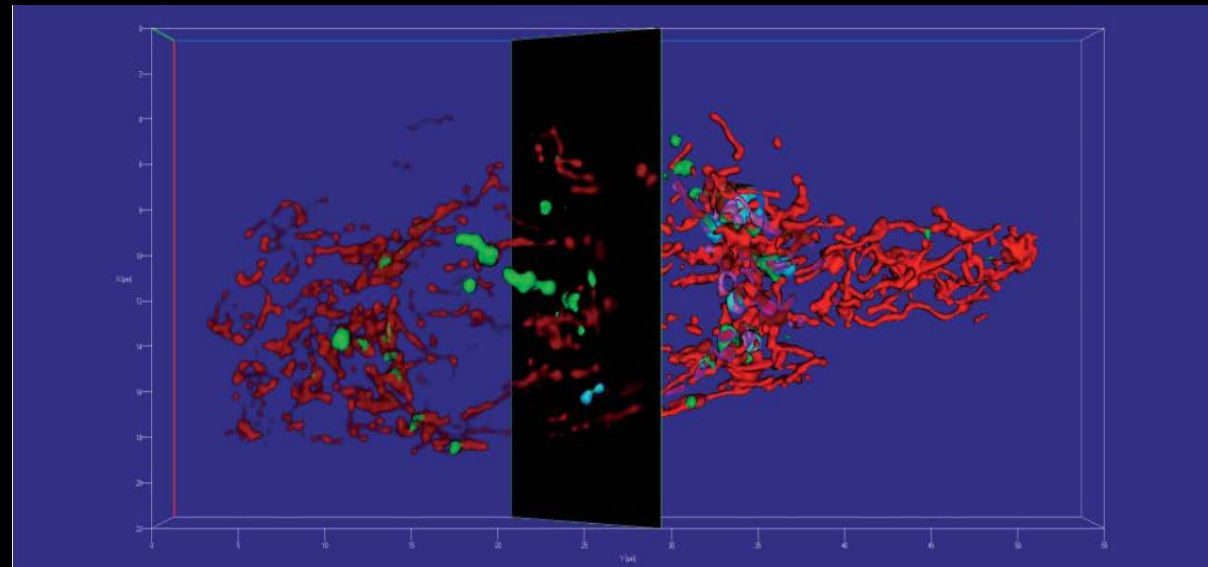
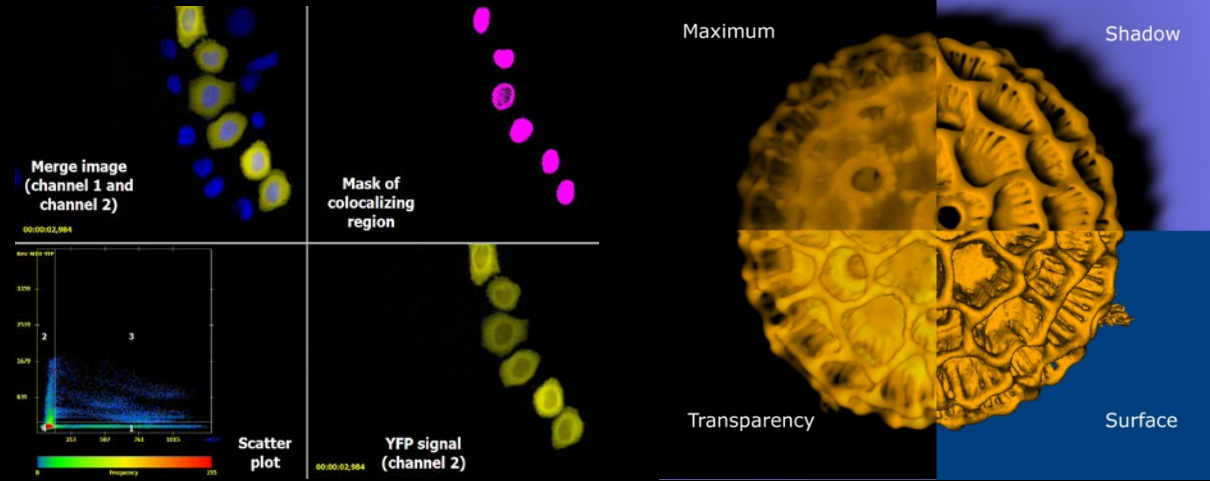


