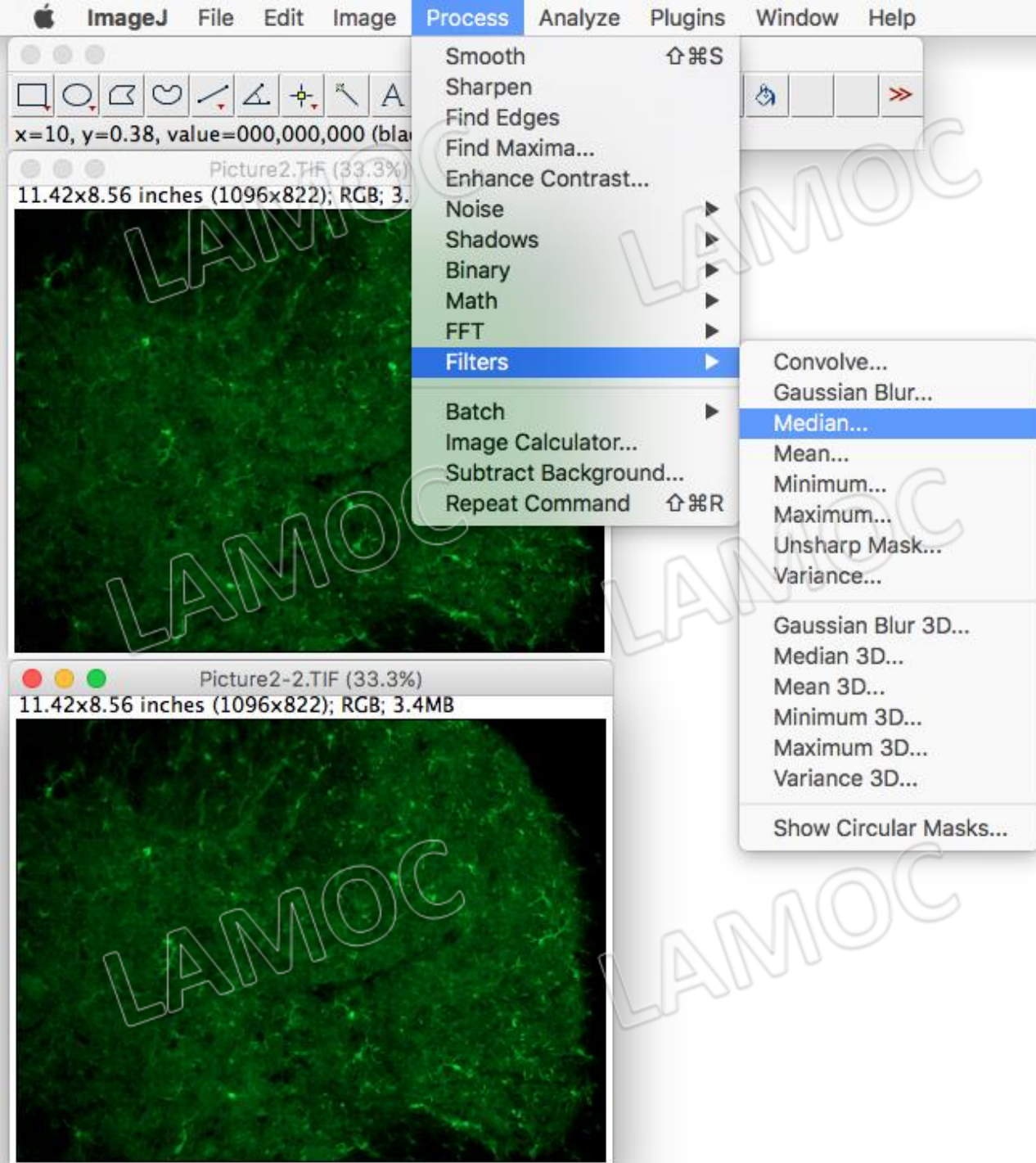
Rolling ball radius: pixels

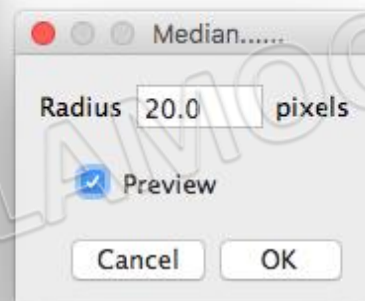
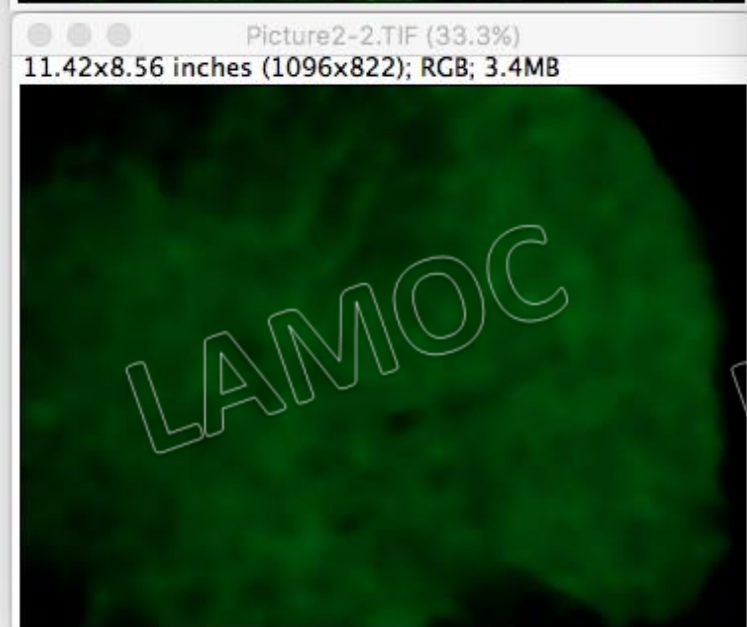
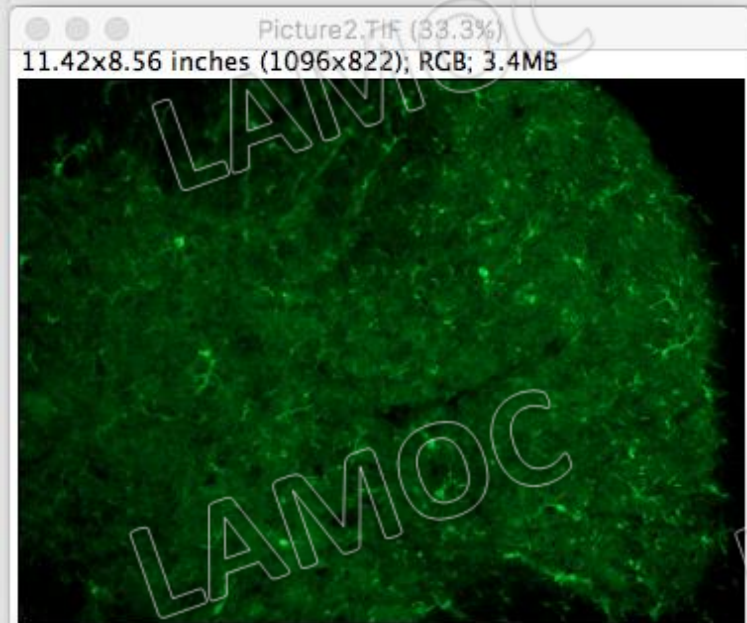
- ☐ Light background
- ☐ Separate colors
- ☐ Create background (don't subtract)
- ☐ Sliding paraboloid
- ☐ Disable smoothing
- ☐ Preview

Help Cancel OK



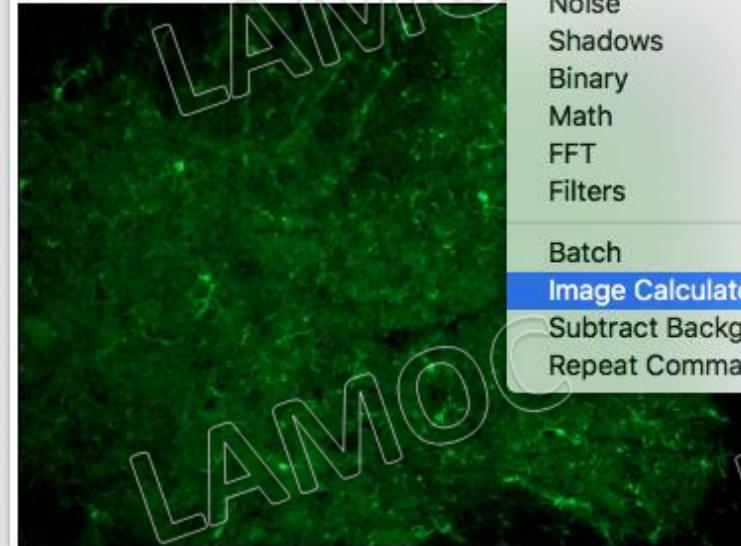








Picture2.tif (33.3%)
11.42x8.56 inches (1096x822); RGB; 3.4MB

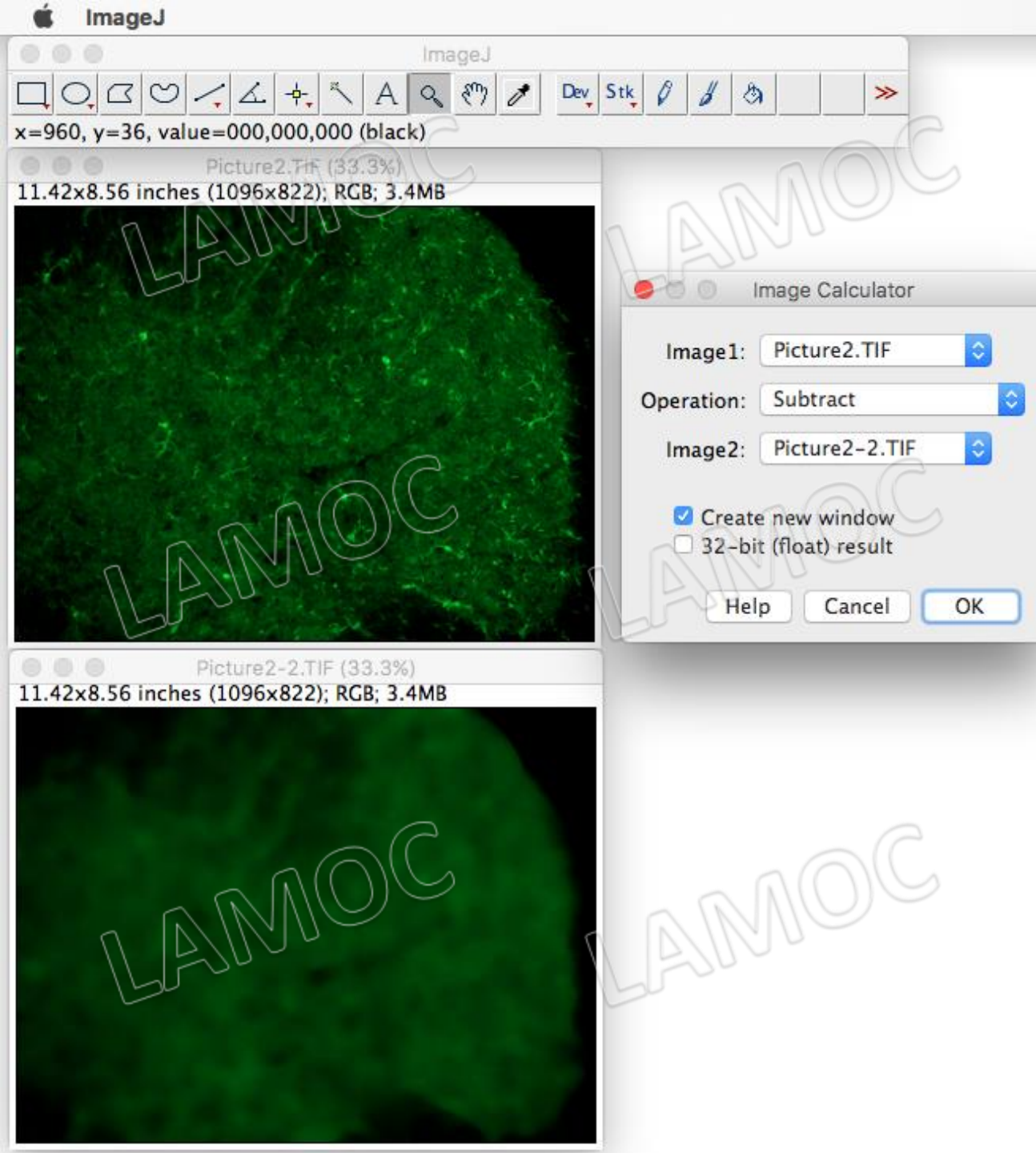


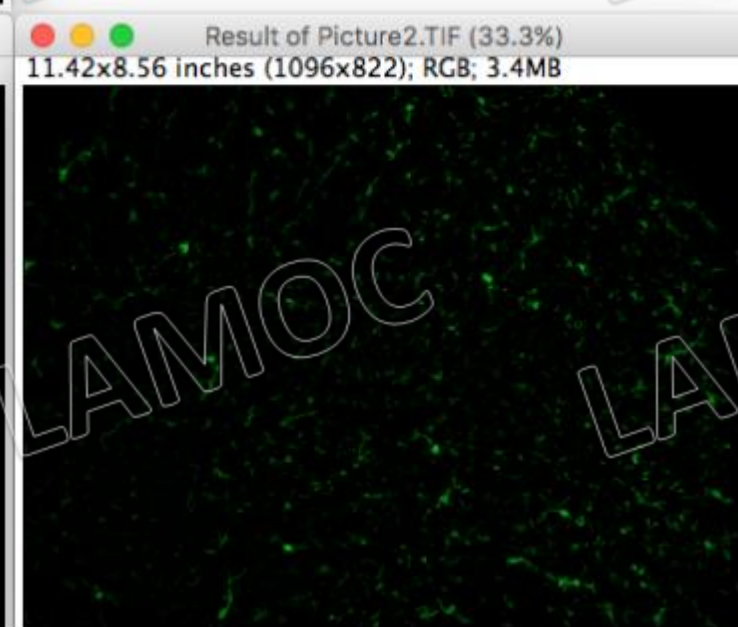
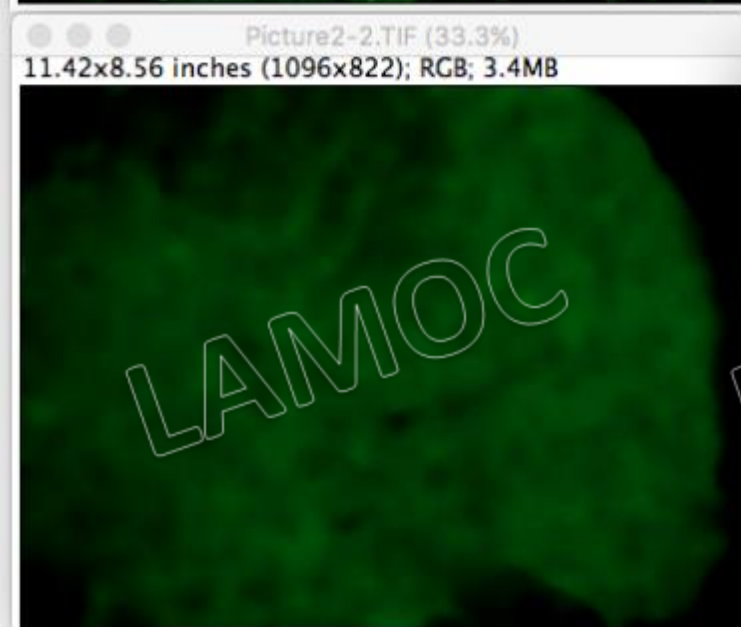
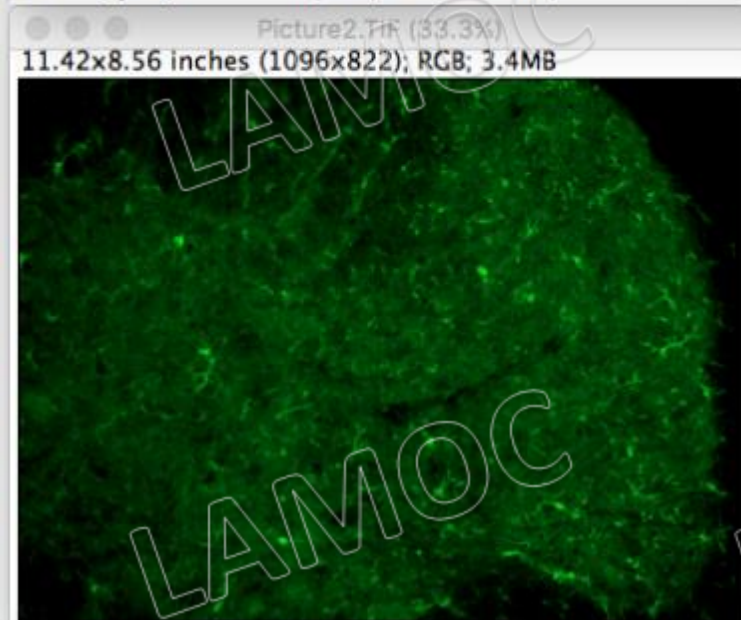
Picture2-2.tif (33.3%)
11.42x8.56 inches (1096x822); RGB; 3.4MB



- Smooth ⌘S
- Sharpen
- Find Edges
- Find Maxima...
- Enhance Contrast...
- Noise ▶
- Shadows ▶
- Binary ▶
- Math ▶
- FFT ▶
- Filters ▶
- Batch ▶
- Image Calculator...**
- Subtract Background...
- Repeat Command ⌘R

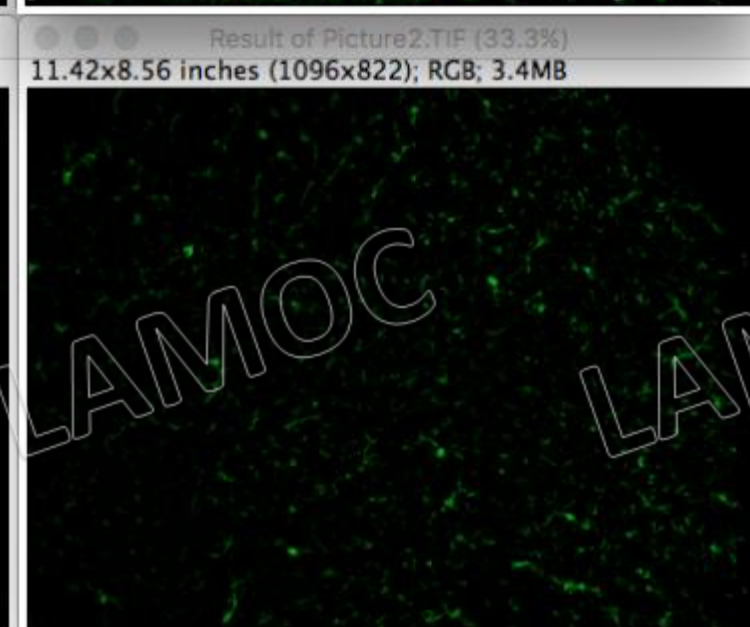
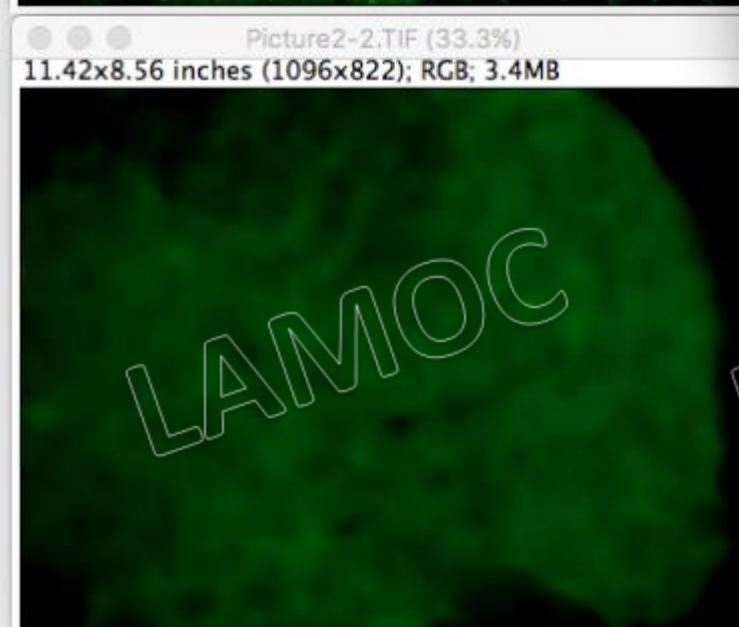
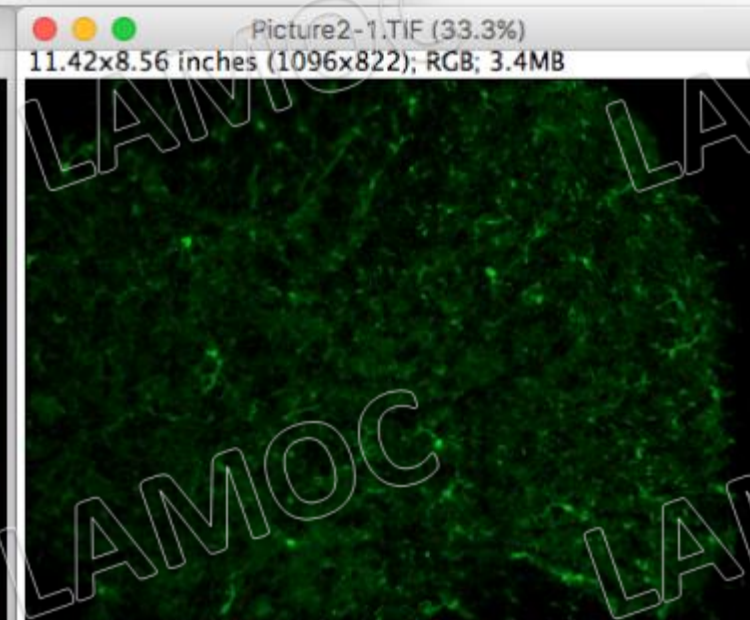
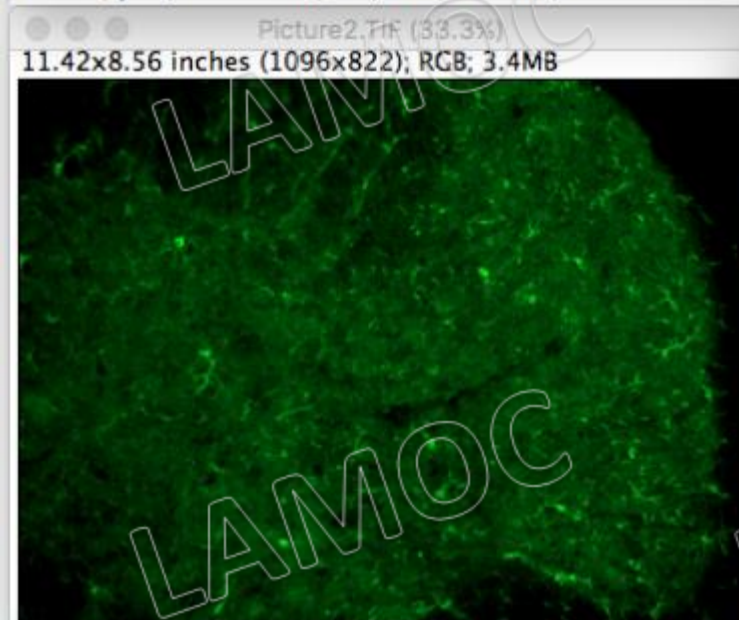