# ZEN Blue常用操作说明



ZEN 2.3 (blue edition)  
BIO Applications



# ZEN Blue主界面

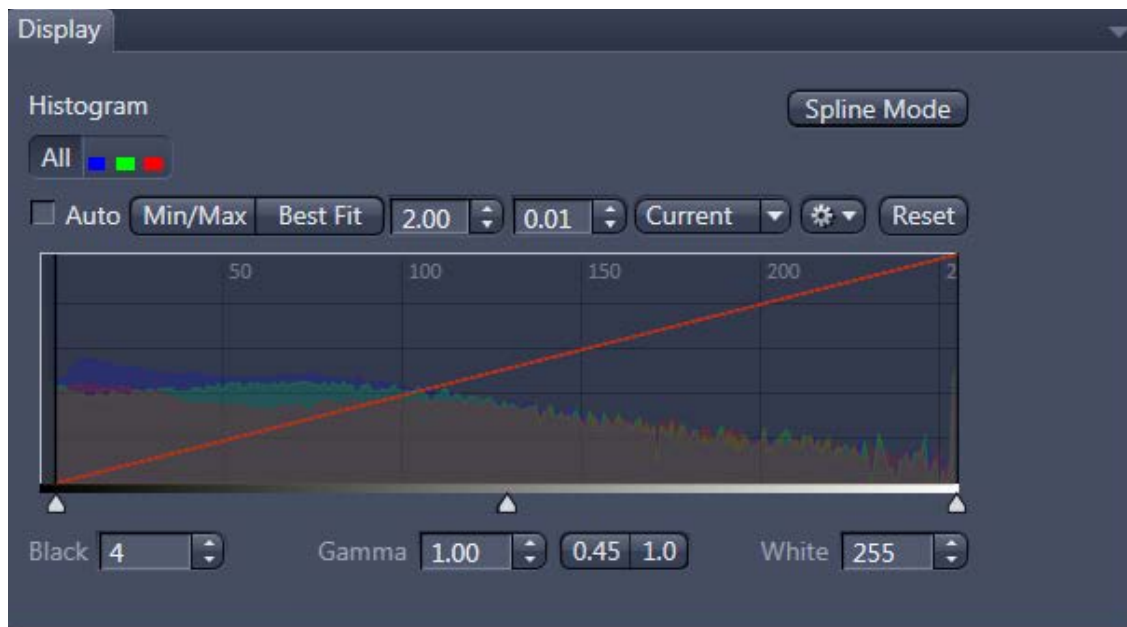


The screenshot shows the ZEN Blue software interface with the following components labeled in Chinese:

- 标题栏** (Title Bar): Located at the top left, pointing to the window title "ZEN brain PH3 b-tub eng-GFP-EDF\_(c2+c3+c4+c5).czi - ZEN 2.3 lite".
- 菜单栏** (Menu Bar): Located at the top right, pointing to the menu items "File Edit View Acquisition Graphics Tools Window Help".
- 工具栏** (Toolbar): Located below the menu bar, pointing to the icons for Camera and Processing.
- 左侧工具栏** (Left Tool Bar): Located on the left side, pointing to the "Method" panel which lists various image processing functions like "Image Export", "Fuse Image Subset", and "Image Import".
- 右侧工具栏** (Right Tool Bar): Located on the right side, pointing to the "Images and Documents" panel which shows a list of open files.
- 图像显示区域** (Image Display Area): The central area pointing to the main image of a cell with a 100 μm scale bar.
- 图像控制区域** (Image Control Area): Located at the bottom, pointing to the "Display" panel which includes a histogram and various adjustment sliders for zoom, gamma, and white/black levels.
- 状态栏** (Status Bar): Located at the very bottom, pointing to the system information and performance metrics.

在图像下方的Display工具栏中可以调节直方图对角线上白色节点，改变对角线的起止位置和斜率，从而改变图像的亮度和对比度。

注意：只有在图像拍摄完成后，才能通过这种方法调节图片的亮度和对比度！由于这种方法只改变了图像显示的亮度，而不改变图像数据信息，在图像预览时，调节直方图不能改变拍摄所得图片的效果！