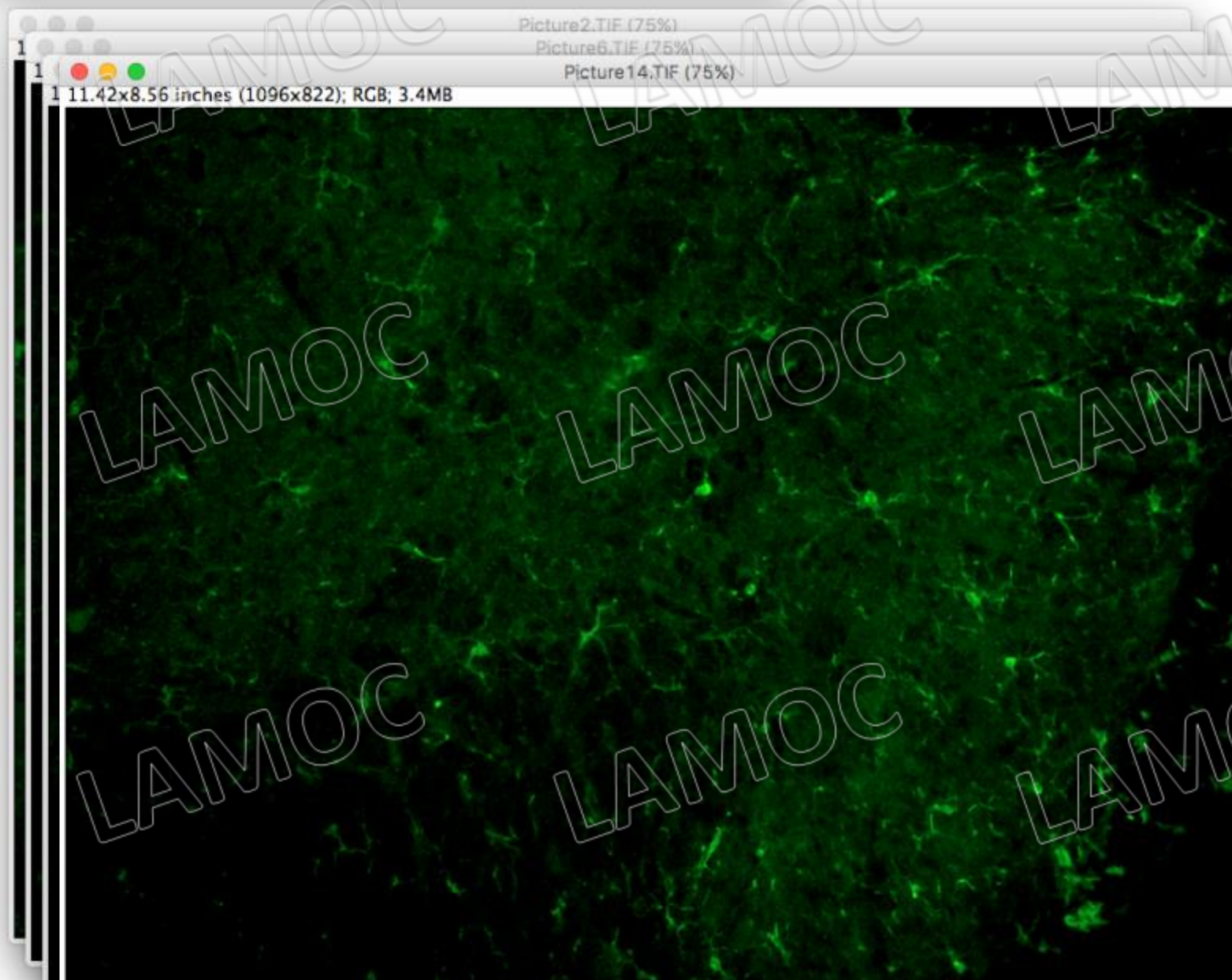


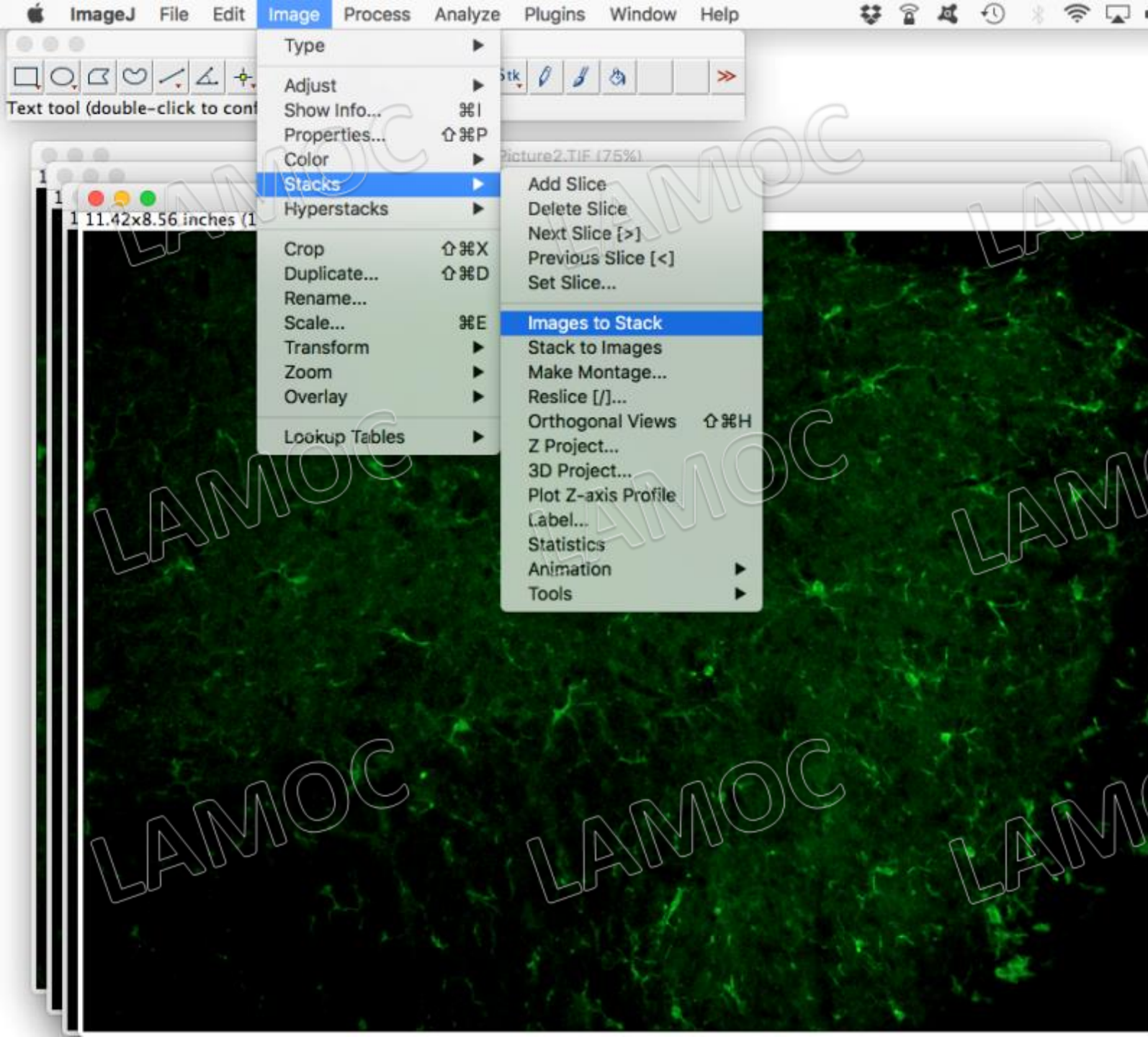


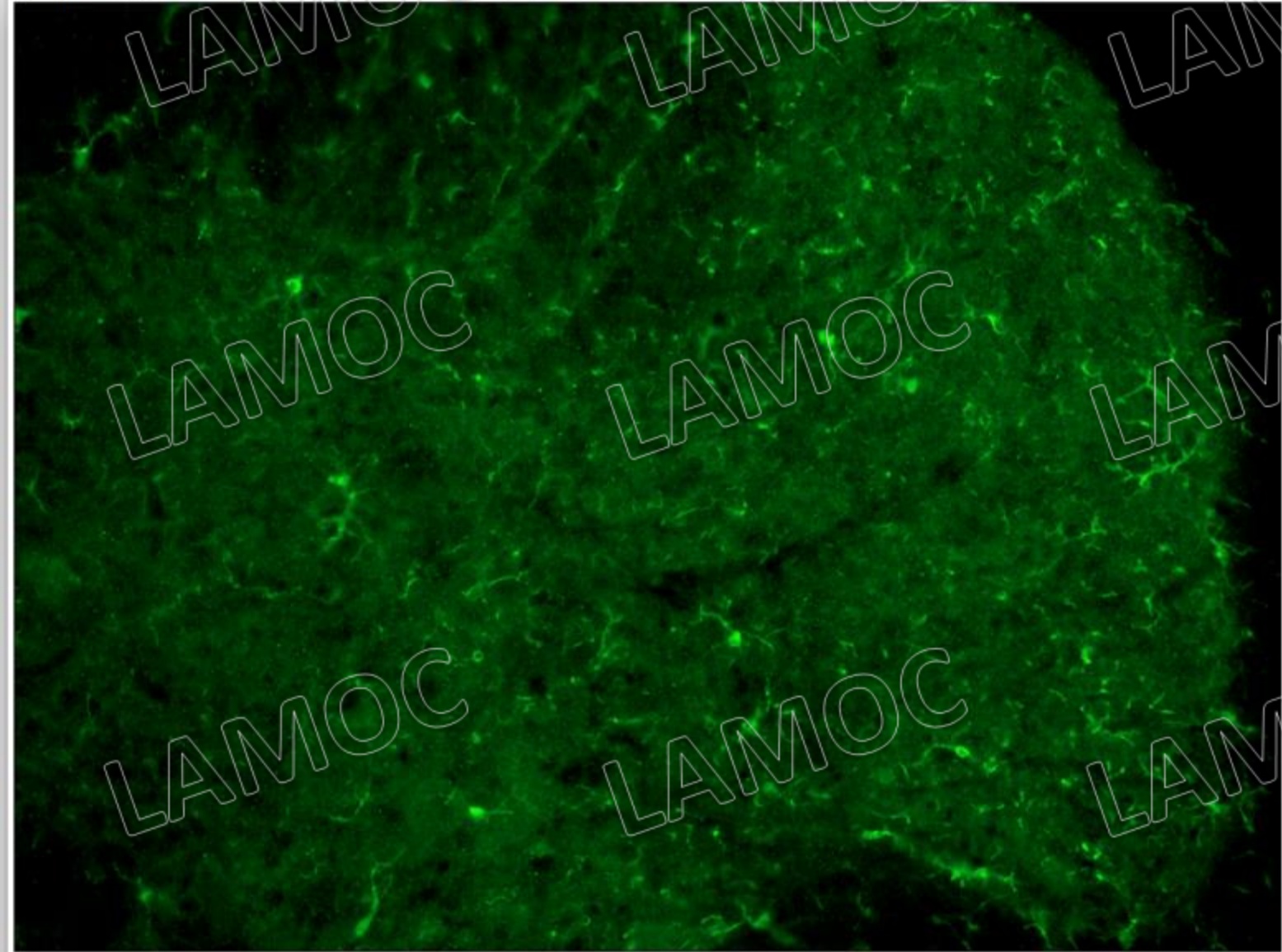
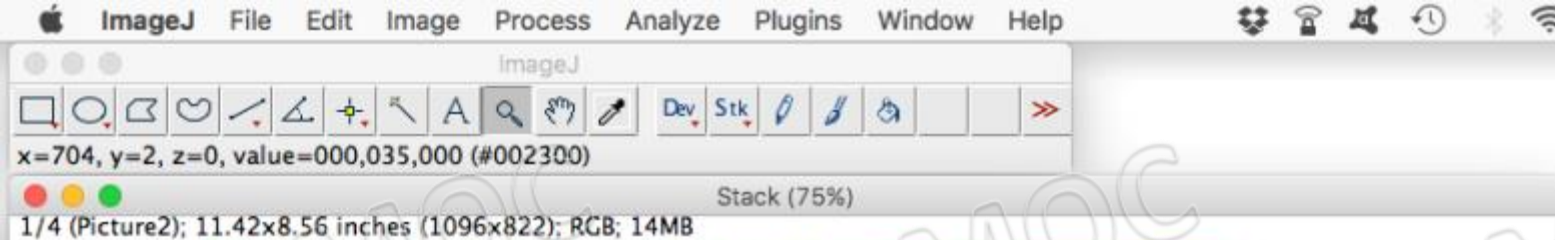


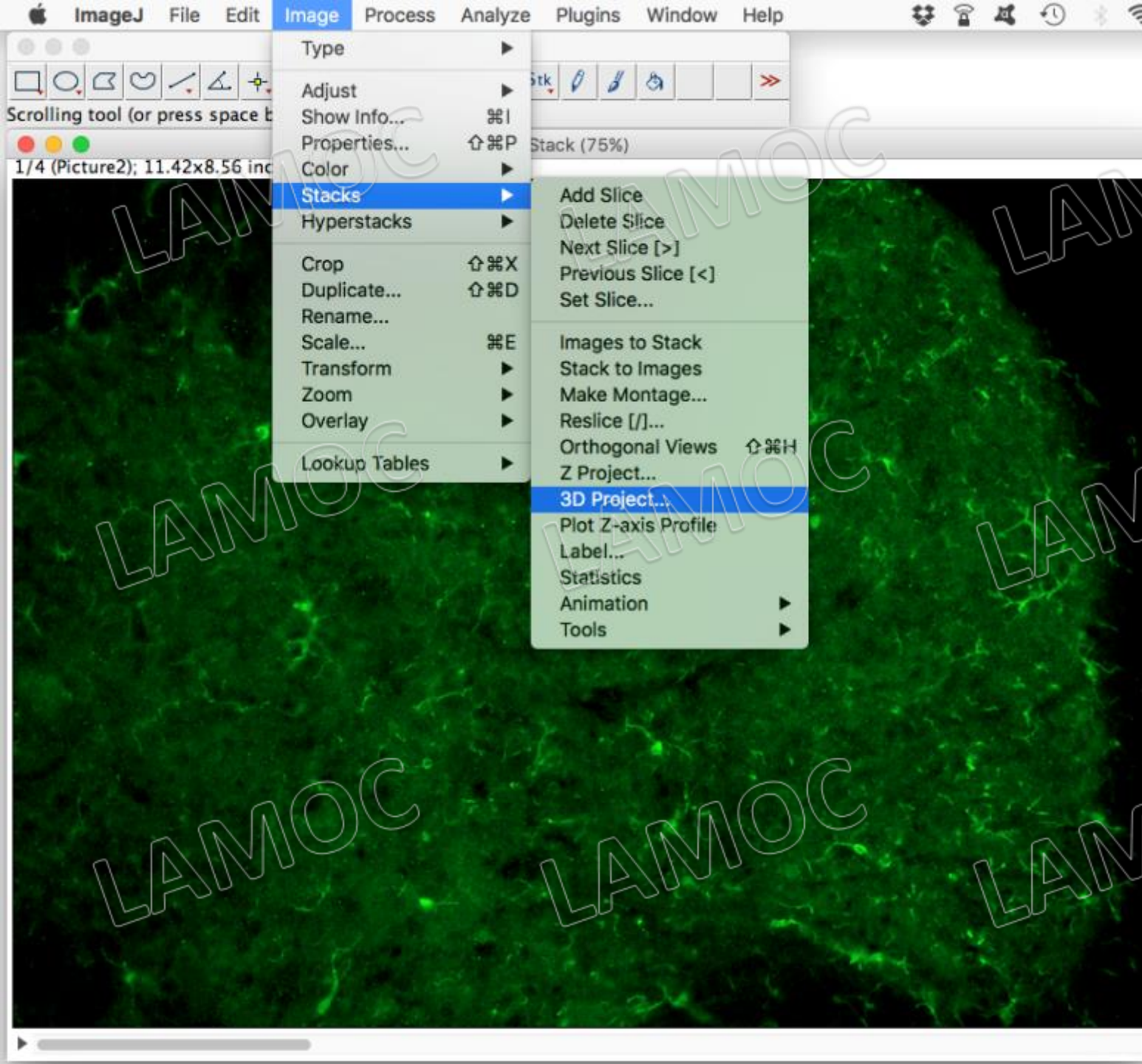
x=147, y=0, value=000,037,000 (#002500)







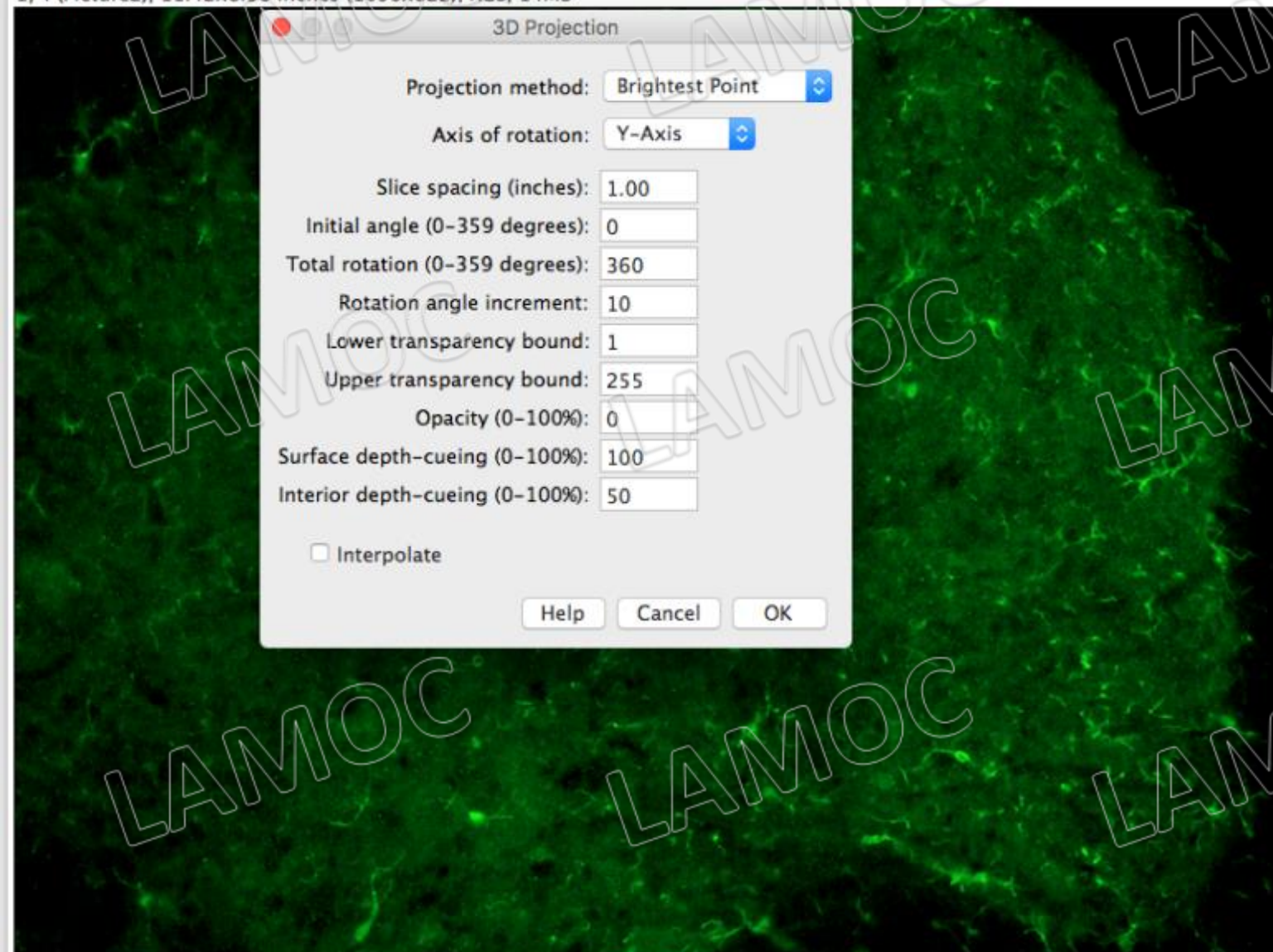






Stack (75%)

1/4 (Picture2); 11.42x8.56 inches (1096x822); RGB; 14MB



3D Projection

Projection method: Brightest Point

Axis of rotation: Y-Axis

Slice spacing (inches): 1.00

Initial angle (0-359 degrees): 0

Total rotation (0-359 degrees): 360

Rotation angle increment: 10

Lower transparency bound: 1

Upper transparency bound: 255

Opacity (0-100%): 0

Surface depth-cueing (0-100%): 100

Interior depth-cueing (0-100%): 50

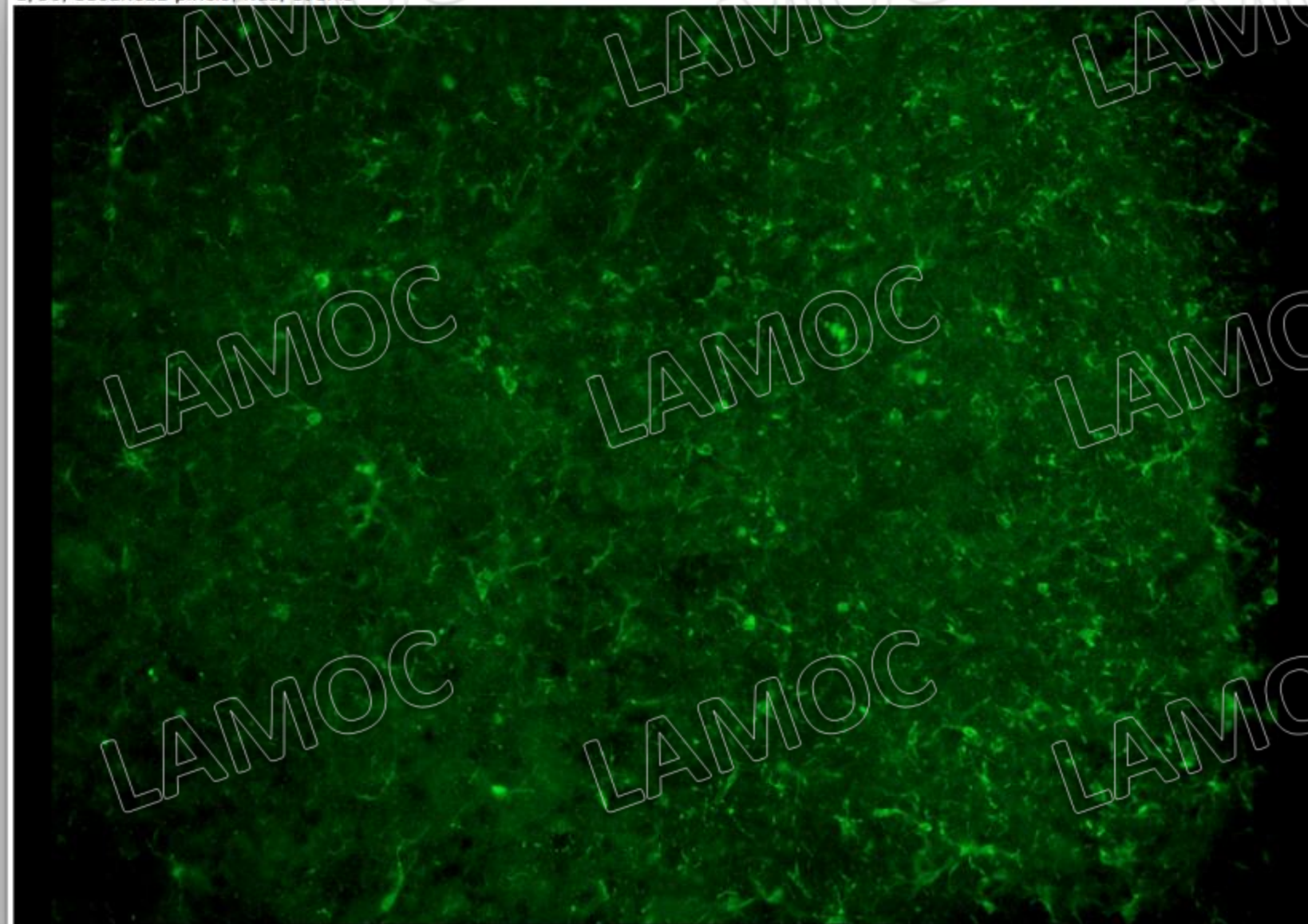
☐ Interpolate

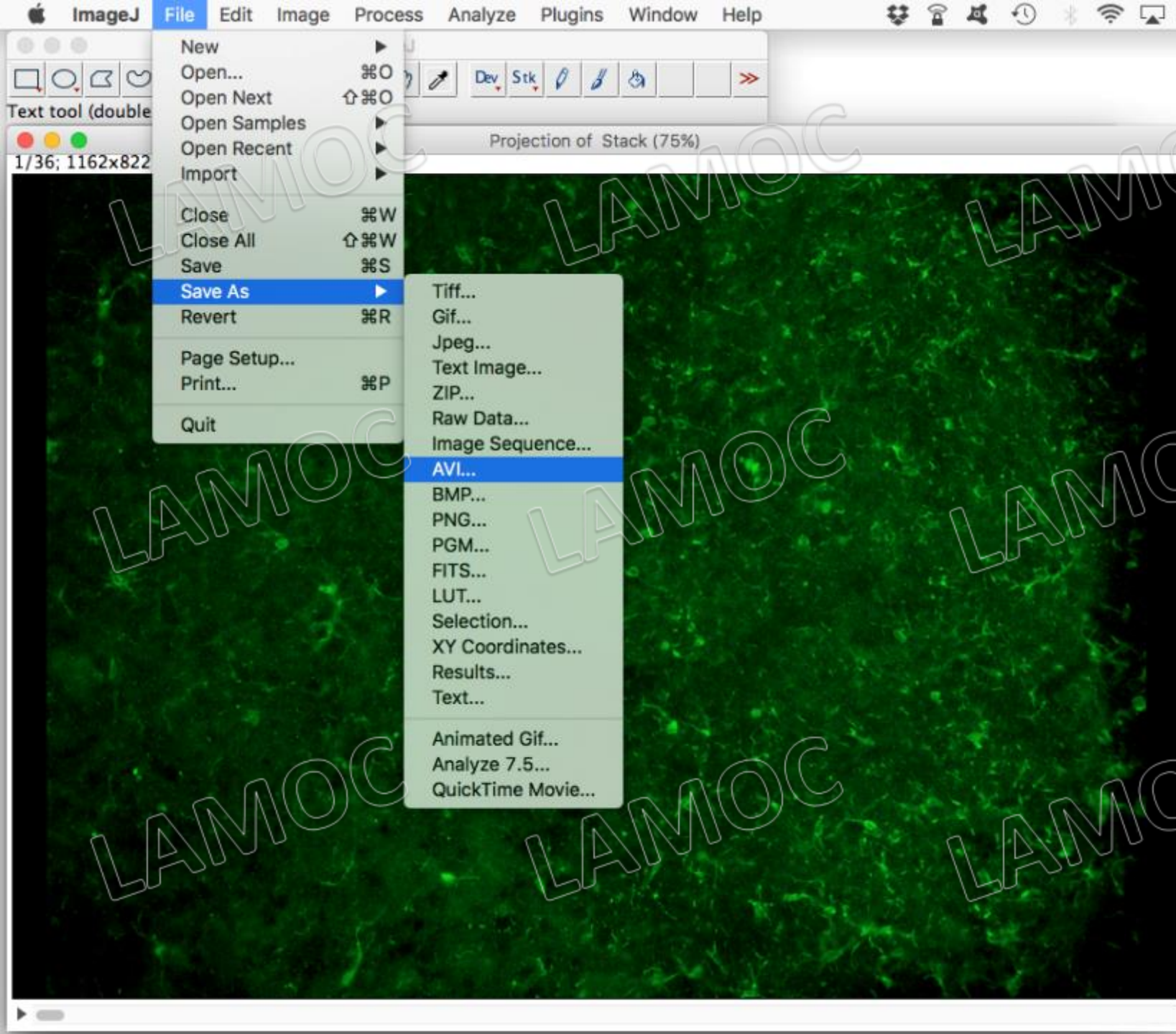
Help Cancel OK



1/36; 1162x822 pixels; RGB; 131MB

Projection of Stack (75%)





LAMOC

LAMOC

LAMOC

LAMOC

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LAMOC

LAMOC

LAMOC

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Pós-Graduação em Odontologia



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FINANCIADORA DE ESTUDOS E PROJETOS
MINISTÉRIO DA CIÊNCIA E TECNOLOGIA



CAPES



Conselho Nacional de Desenvolvimento
Científico e Tecnológico

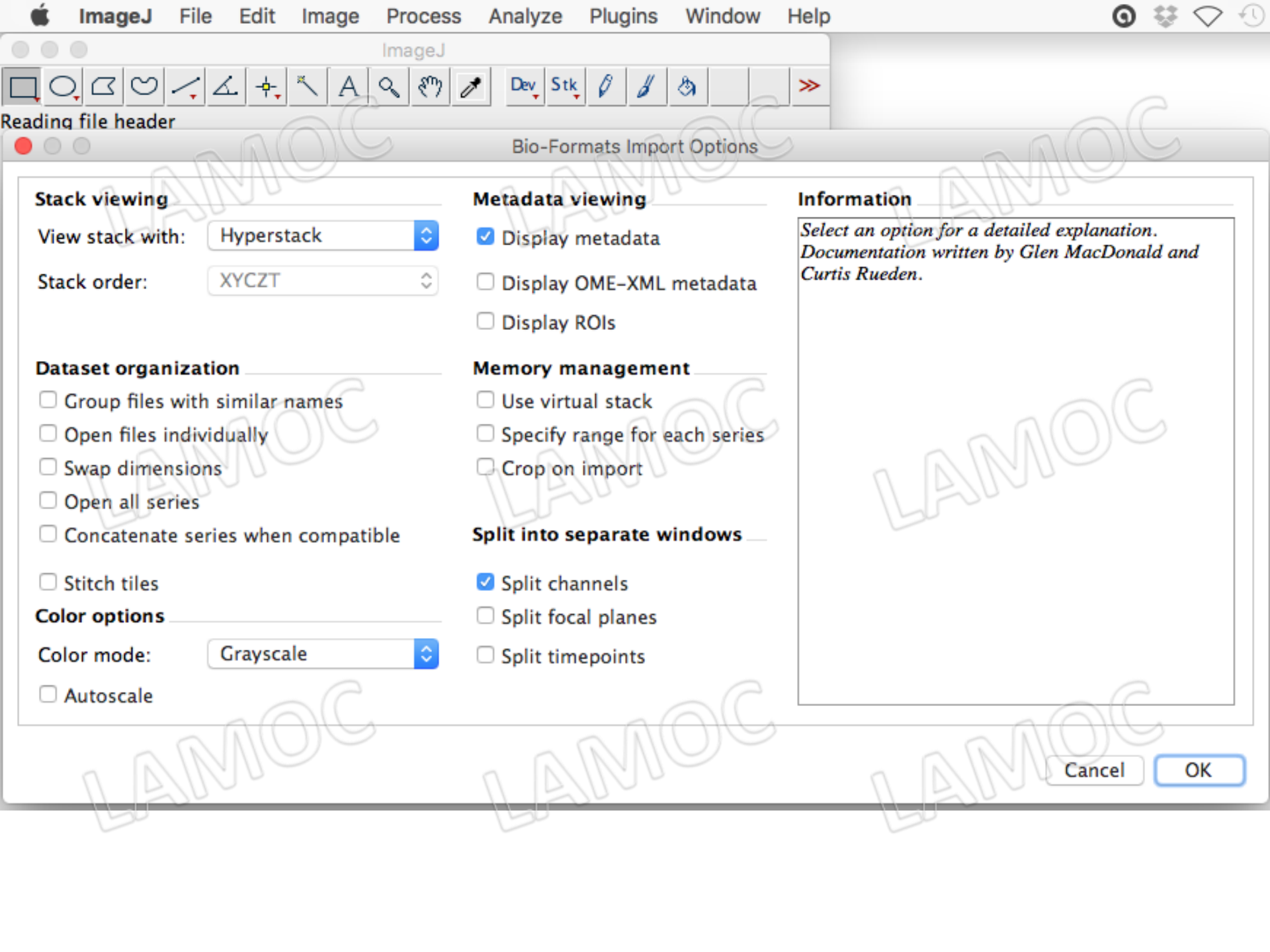
pro:pesq

Pró-Reitoria de Pesquisa - UFRGS



FAPERGS

Fundação de Amparo à Pesquisa do Estado do Rio Grande do Sul



ImageJ

Reading file header

Bio-Formats Import Options

Stack viewing

View stack with: Hyperstack

Stack order: XYCZT

Dataset organization

- ☐ Group files with similar names
- ☐ Open files individually
- ☐ Swap dimensions
- ☐ Open all series
- ☐ Concatenate series when compatible

☐ Stitch tiles

Color options

Color mode: Grayscale

☐ Autoscale

Metadata viewing

- ☒ Display metadata
- ☐ Display OME-XML metadata
- ☐ Display ROIs

Memory management

- ☐ Use virtual stack
- ☐ Specify range for each series
- ☐ Crop on import

Split into separate windows

- ☒ Split channels
- ☐ Split focal planes
- ☐ Split timepoints

Information

Select an option for a detailed explanation.
Documentation written by Glen MacDonald and
Curtis Rueden.

Cancel

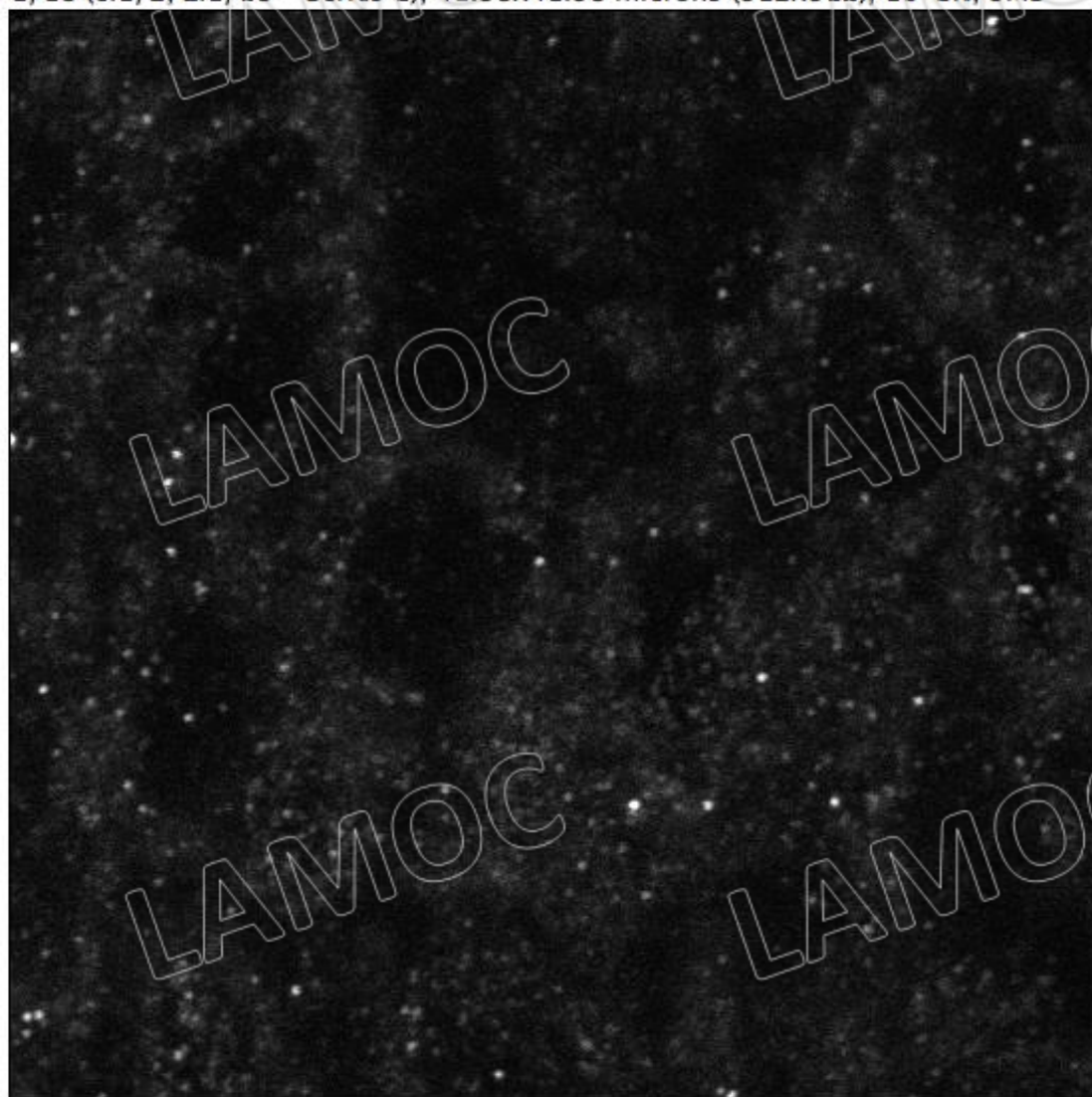
OK

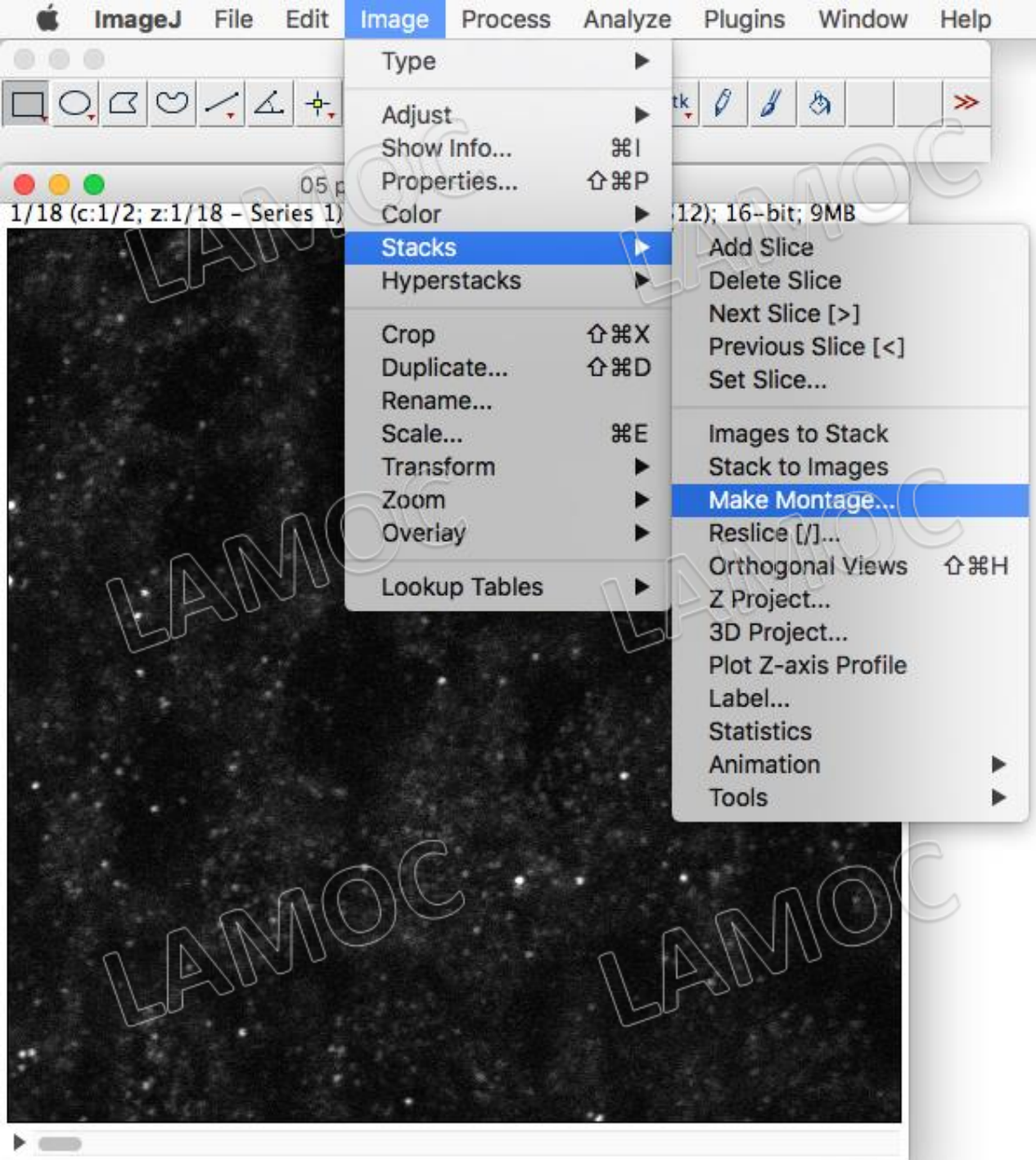


x=114, y=510, z=0, value=262

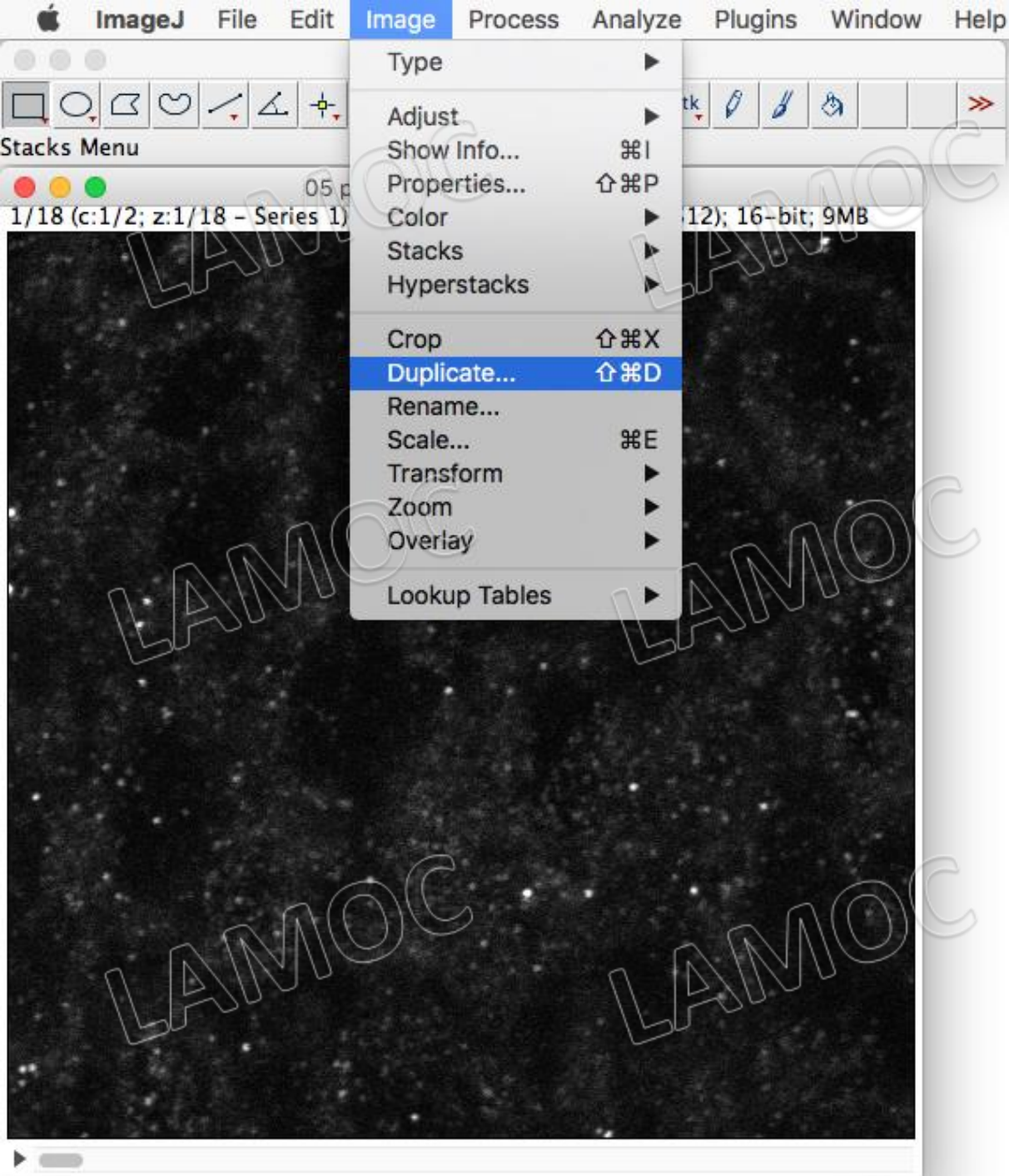
05 p38 cc pax 5x b.oif - C=0

1/18 (c:1/2; z:1/18 - Series 1); 41.98x41.98 microns (512x512); 16-bit; 9MB











05 p38 cc pax 5x b.oif - C=0
1/18 (c:1/2; z:1/18 - Series 1); 41.98x41.98 microns (512x512); 16-bit; 9MB

Duplicate...