荧光图像建议调节参数：

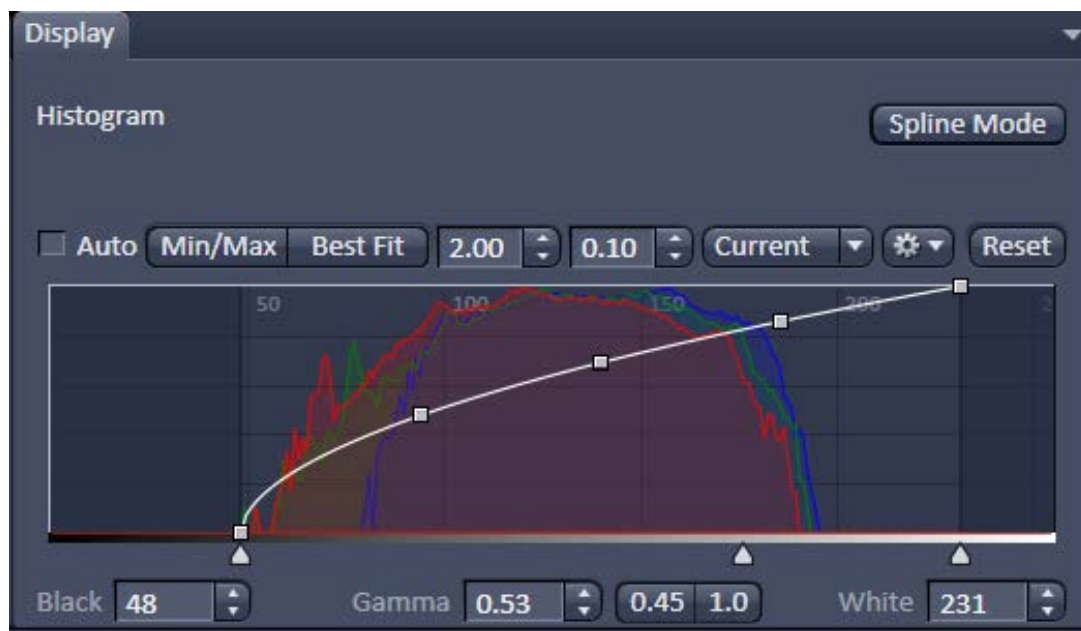
对角线左下角节点右移至第一个峰右侧，以压制背景；  
对角线右上角节点左移至峰结束的位置，以增强信号  
亮度。

Gamma值一般为 1 。

Display调节不会改变荧光强度测量数据。

在图像下方的Display工具栏中可以调节直方图对角线上白色节点，改变对角线的起止位置和斜率，从而改变图像的亮度和对比度。

注意：只有在图像拍摄完成后，才能通过这种方法调节图片的亮度和对比度！由于这种方法只改变了图像显示的亮度，而不改变图像数据信息，在图像预览时，调节直方图不能改变拍摄所得图片的效果！

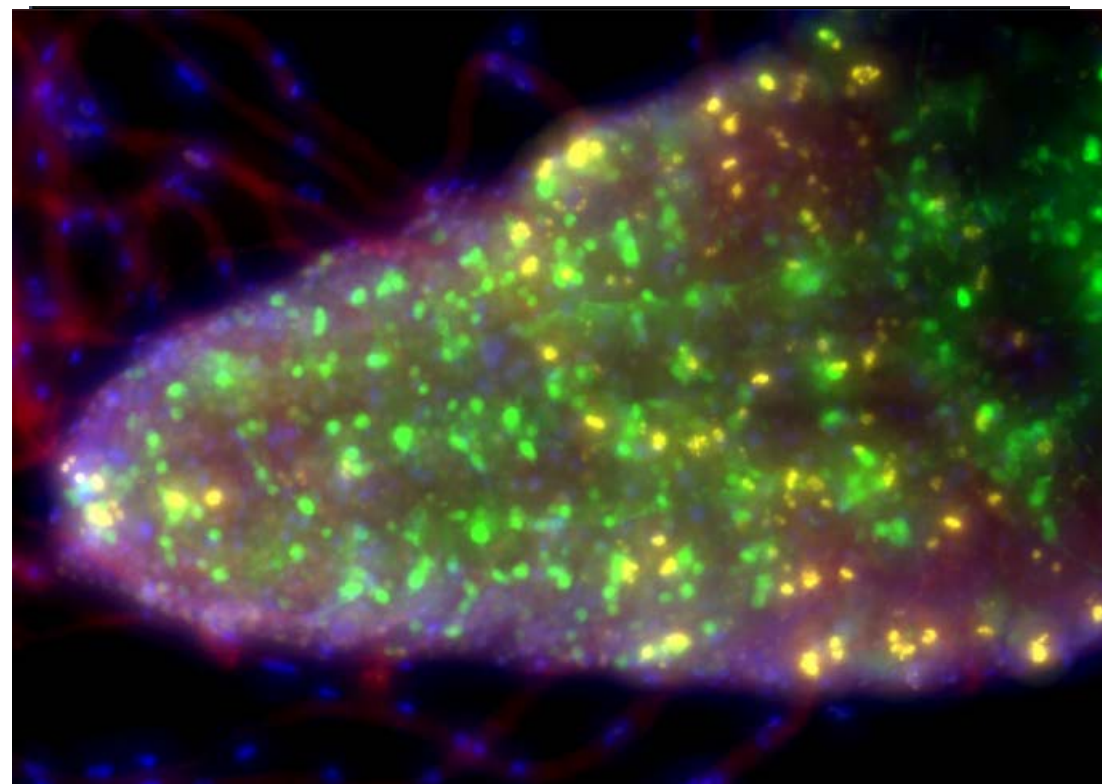
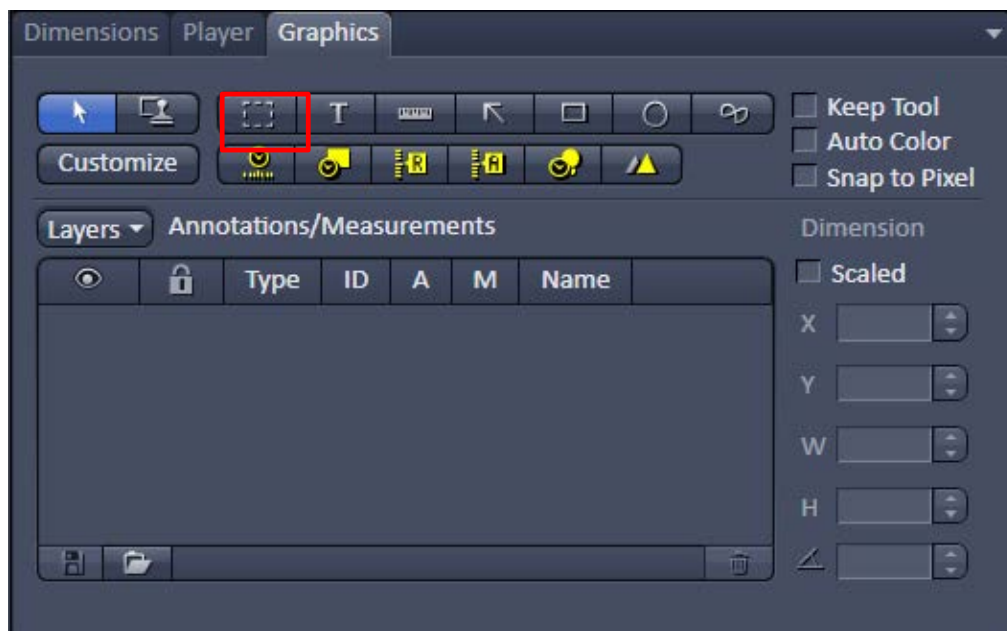