Title: 05 p38 cc pax 5x b.oif

☒ Duplicate stack

Range: 6-10

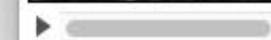
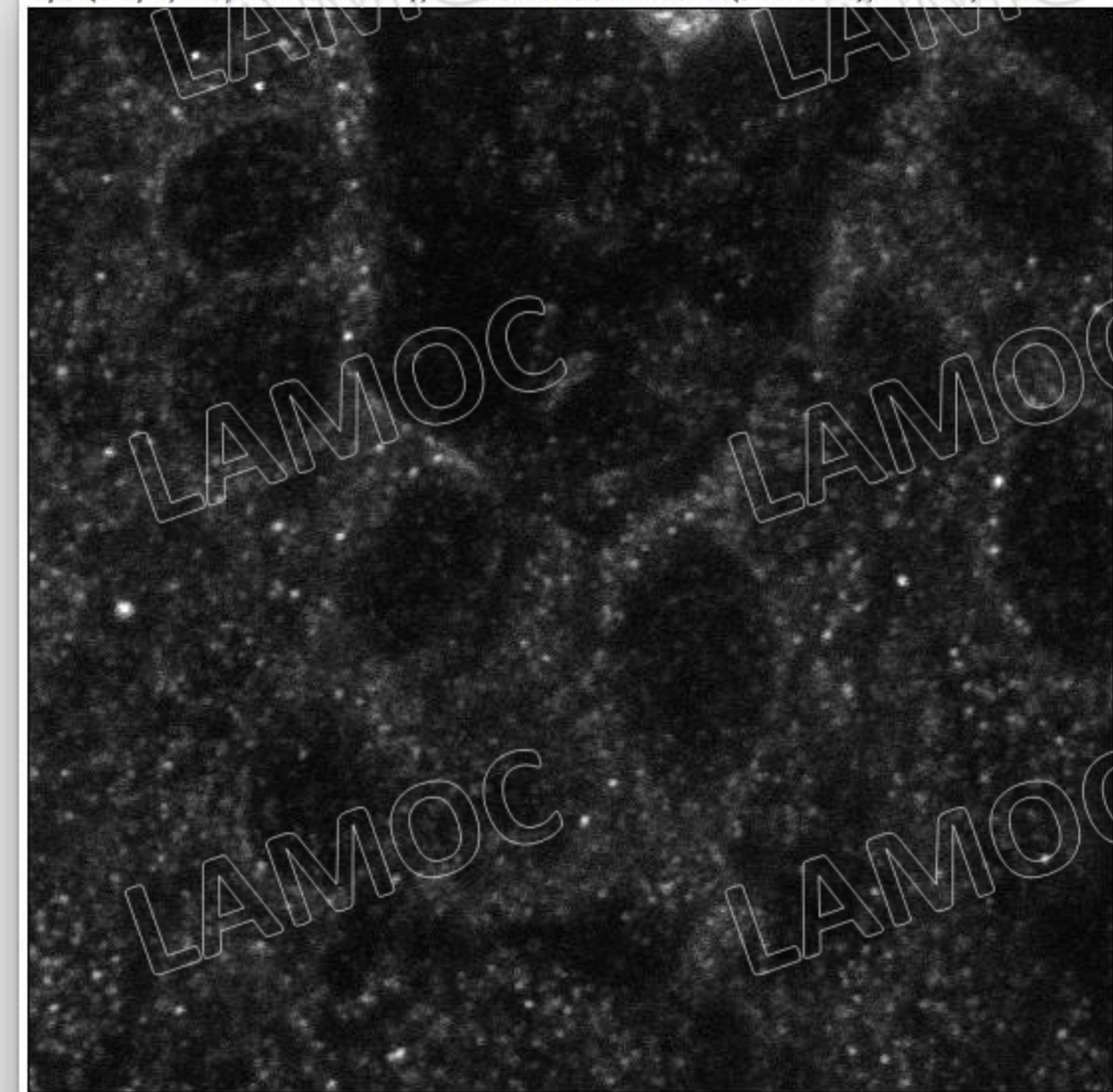
Cancel OK

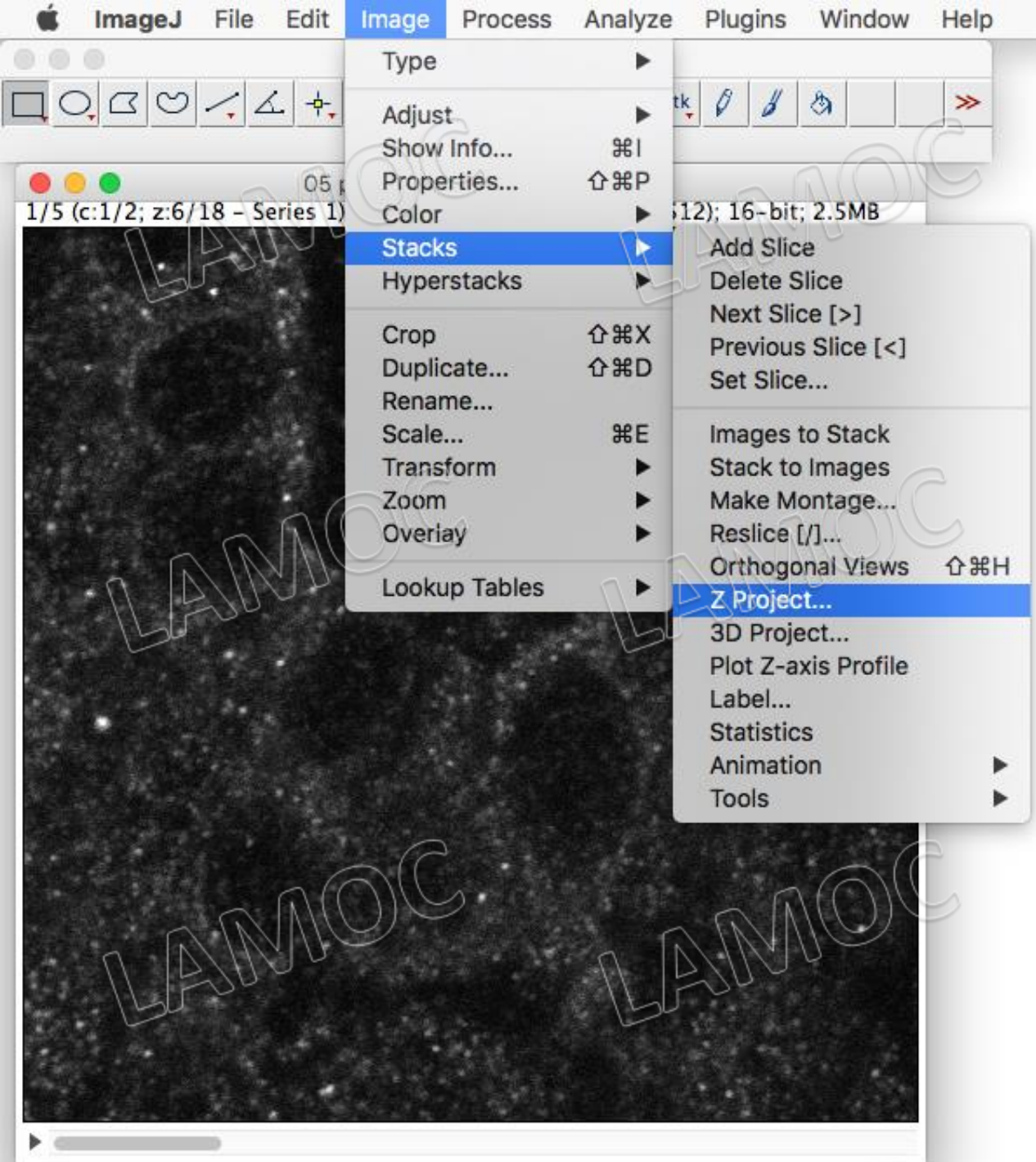


x=265, y=0, z=0, value=438

05 p38 cc pax 5x b.oif - C=0-1

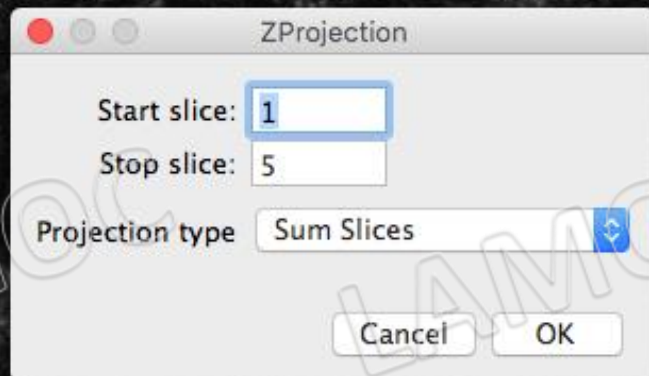
1/5 (c:1/2; z:6/18 - Series 1); 41.98x41.98 microns (512x512); 16-bit; 2.5MB





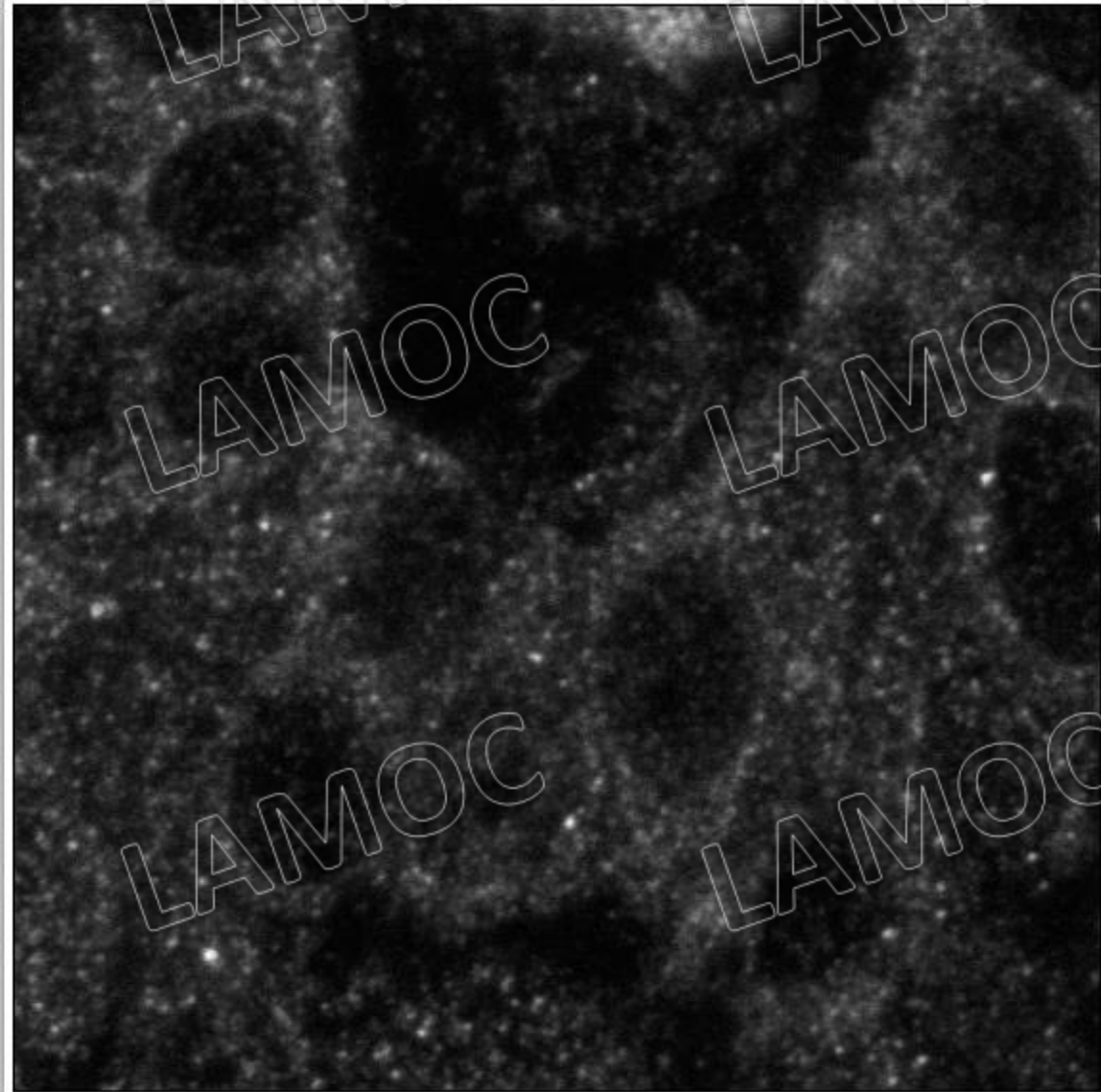


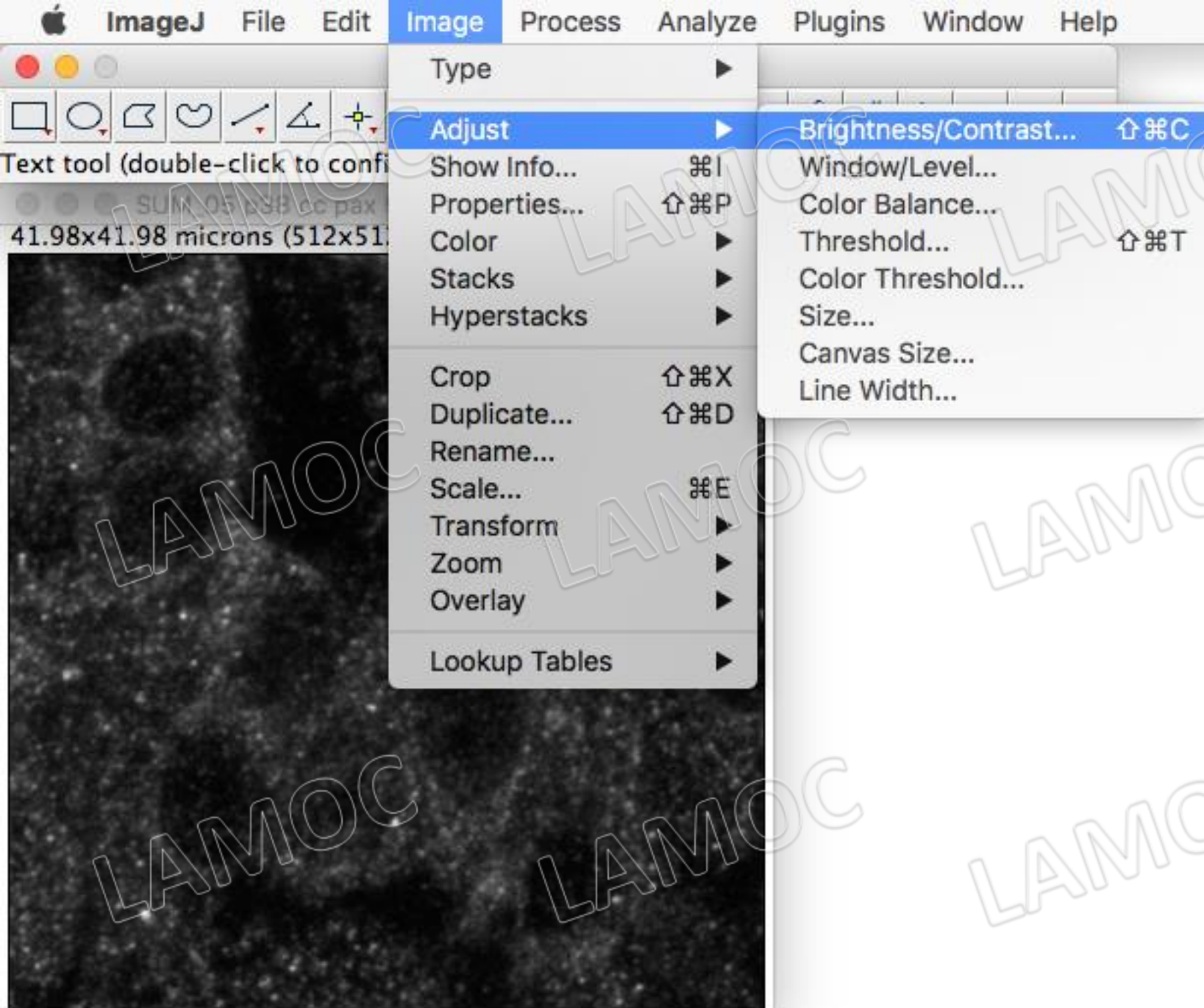
Q5 p38 cc pax 5x b.oif - C=0-1
1/5 (c:1/2; z:6/18 - Series 1); 41.98x41.98 microns (512x512); 16-bit; 2.5MB





SUM_05 p38 cc pax 5x b.oif - C=0-1
41.98x41.98 microns (512x512); 32-bit; 1MB



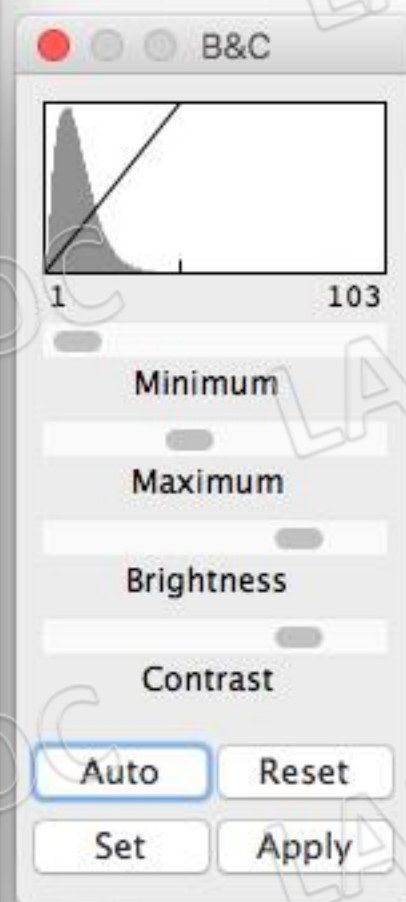
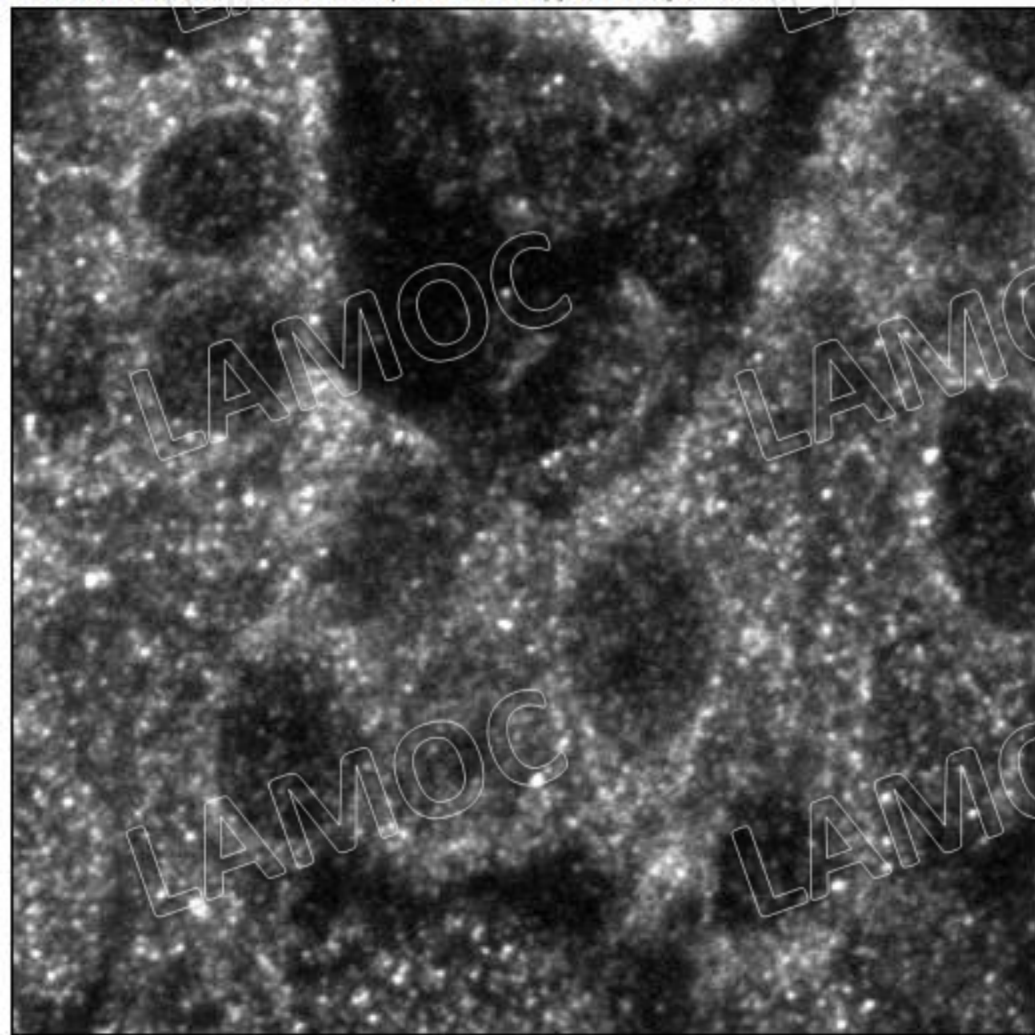




x=502, y=74, value=19

SUM_05_p38_cc_pax_5x_b.tif - C=0-1 (75%)

41.98x41.98 microns (512x512); 8-bit; 256K

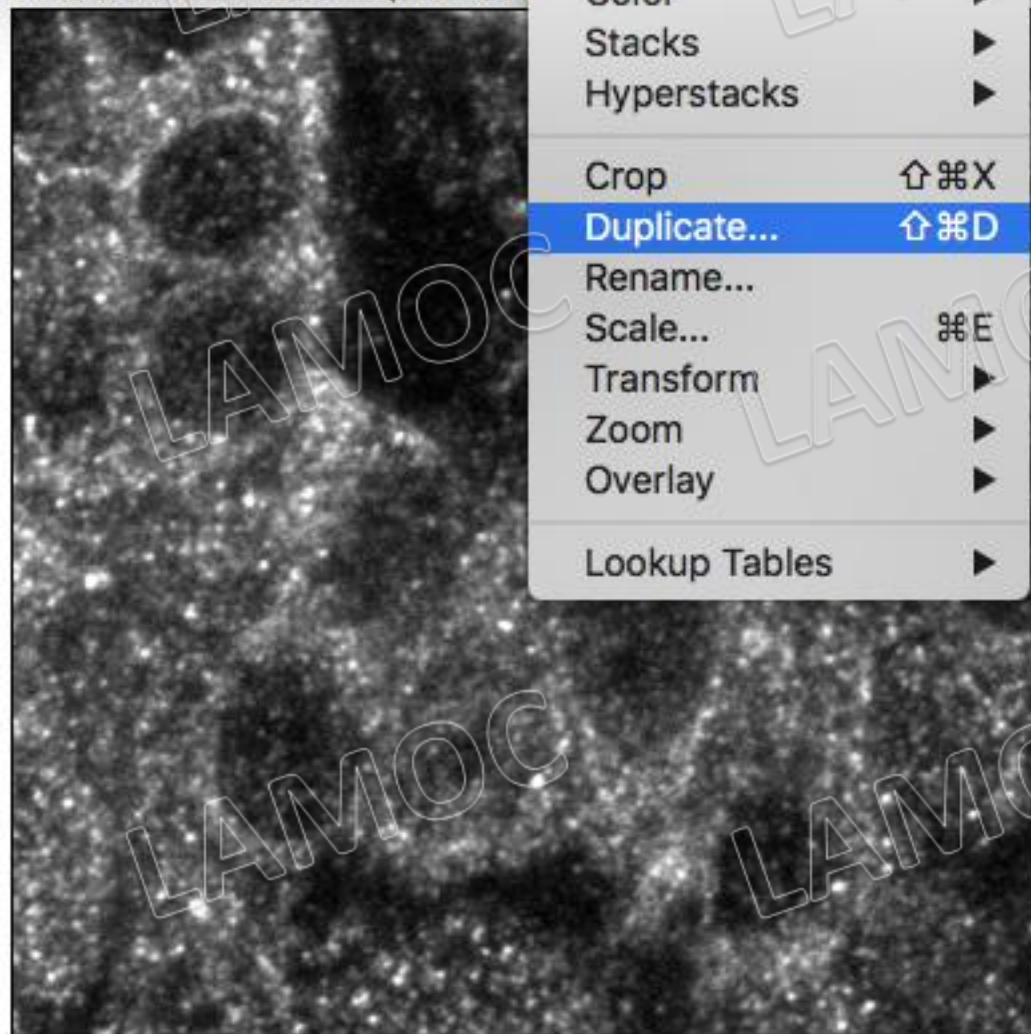




x=41.16, y=6.07, value=19

SUM 05 093 cc pax

41.98x41.98 microns (512x512)



Type ▶

Adjust ▶

Show Info... ⌘I

Properties... ⇧⌘P

Color ▶

Stacks ▶

Hyperstacks ▶

Crop ⇧⌘X

Duplicate... ⇧⌘D

Rename...