明场图像建议调节参数：  
对角线左下角节点右移至第一个峰右侧，以增强信号；  
对角线右上角节点左移至峰结束的位置，以提亮背景。

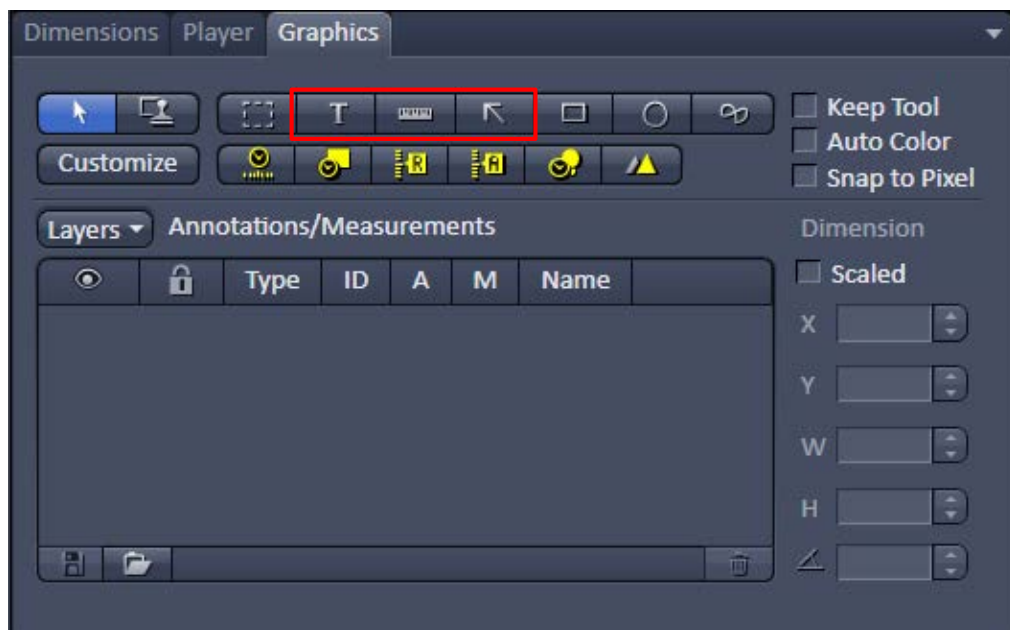
# 选取图片中感兴趣区域



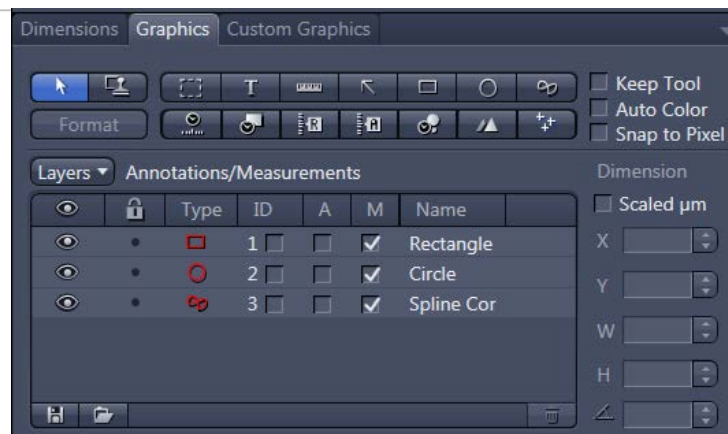
图像拍摄完成后，在图像下方的Graphics工具栏中，使用ROI按钮，截取感兴趣的区域，按Ctrl+Shift+C形成一张新的图片。



图像拍摄完成后，在图像下方的Graphics工具栏中，选择添加比例尺，箭头，文字说明等常用注释。

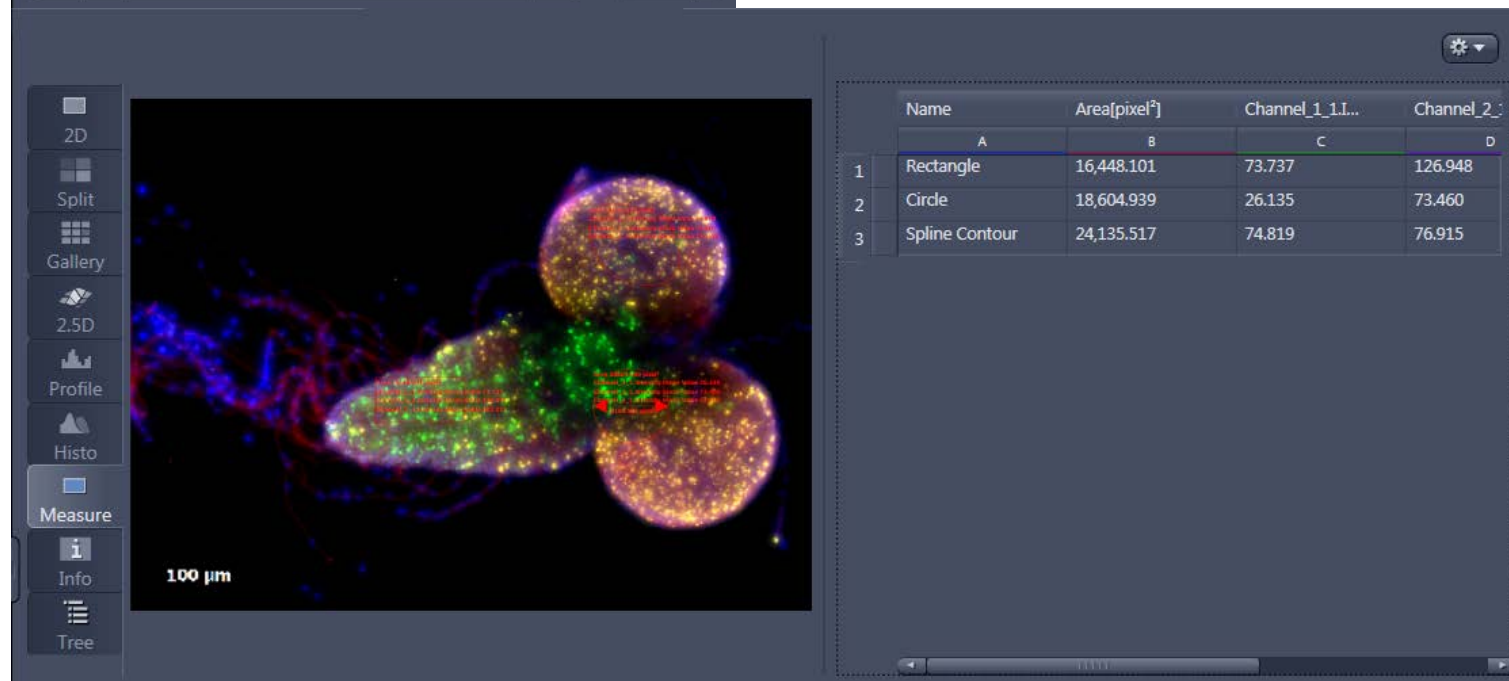


从左至右，依次为文本框，比例尺，箭头和方框的添加按钮。在图像上选中添加好的标注点击右键，选择Format，可以更改线条颜色，字体大小等注释格式。