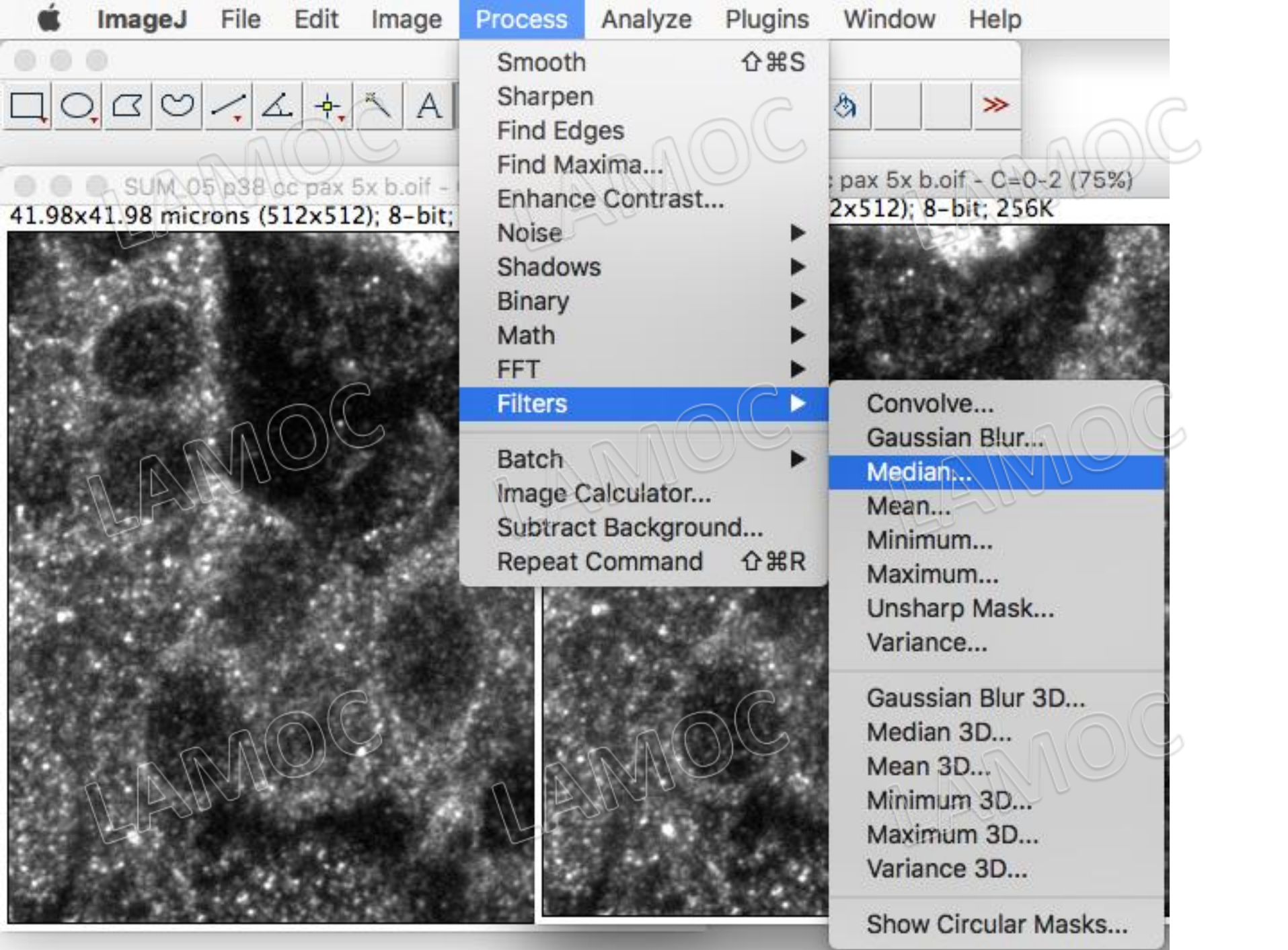
Scale... ⌘E

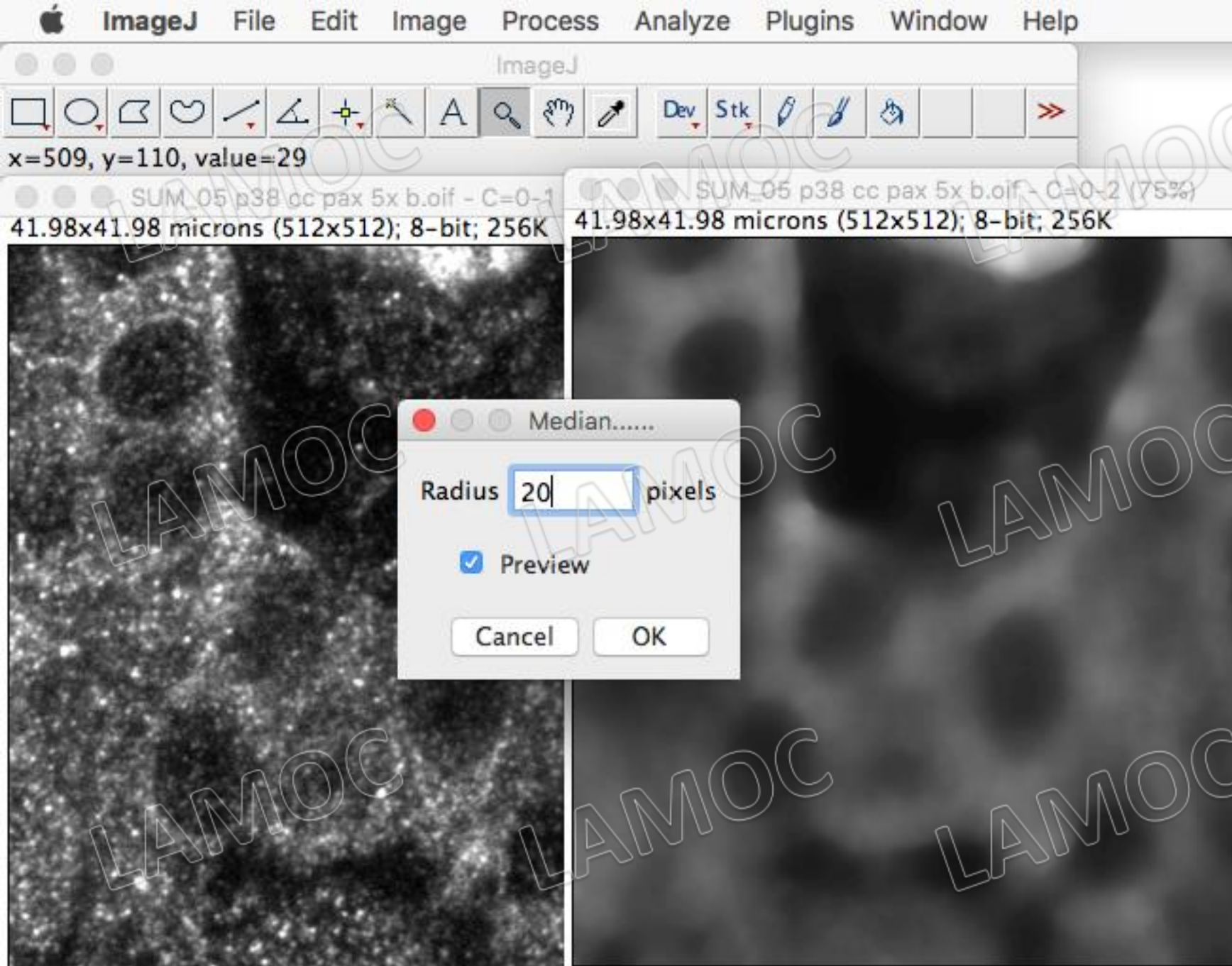
Transform ▶

Zoom ▶

Overlay ▶

Lookup Tables ▶

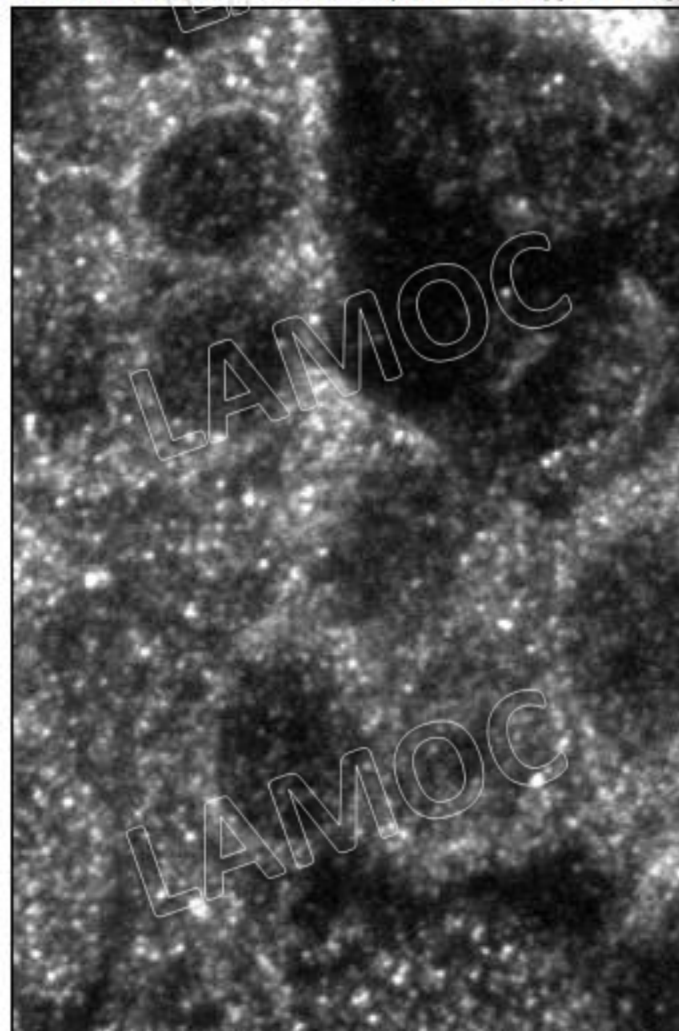






Wand (tracing) tool!

SUM_05.p38.cc.pax.5x.b.oif - 41.98x41.98 microns (512x512); 8-bit;



- Smooth ⌘S
- Sharpen
- Find Edges
- Find Maxima...
- Enhance Contrast...
- Noise ▶
- Shadows ▶
- Binary ▶
- Math ▶
- FFT ▶
- Filters ▶
- Batch ▶
- Image Calculator...**
- Subtract Background...
- Repeat Command ⌘R

; pax.5x.b.oif - C=0-2 (75%) 2x512; 8-bit; 256K





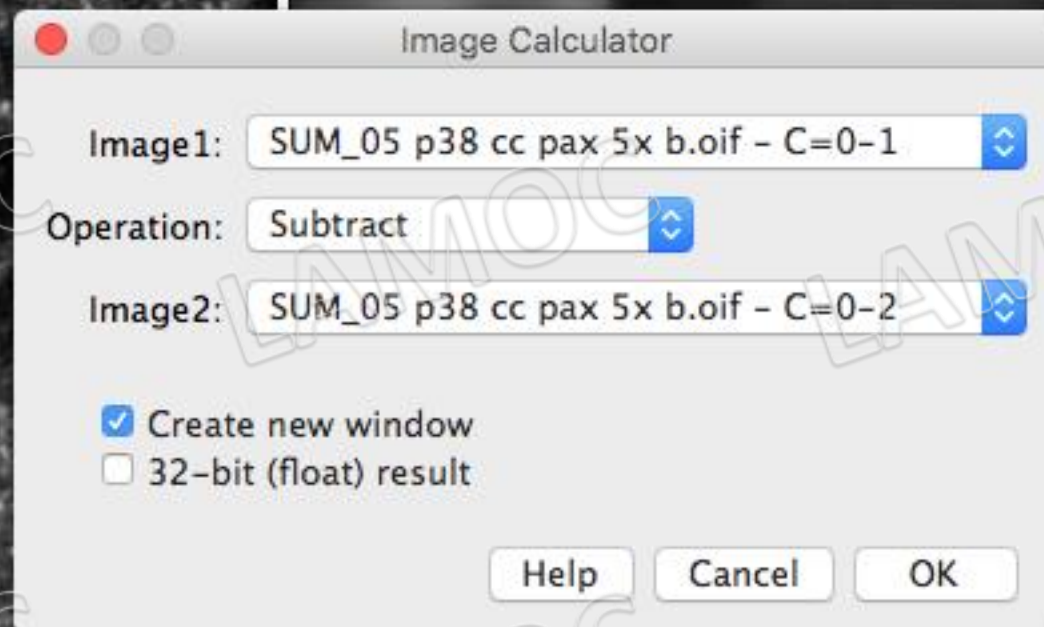
x=5, y=200, value=20

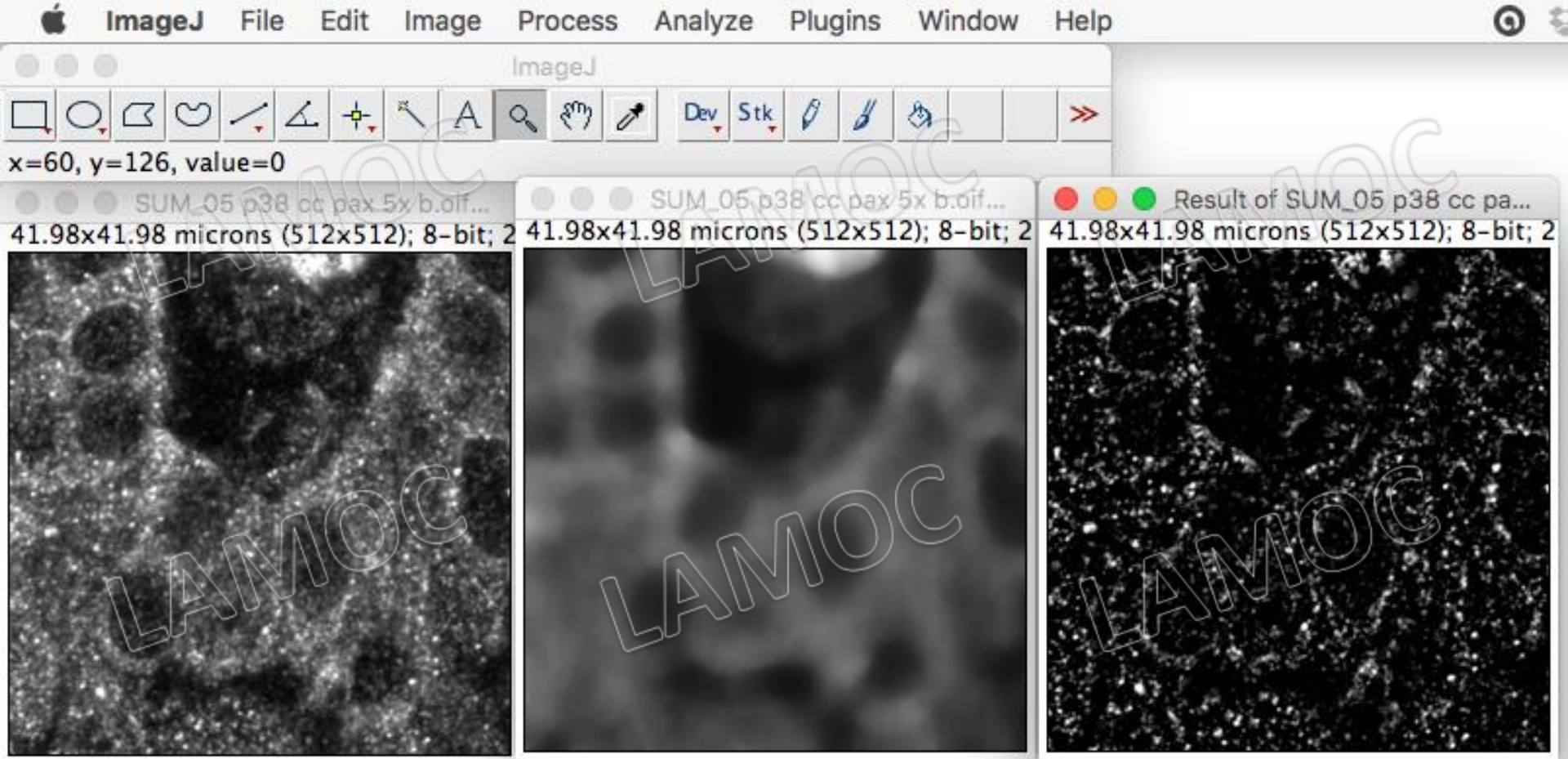
SUM_05 p38 cc pax 5x b.oif - C=0-1

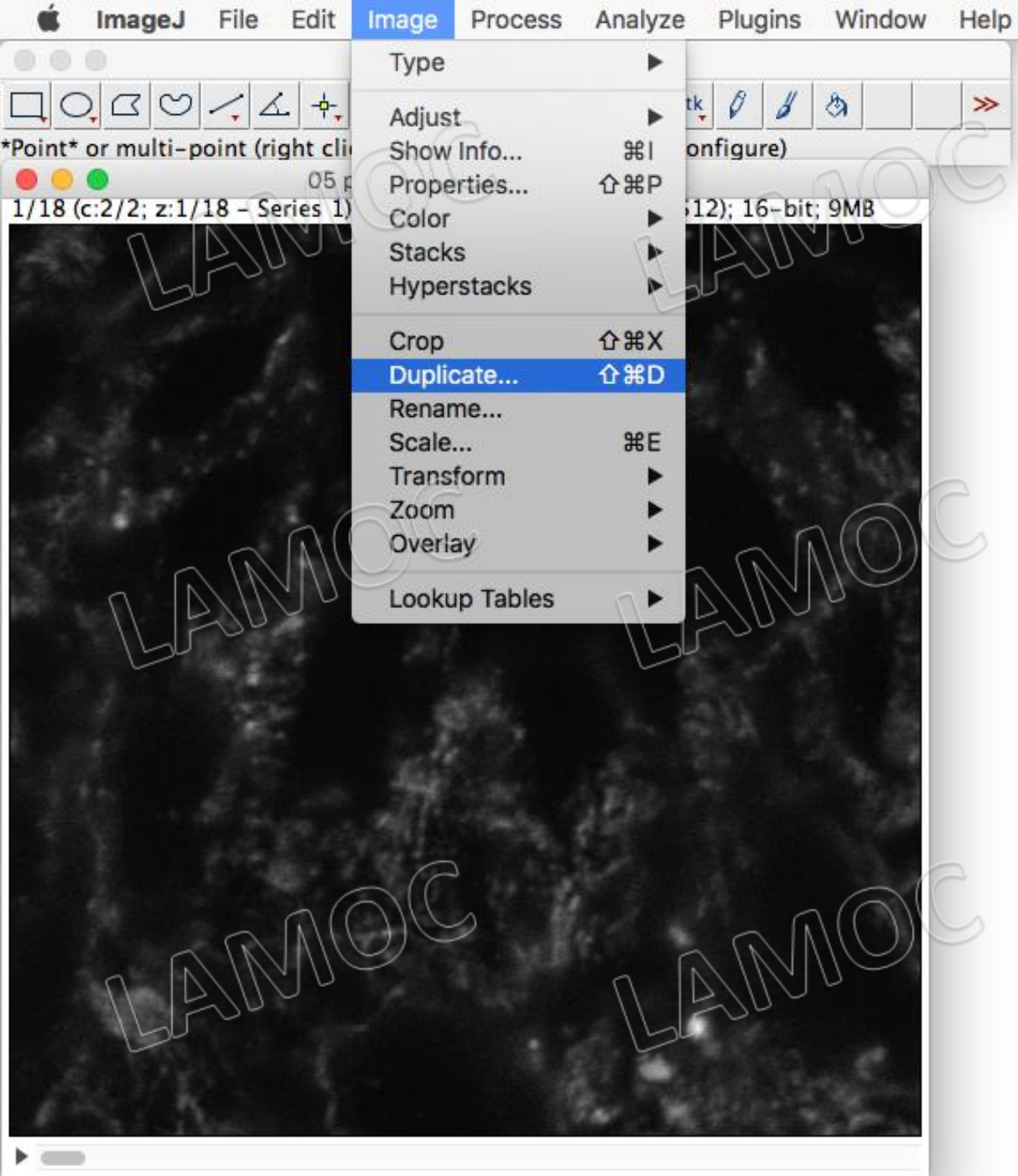
41.98x41.98 microns (512x512); 8-bit; 256K

SUM_05 p38 cc pax 5x b.oif - C=0-2 (75%)

41.98x41.98 microns (512x512); 8-bit; 256K

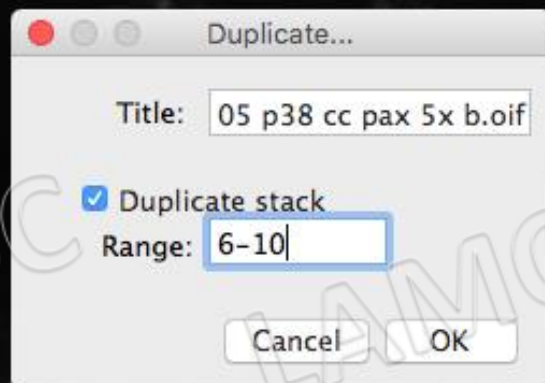
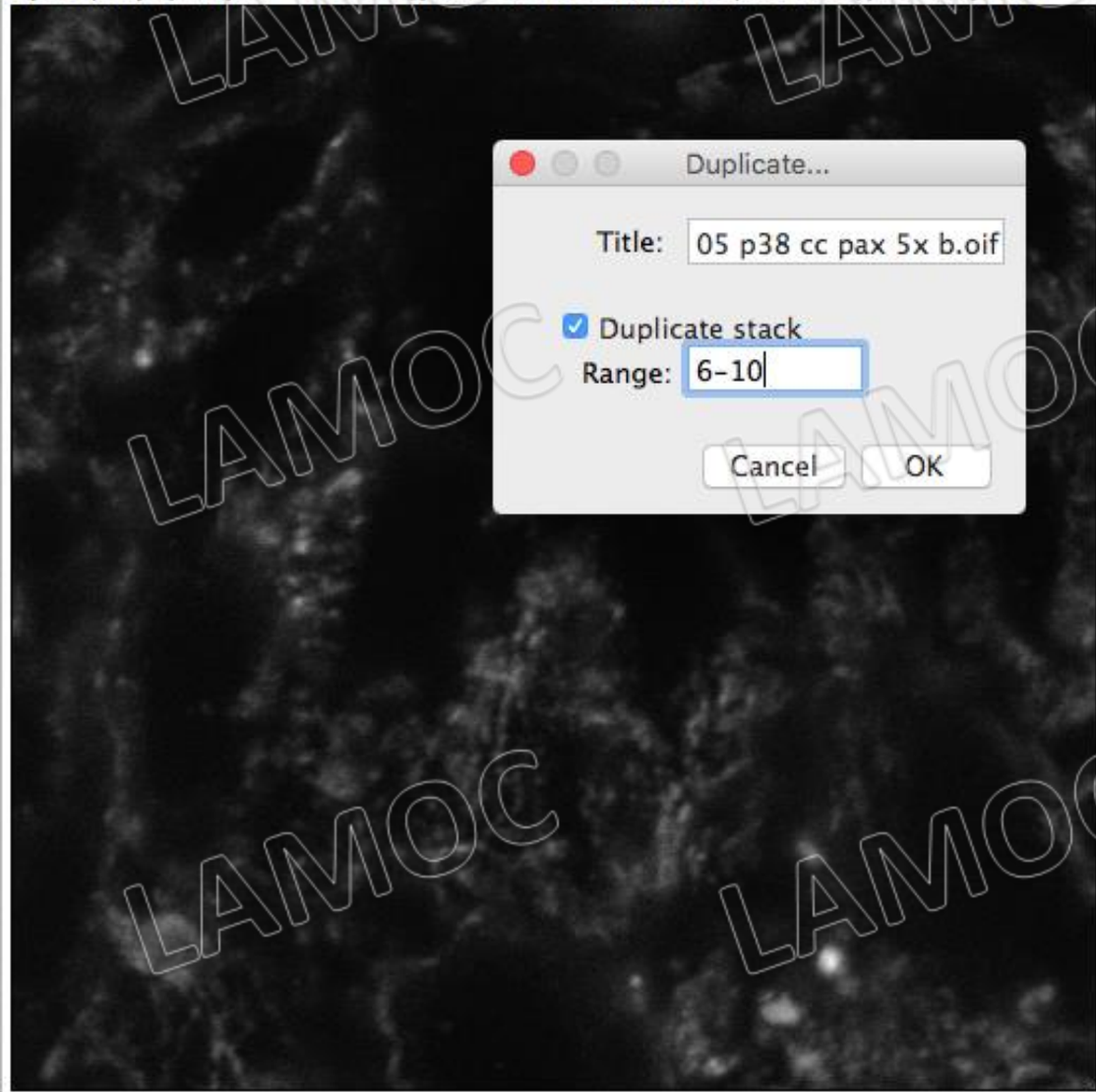