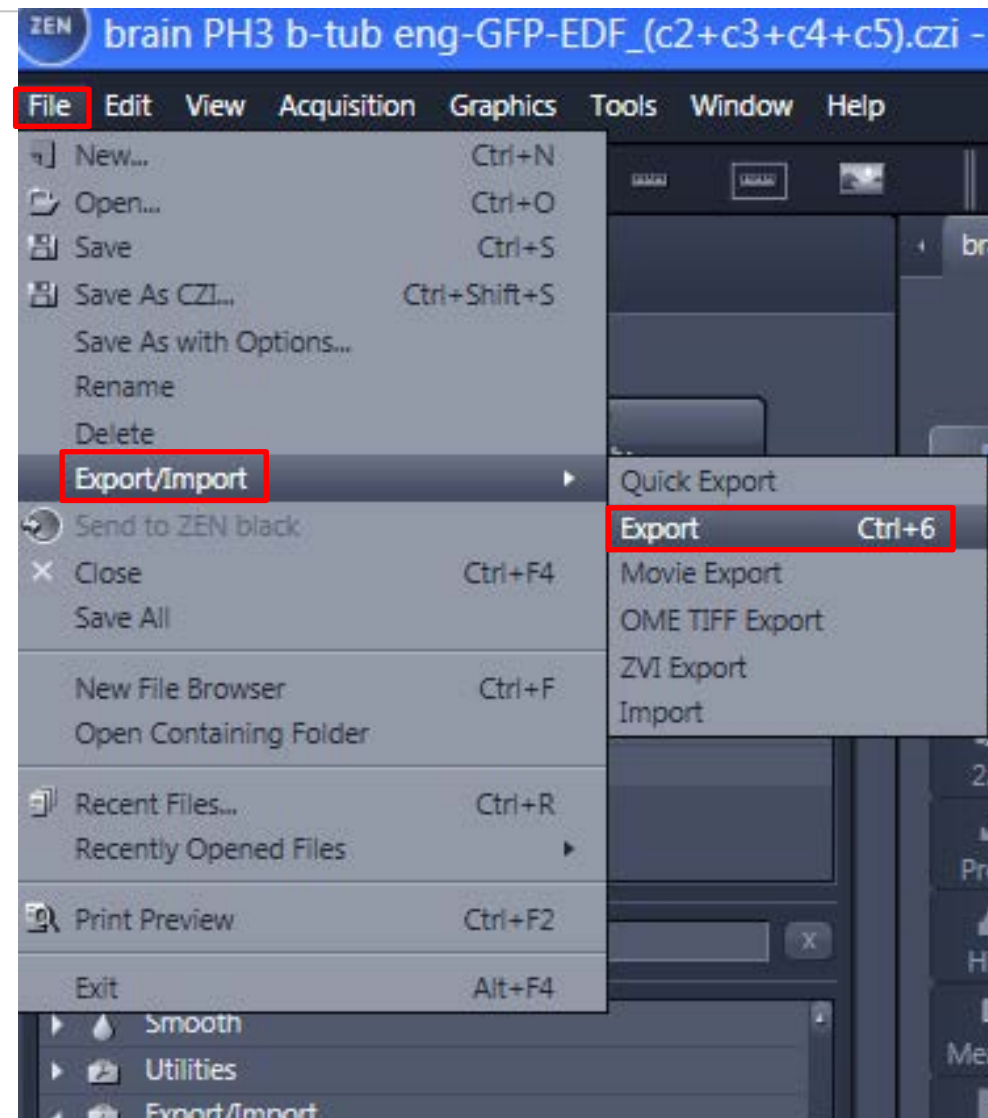
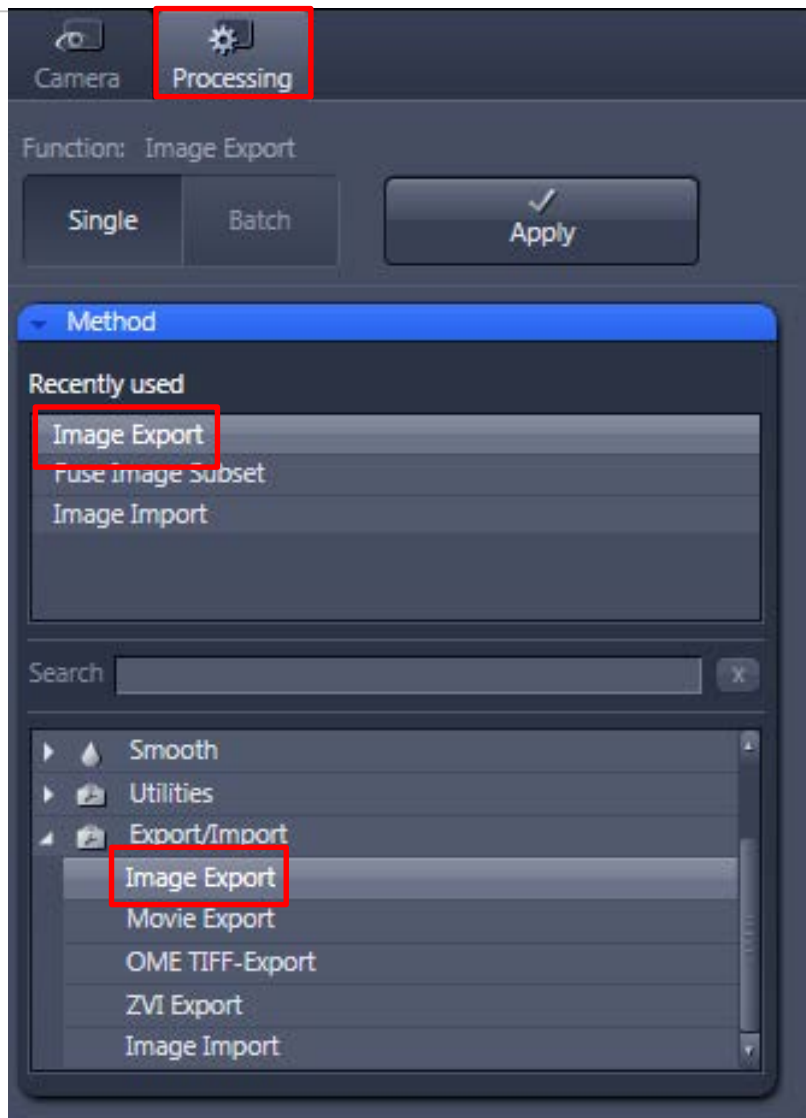
在图像下方的Graphics工具栏中，选择方框，圆形，不规则形状等常用测量工具。从左至右，依次为方框，圆形和不规则形状的添加按钮。

注意：在菜单栏的**Graphics**菜单中，还提供了直线，点数等其他测量工具。



在Measure图像显示界面中，使用选择的测量工具在图像上框选感兴趣的区域。在图像的右侧将出现测量结果列表。

# 图片导出

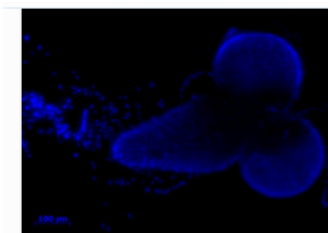
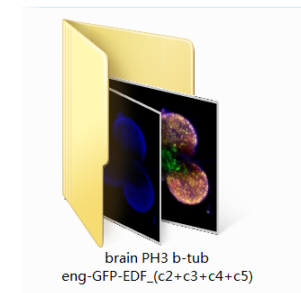
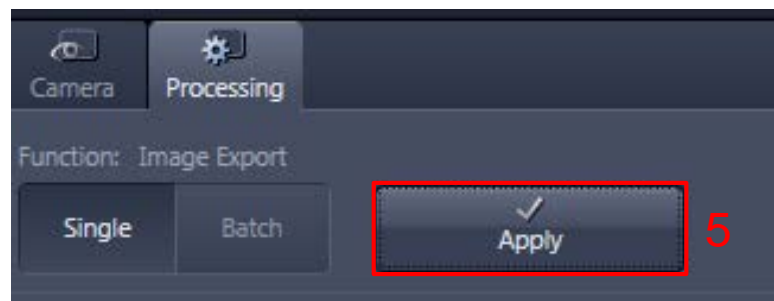
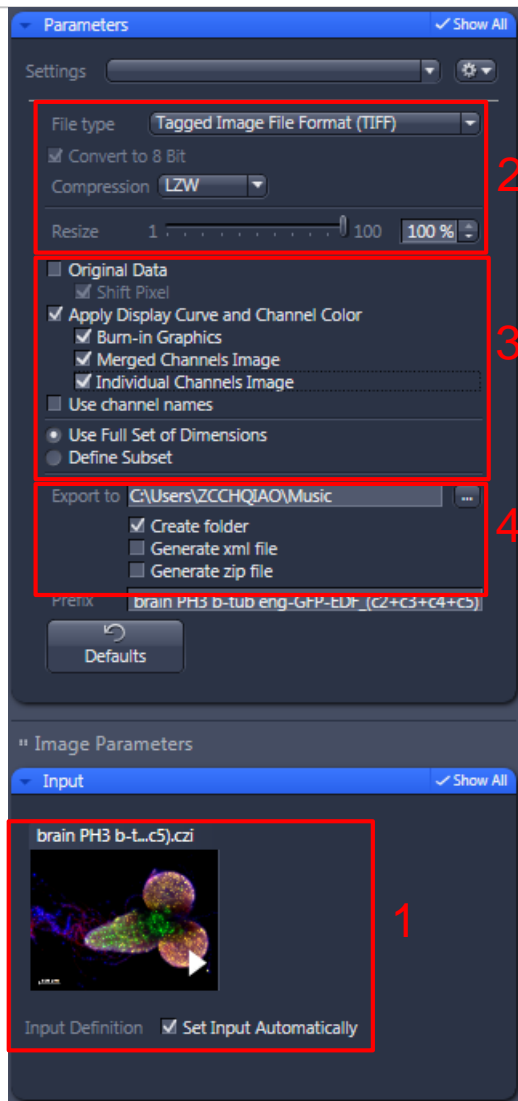