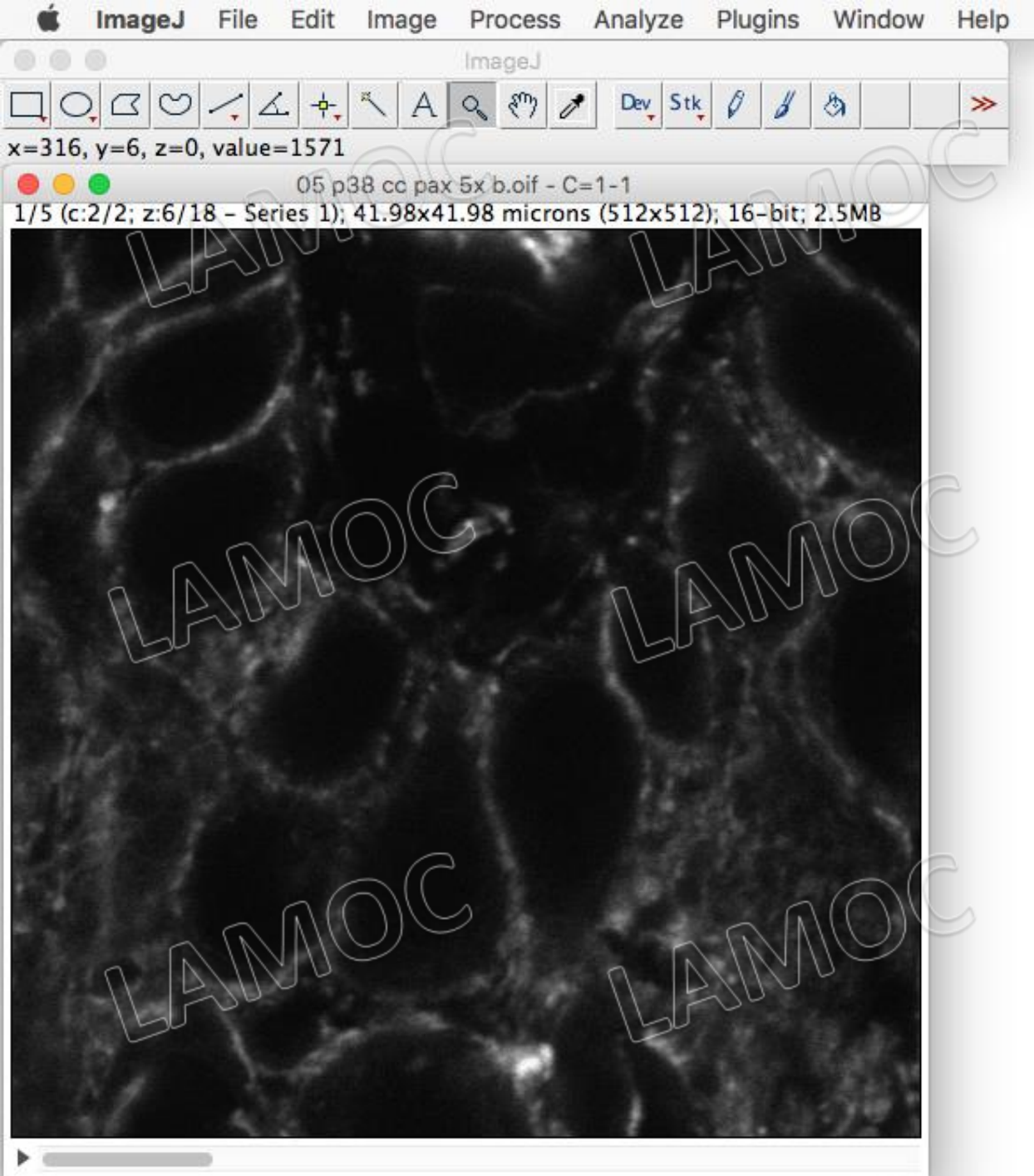


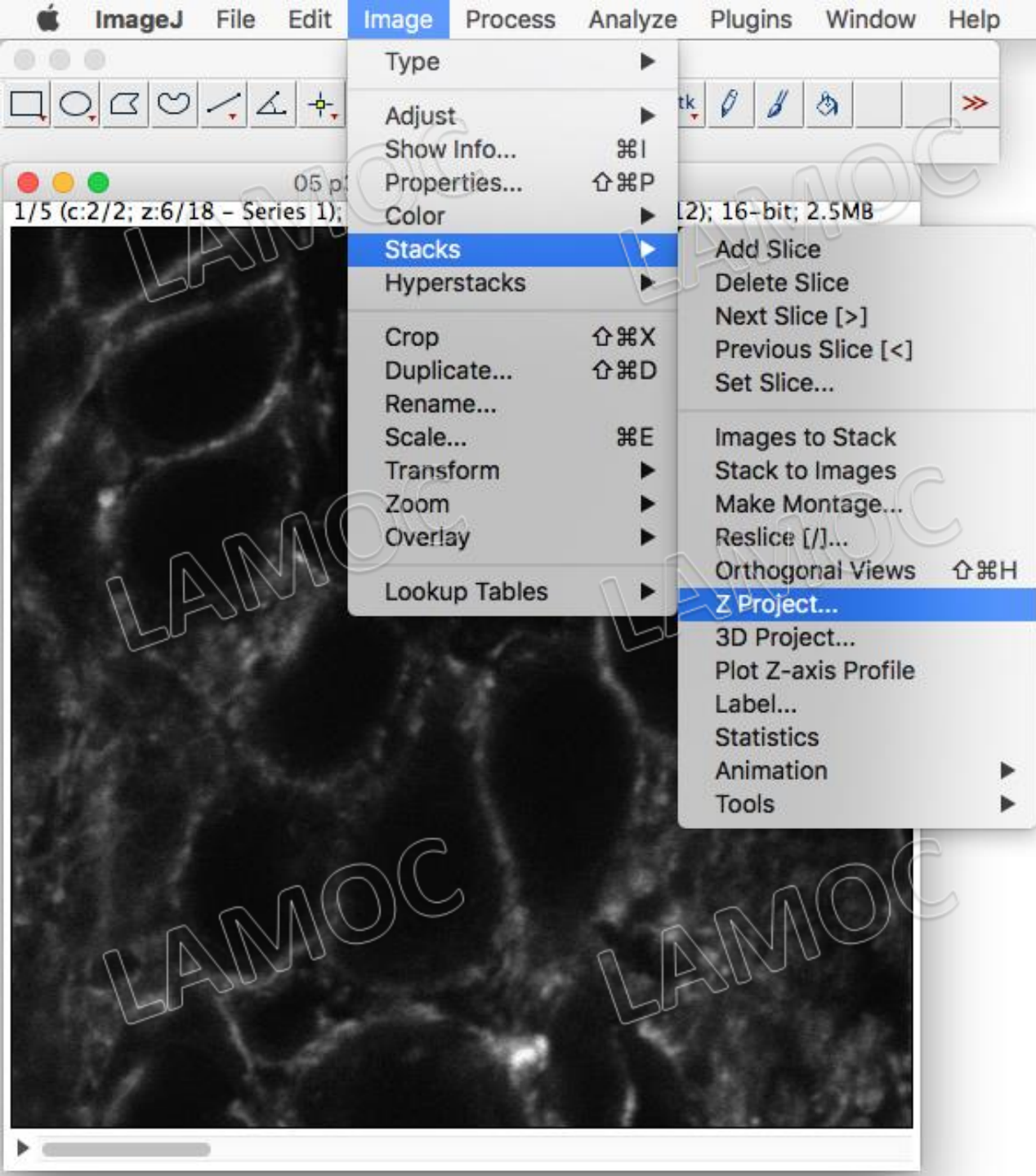


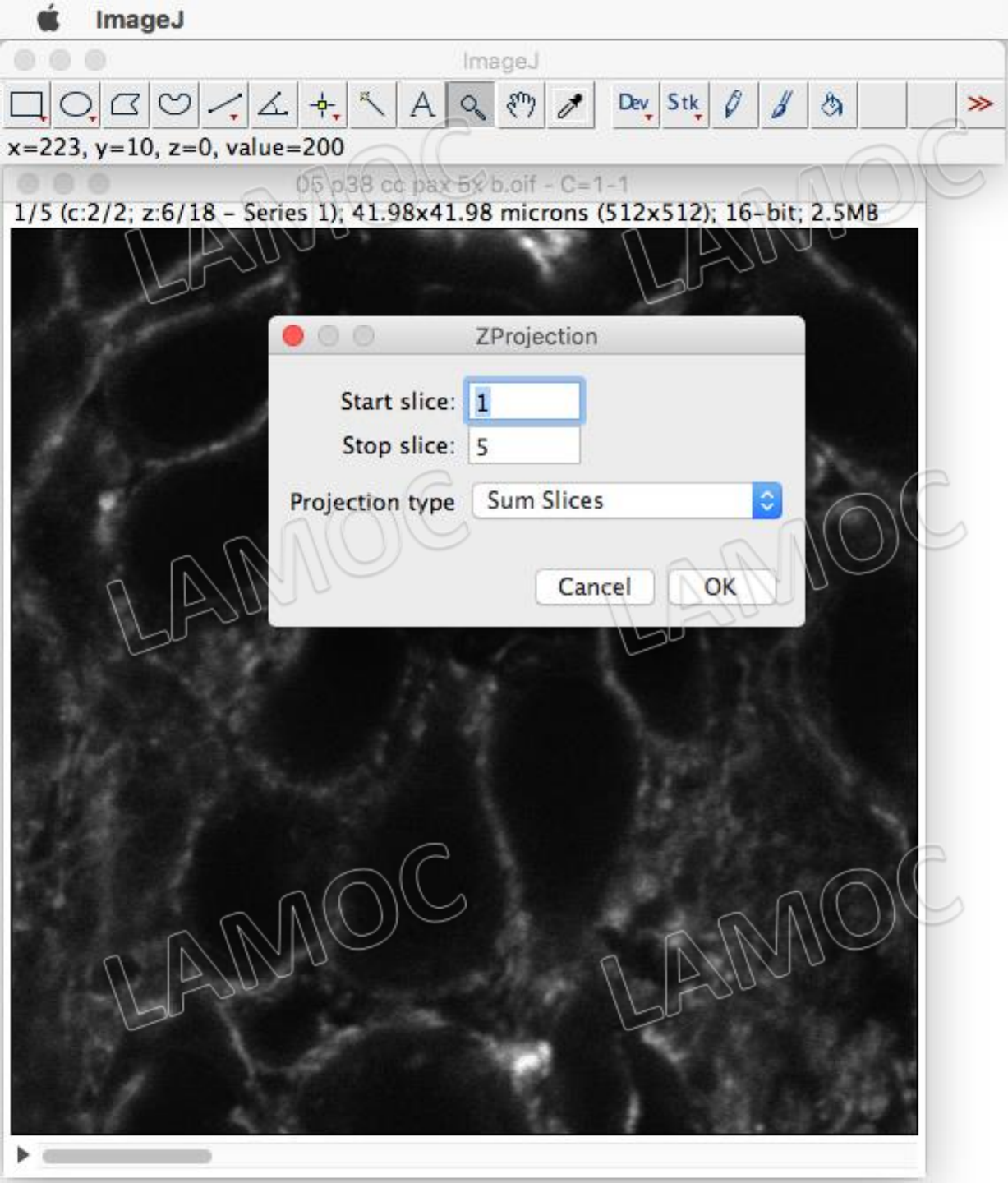


05 p38 cc pax 5x b.oif - C=1
1/18 (c:2/2; z:1/18 - Series 1); 41.98x41.98 microns (512x512); 16-bit; 9MB





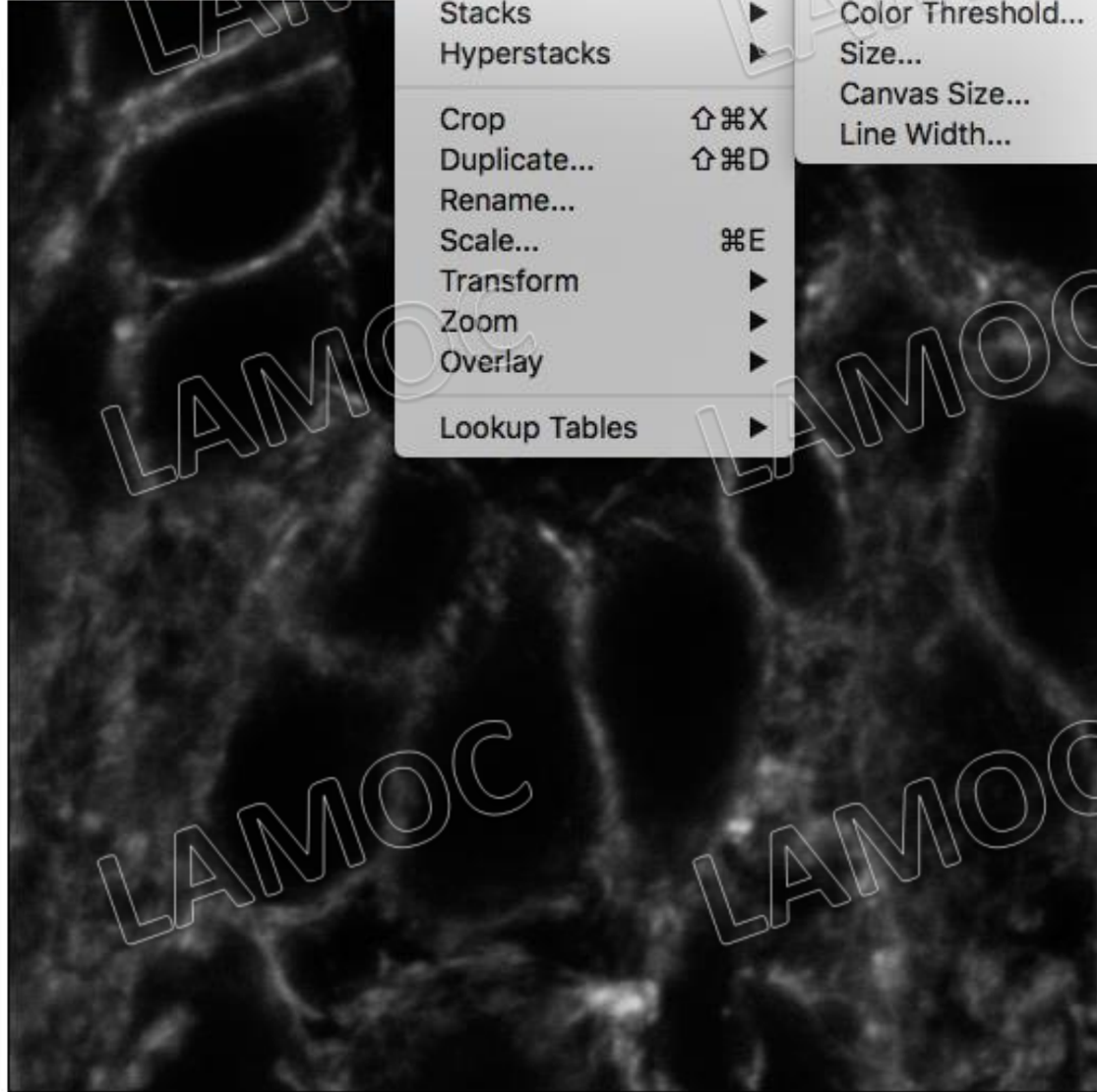






Point or multi-point (right click)

SUMMARY
41.98x41.98 microns (512x512)



- Type
- Adjust
 - Brightness/Contrast... ⌘C
 - Window/Level...
 - Color Balance...
 - Threshold... ⌘T
 - Color Threshold...
 - Size...
 - Canvas Size...
 - Line Width...
- Show Info... ⌘I
- Properties... ⌘P
- Color
- Stacks
- Hyperstacks
- Crop ⌘X
- Duplicate... ⌘D
- Rename...
- Scale... ⌘E
- Transform
- Zoom
- Overlay
- Lookup Tables

B&C

643.00 14581.1

Minimum

Maximum

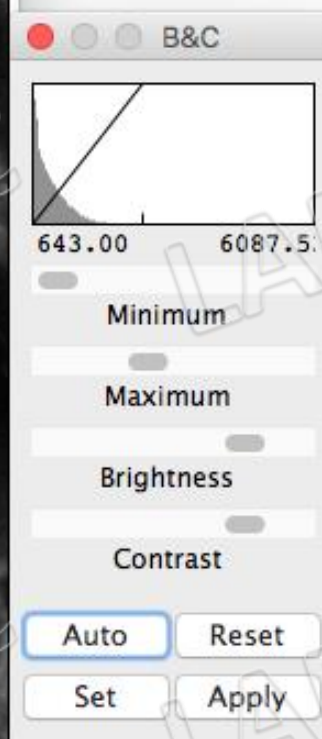
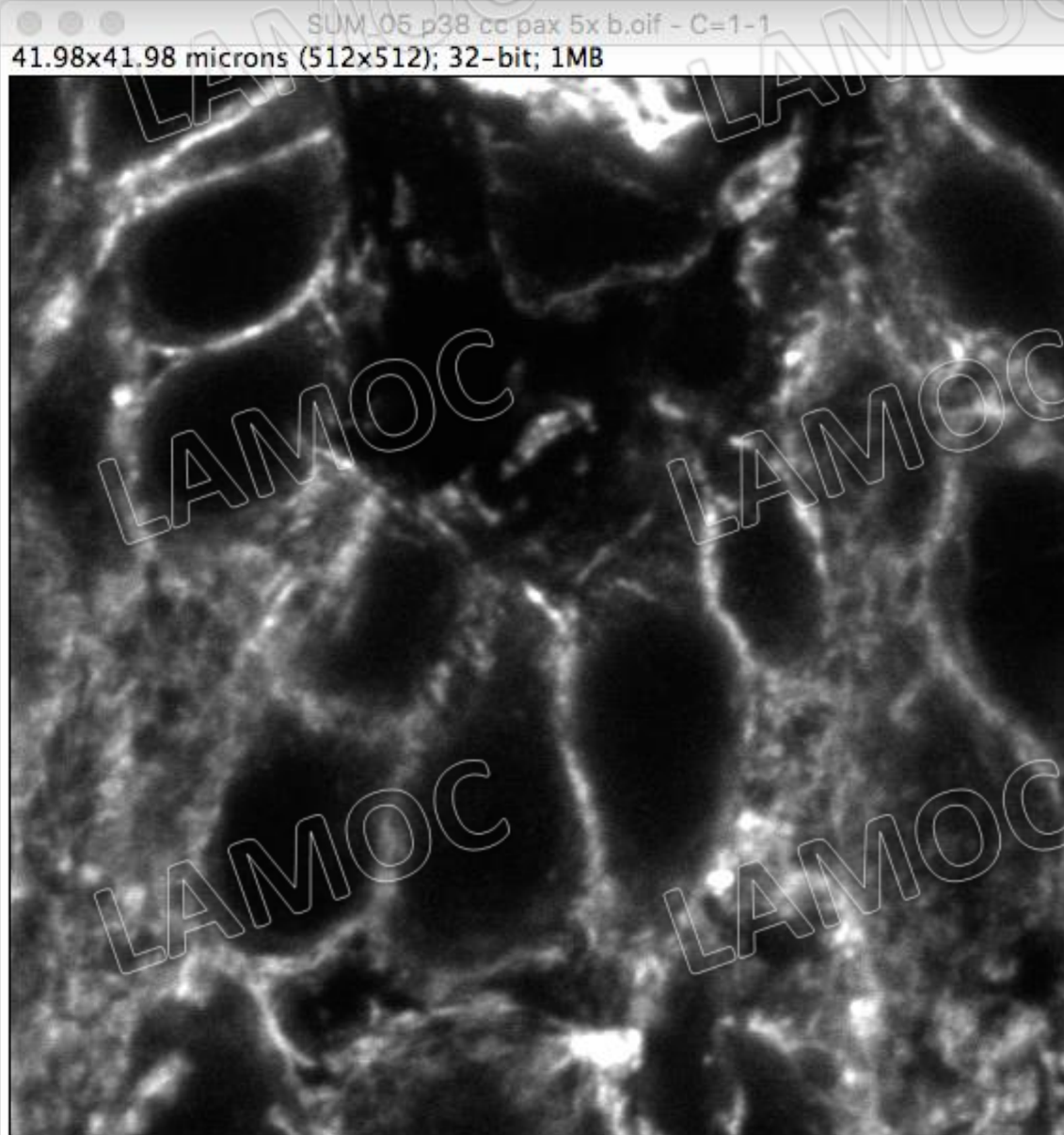
Brightness

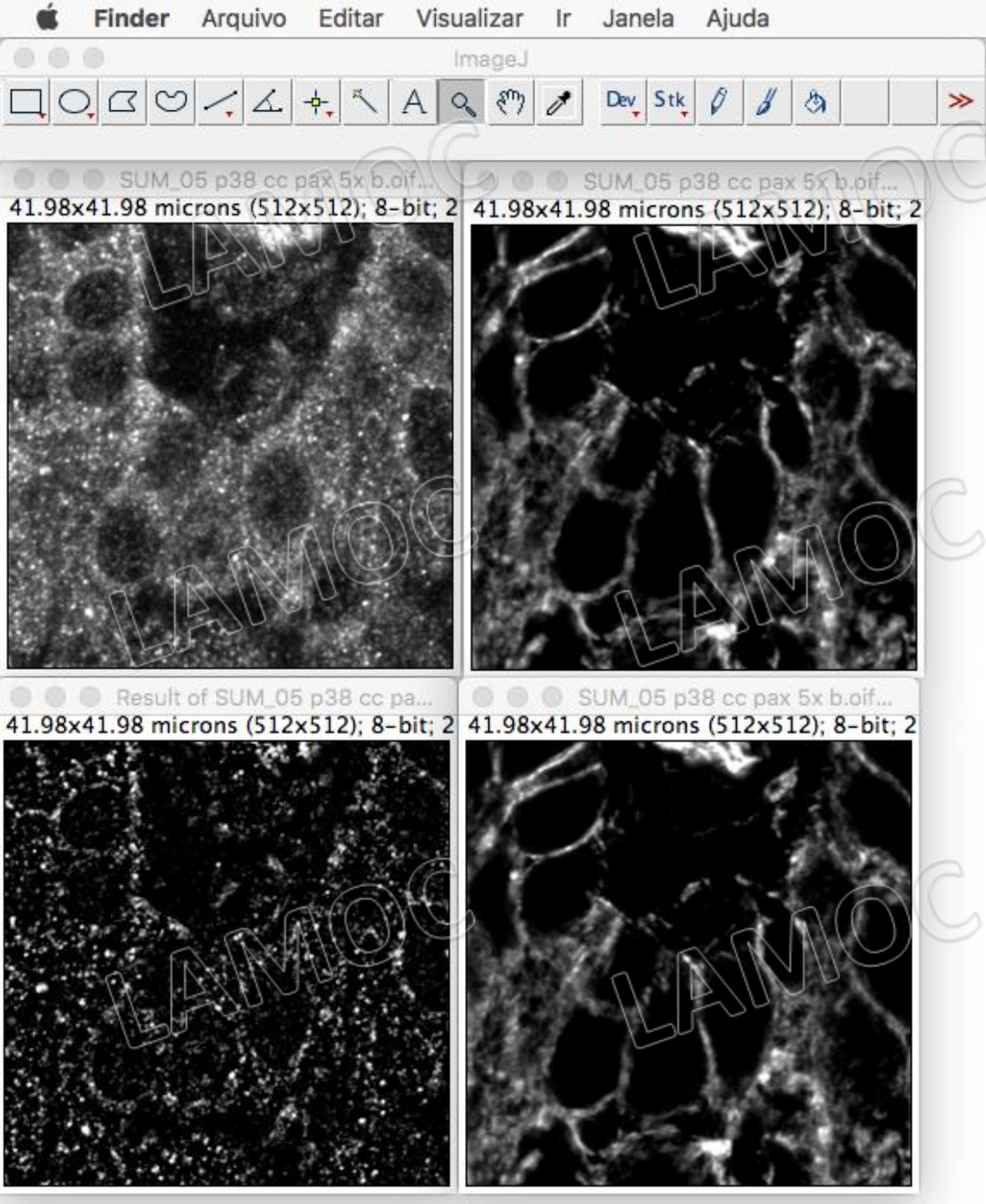
Contrast

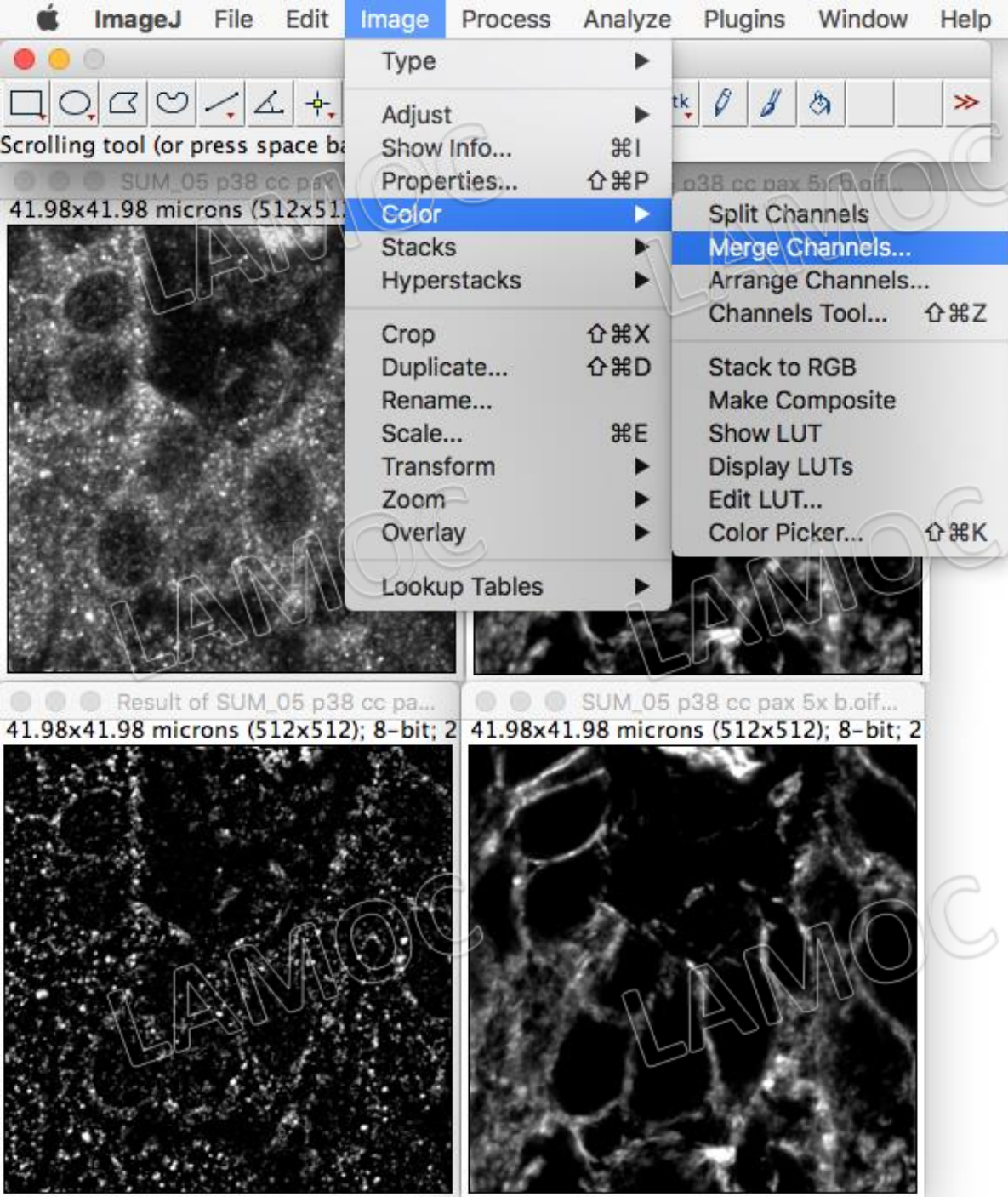
Auto Reset

Set Apply

The dialog box features a histogram with a diagonal line. Below the histogram are sliders for 'Minimum' and 'Maximum' values, and sliders for 'Brightness' and 'Contrast'. At the bottom are four buttons: 'Auto', 'Reset', 'Set', and 'Apply'.



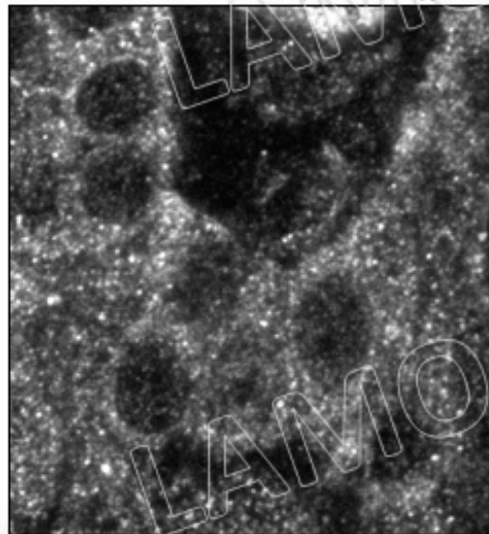




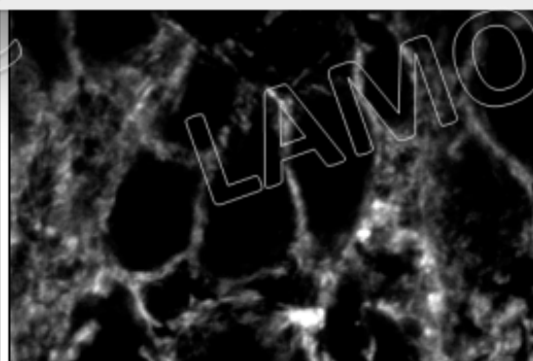
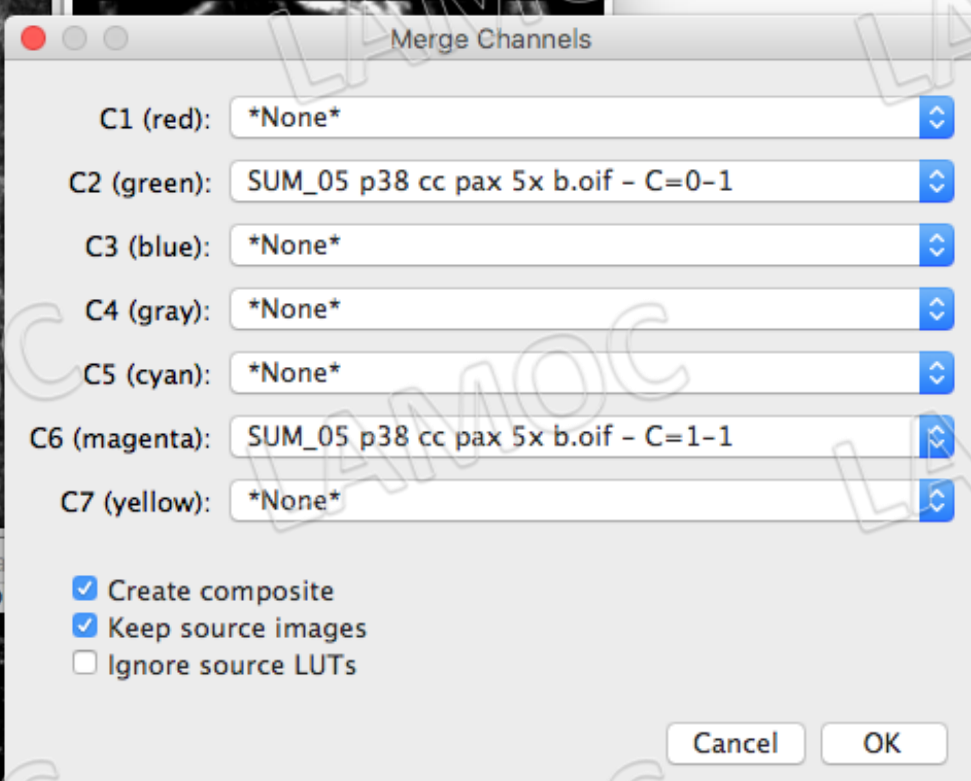


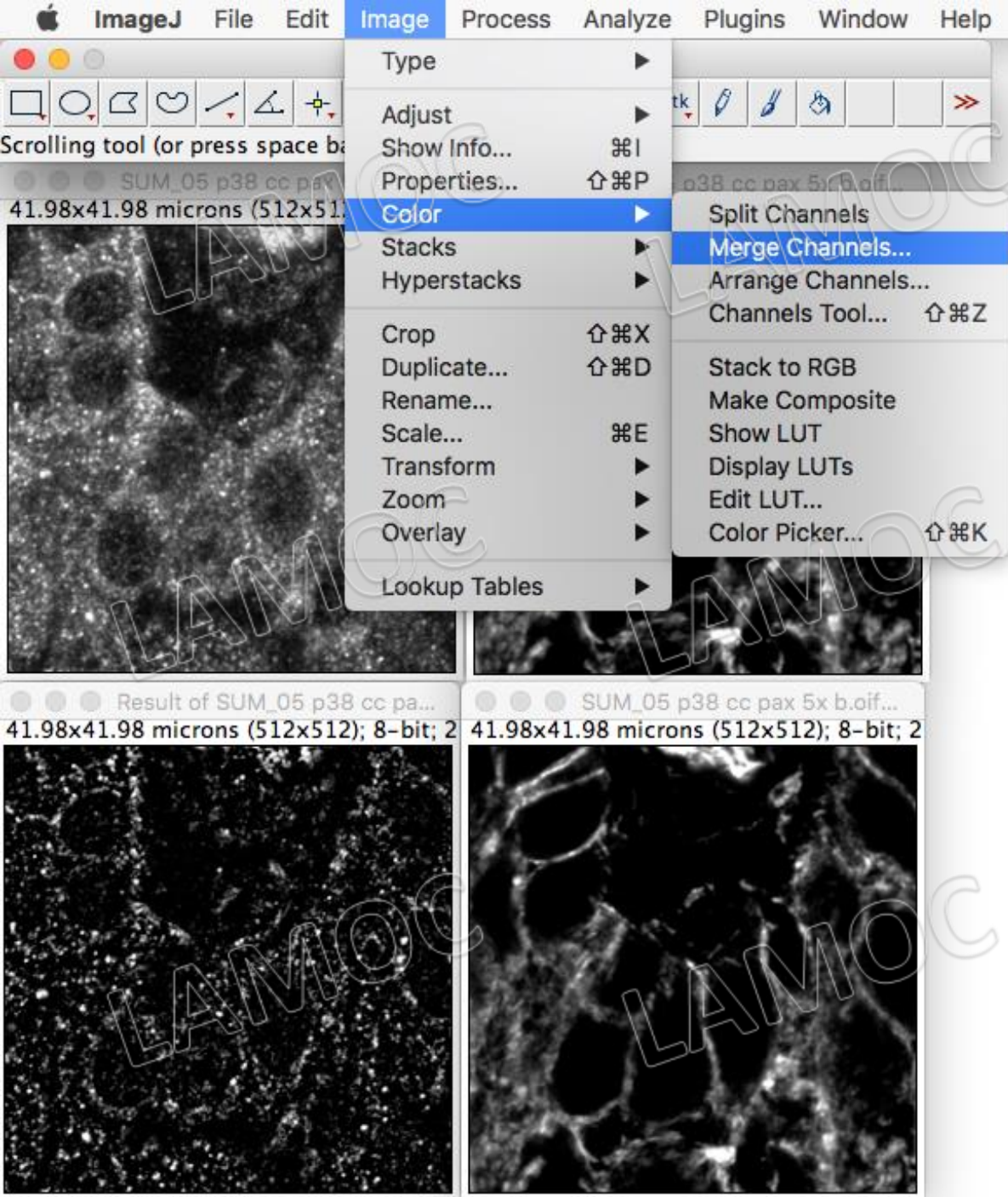
x=430, y=2, value=85

SUM_05 p38 cc pax 5x b.oif... SUM_05 p38 cc pax 5x b.oif...
41.98x41.98 microns (512x512); 8-bit; 2 41.98x41.98 microns (512x512); 8-bit; 2



Result of SUM_05 p38 cc pa...
41.98x41.98 microns (512x512); 8-b



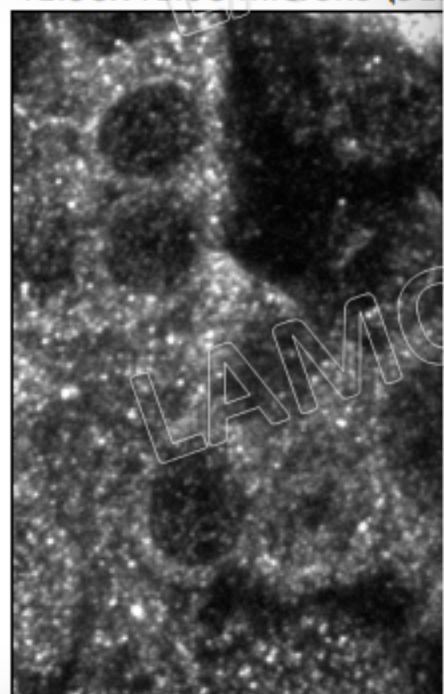




x=502, y=44, value=5

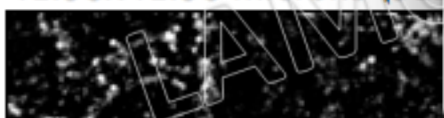
SUM_05 p38 cc

41.98x41.98 microns (512x512)



Result of SUM_05 p38 cc

41.98x41.98 microns (512x512)



Merge Channels

C1 (red): *None*

C2 (green): Result of SUM_05 p38 cc pax 5x b.oif - C=0-1

C3 (blue): *None*

C4 (gray): *None*

C5 (cyan): *None*

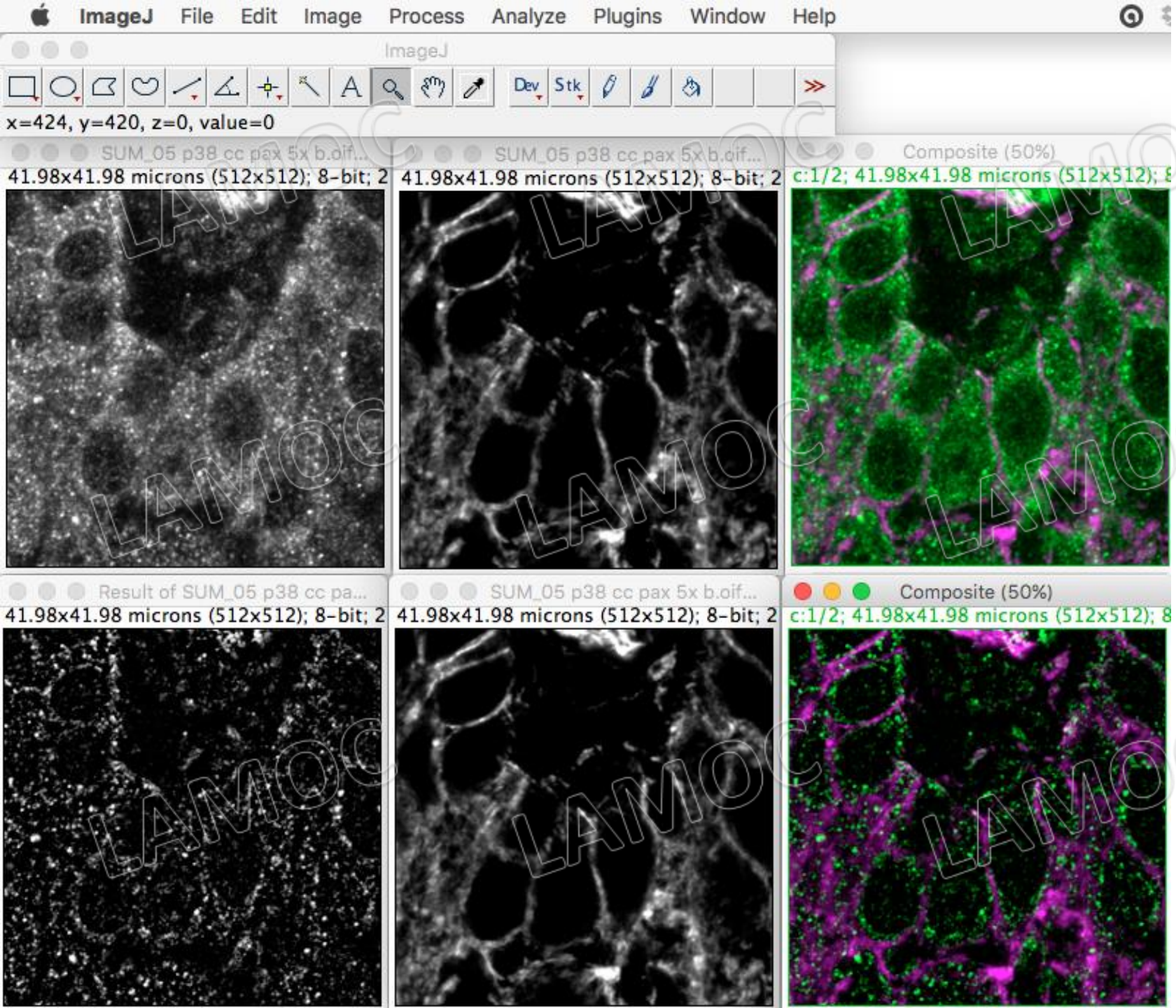
C6 (magenta): SUM_05 p38 cc pax 5x b.oif - C=1-2

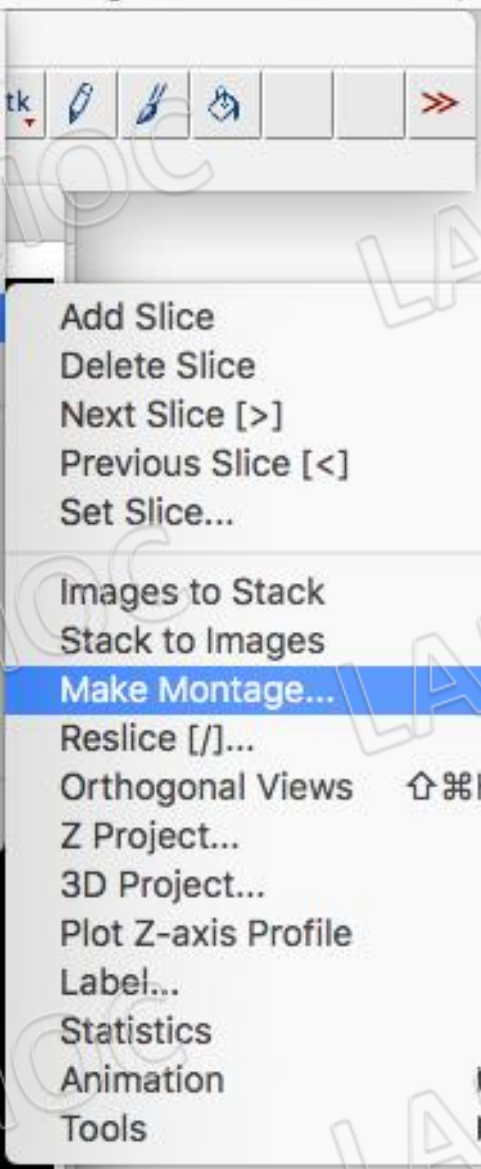
C7 (yellow): *None*

- ☒ Create composite
- ☒ Keep source images
- ☐ Ignore source LUTs

Cancel

OK



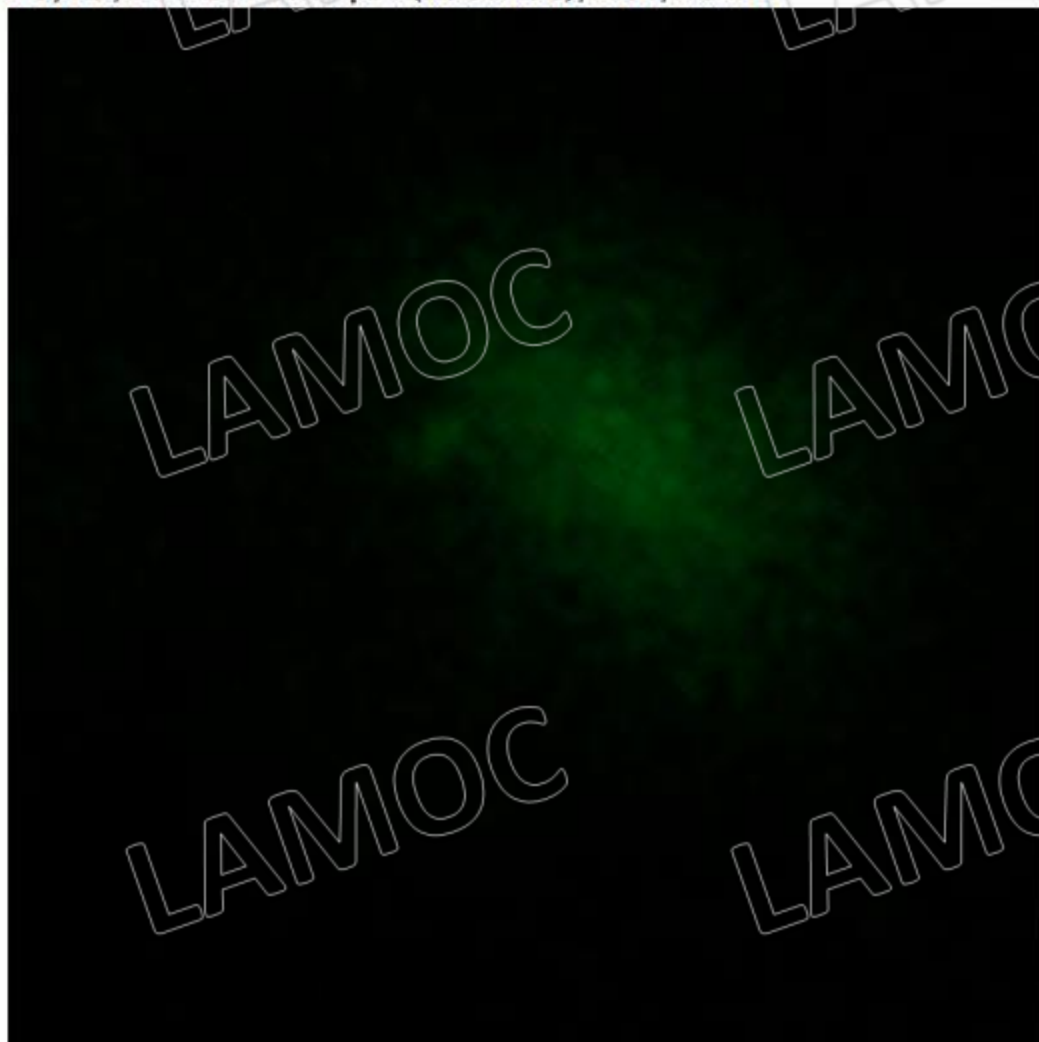




x=69, y=13, z=24, value=000,000,000 (black)

C2-06 confocal-series.tif

25/25; 21.78x21.78 μ m (400x400); RGB; 15MB



Make Montage

Columns: 5

Rows: 5

Scale Factor: 0.25

First Slice: 1

Last Slice: 25

Increment: 1

Border Width: 0

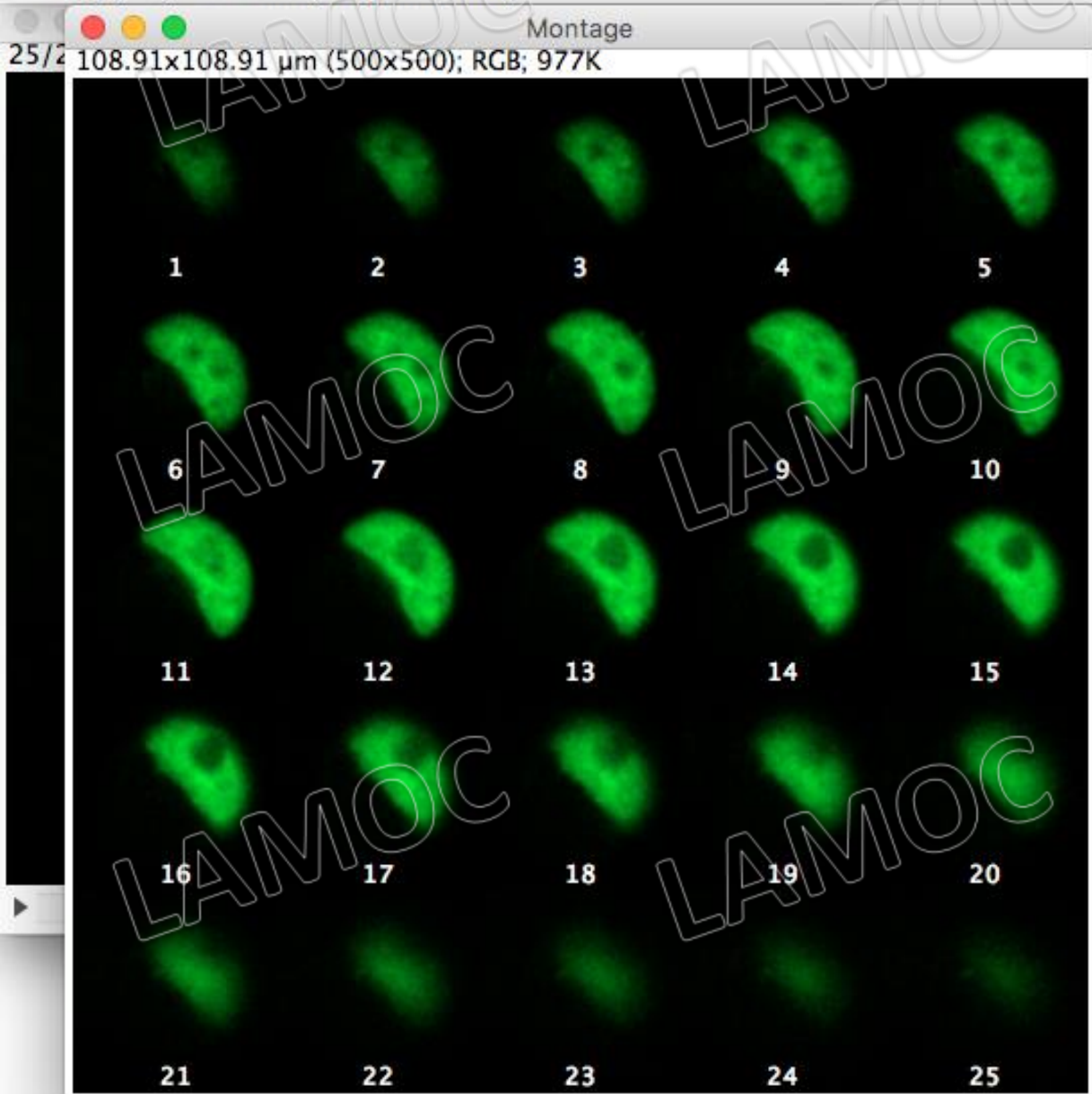
Font Size: 12

☐ Label Slices

☐ Use Foreground Color

Cancel

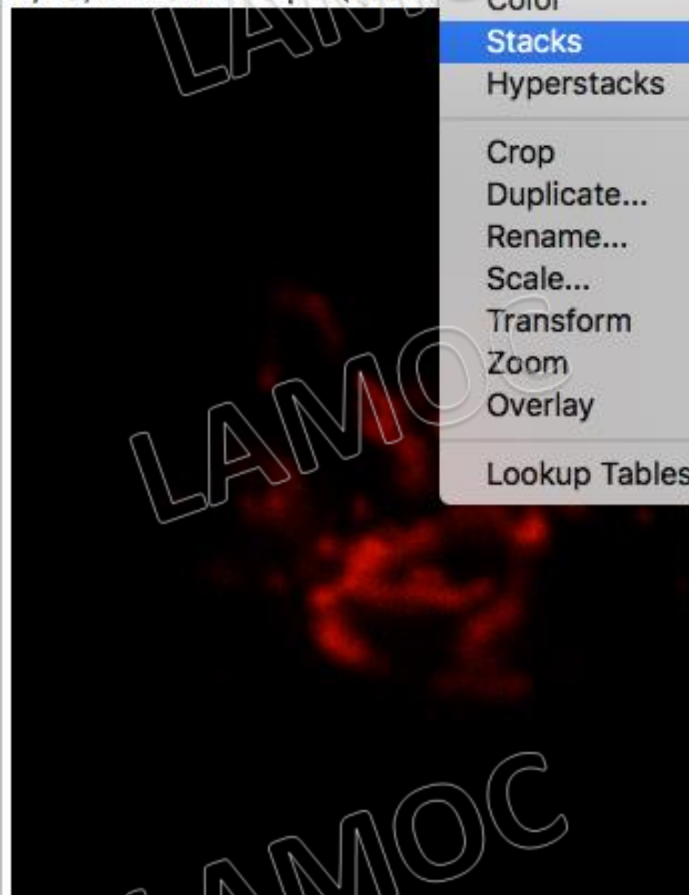
OK





Paintbrush Tool

C1-06 confocal-series.tif
1/25; 21.78x21.78 μm (400x400)



- Type ▶
- Adjust ▶
- Show Info... ⌘I
- Properties... ⌘P
- Color ▶
- Stacks ▶**
- Hyperstacks ▶
- Crop ⌘X
- Duplicate... ⌘D
- Rename...
- Scale... ⌘E
- Transform ▶
- Zoom ▶
- Overlay ▶
- Lookup Tables ▶



C2-06 confocal-series.tif
21.78x21.78 μm (400x400); RGB; 15MB

- Add Slice
- Delete Slice
- Next Slice [>]
- Previous Slice [<]
- Set Slice...
- Images to Stack
- Stack to Images
- Make Montage...
- Reslice [/]...
- Orthogonal Views ⌘H
- Z Project...
- 3D Project...
- Plot Z-axis Profile
- Label...
- Statistics
- Animation ▶

Tools ▶

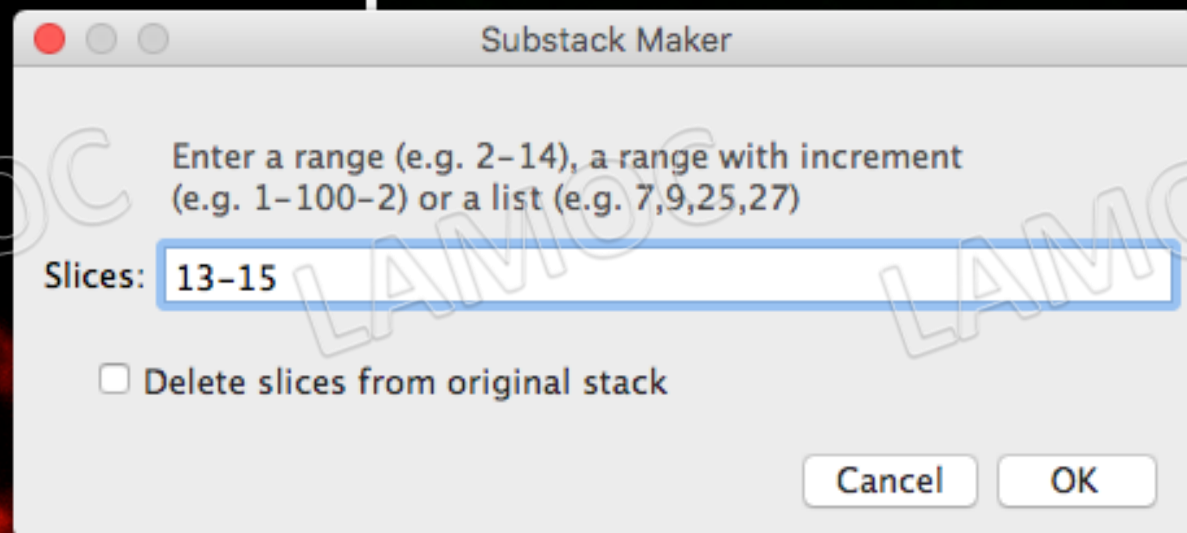
- Combine...
- Concatenate...
- Reduce...
- Reverse
- Insert...
- Montage to Stack...
- Make Substack...**
- Grouped Z Project...
- Set Label...
- Remove Slice Labels



x=228, y=3, z=24, value=000,000,000 (black)

C1-06 confocal-series.tif
1/25; 21.78x21.78 μm (400x400); RGB; 15MB

C2-06 confocal-series.tif
25/25; 21.78x21.78 μm (400x400); RGB; 15MB

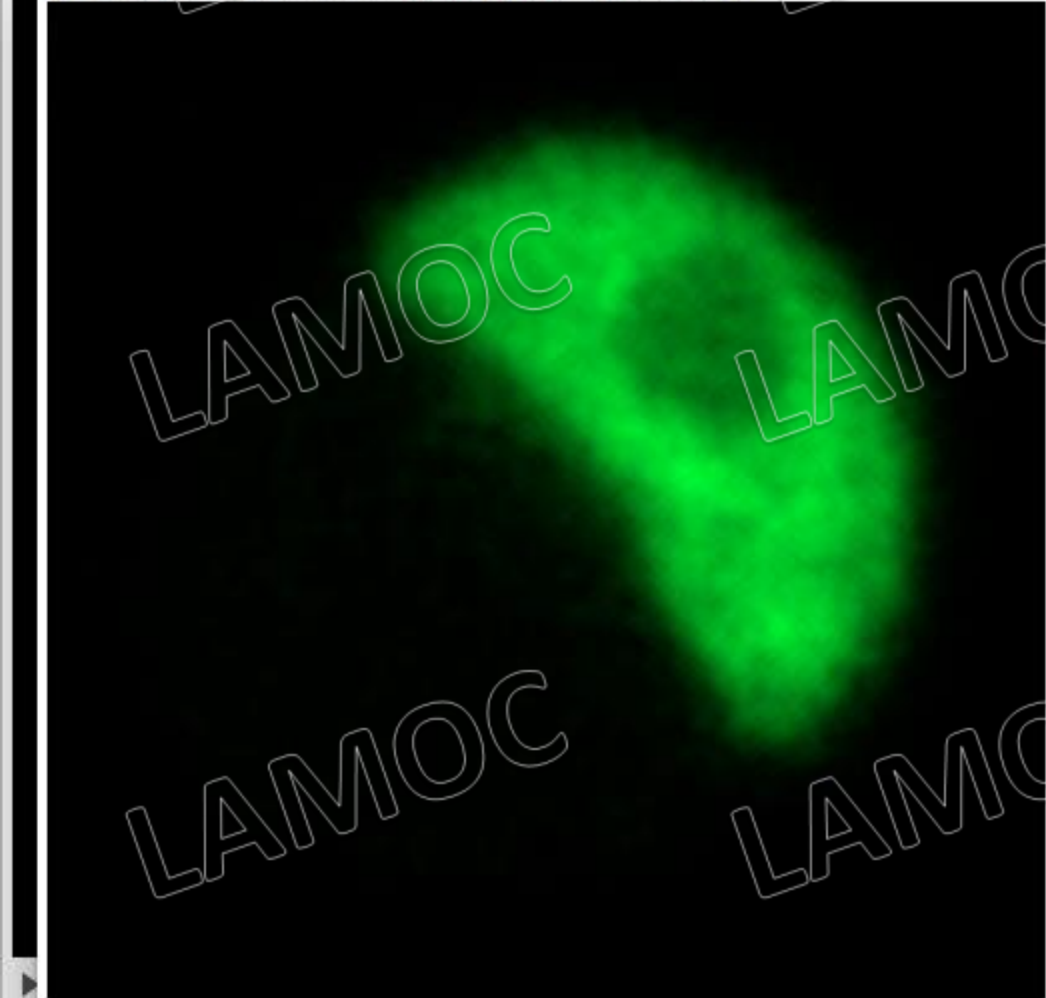


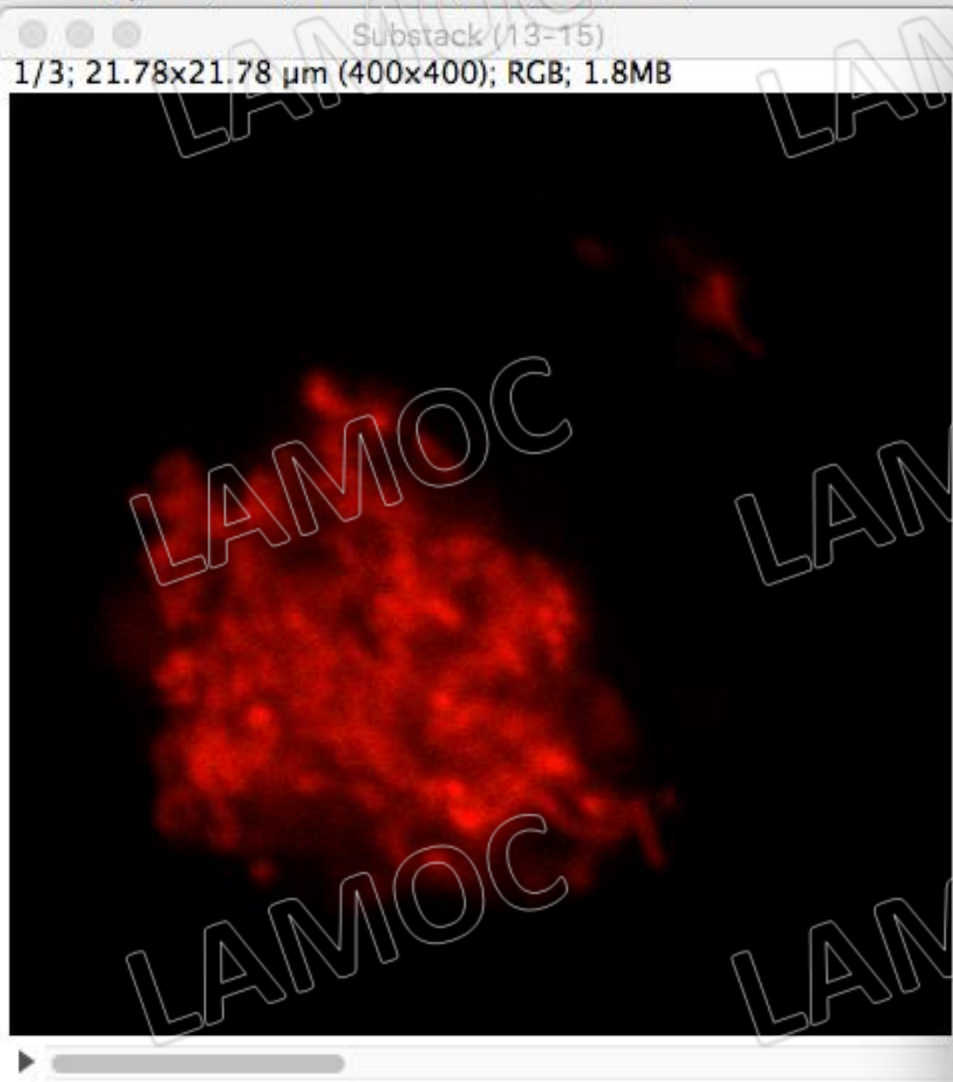


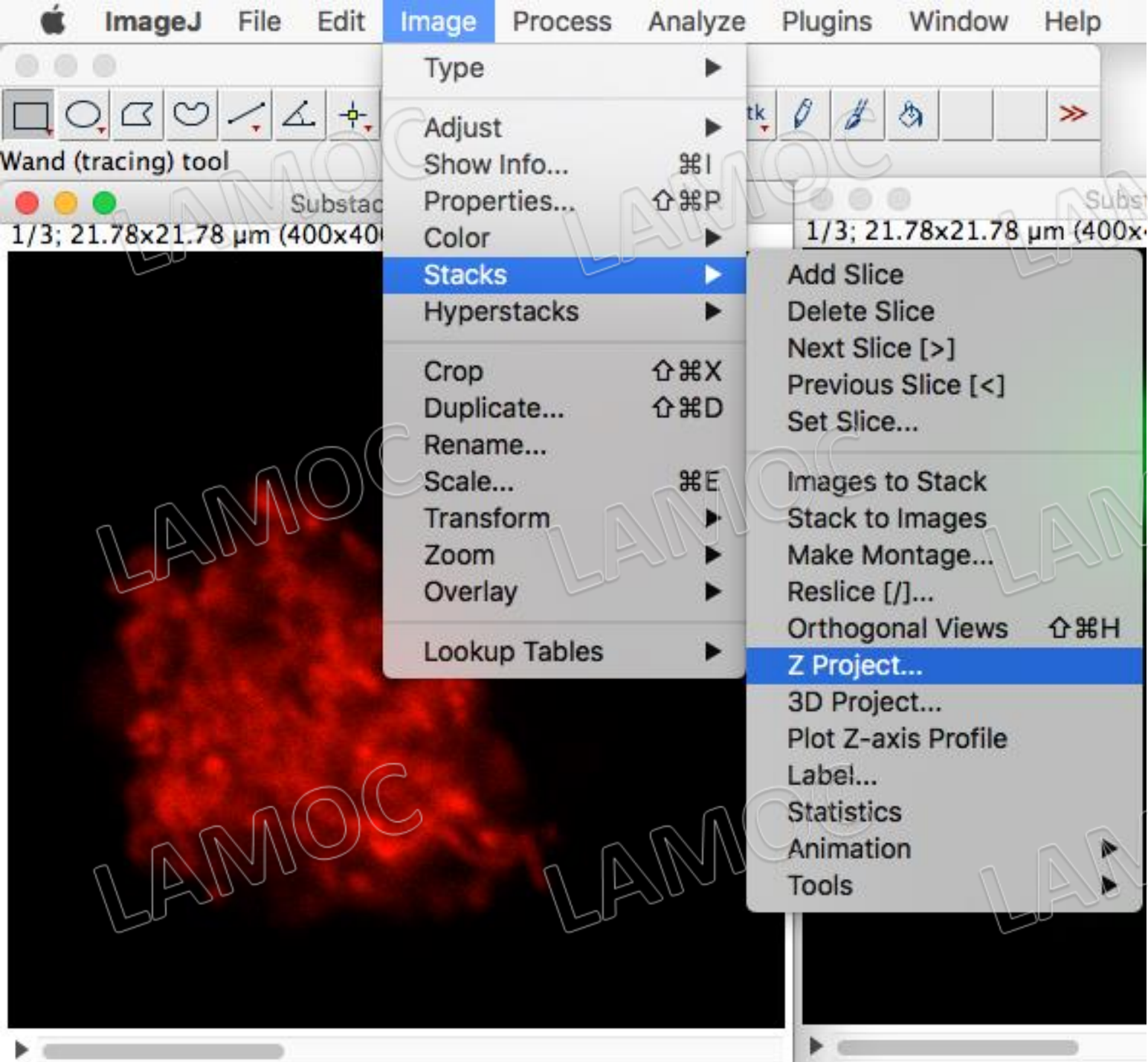
x=53, y=391, z=0, value=000,000,000 (black)

C1-06 confocal-series.tif C2-06 confocal-series.tif
1 Substack (13-15) 78 μ m (400x400); RGB;

1/3; 21.78x21.78 μ m (400x400); RGB; 1.8MB









x=119, y=7, z=0, value=000,000,000 (black)

Substack (13-15)
1/3; 21.78x21.78 μm (400x400); RGB; 1.8MB

1/3; 21.78x21.78 μm (400x400); RGB; 1.8MB

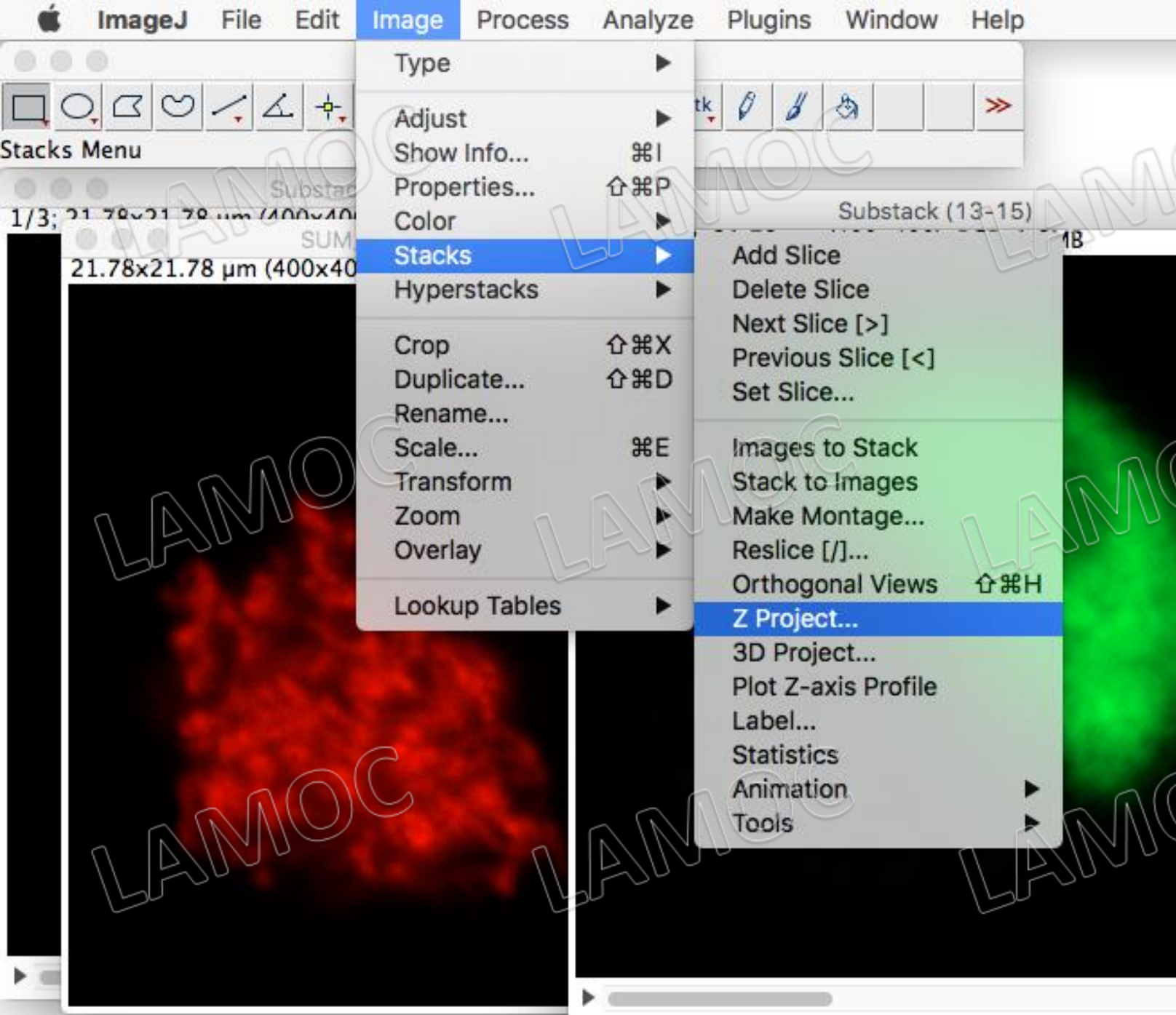
ZProjection

Start slice:

Stop slice:

Projection type:

Cancel OK





x=54, y=335, z=0, value=000,000,000 (black)

Substack (12-15)

1/3; 21.78x21.78 μ m (400x400)

Substack (13-15)

1/3; 21.78x21.78 μ m (400x400); RGB; 1.8MB

21.78x21.78 μ m (400x400)