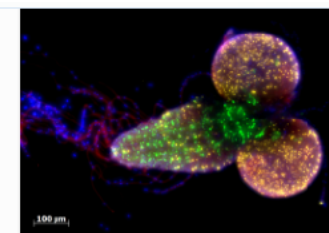
# 图片导出



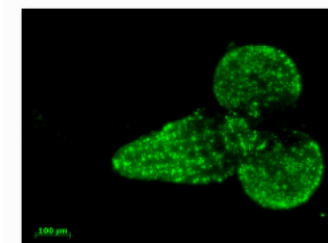
- 1、要导出的图片已经在ZEN中打开，自动输入现在打开的图片，或者手动选择要导出的图片；
- 2、选择导出图片格式和导出图片质量尺寸；
- 3、导出图片是否包括单通道图像、叠加图像和图像上的注释；
- 4、导出位置和是否创建文件夹。
- 5、点击“应用”。



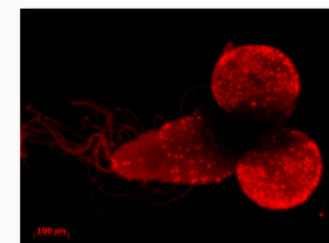
brain PH3 b-tub  
eng-GFP-EDF\_(c2+c3+c4+c5)\_c1.tif



brain PH3 b-tub  
eng-GFP-EDF\_(c2+c3+c4+c5)\_c1+2  
+3.tif



brain PH3 b-tub  
eng-GFP-EDF\_(c2+c3+c4+c5)\_c2.tif



brain PH3 b-tub  
eng-GFP-EDF\_(c2+c3+c4+c5)\_c3.tif

# 图片批量导出



The screenshot displays the ZEISS ZEN software interface with the following components and steps:

- Processing Panel (Left):** The 'Processing' button is highlighted with a red box and labeled '1'. Below it, the 'Batch' button is highlighted with a red box and labeled '2'. In the 'Batch Method' list, 'Image Export' is highlighted with a red box and labeled '3'.
- Batch Processing Panel (Middle):** The 'Add...' button is highlighted with a red box and labeled '4'. Below it, a table lists files to be processed:

S	Consistent	File Name	Size	Method	Output Name	Output Storage Path
5						

Select function first; Add Files by pressing the '+' button.

- Add Files Dialog (Bottom):** The 'Add files' dialog is open, showing a file list. The file '2017-0705-D1ER-bleach2-Create Image Subs...' is highlighted with a red box and labeled '5'. The 'Open (O)' button is highlighted with a red box and labeled '6'.

Method Parameters (Left):

- File type: JPEG File Interchange Format (JPEG)
- Quality: 100
- Resize: 100%
- Export to: C:\Users\ZCCHQIAO\Music

# 图片批量导出

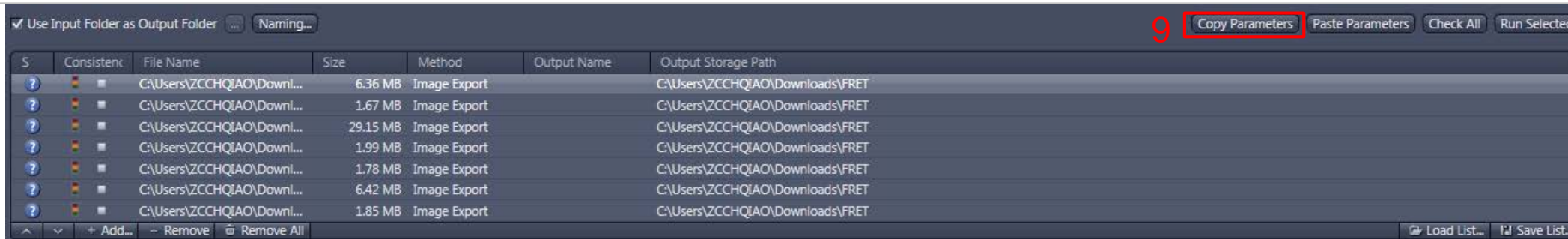


The screenshot displays the 'Batch Processing' window in the Zeiss software. On the left, the 'Batch Method' list has 'Image Export' selected. Below it, the 'Method Parameters' panel is open, showing settings for 'Tagged Image File Format (TIFF)'. A red box highlights this panel, with an arrow pointing to it from the text '8、此处设置导出文件格式，和单个文件导出参数设置类似'. In the center, a table lists files for batch processing. A red arrow points to the first row of the table, with the text '7、选择其中一个文件设置导出文件参数'.

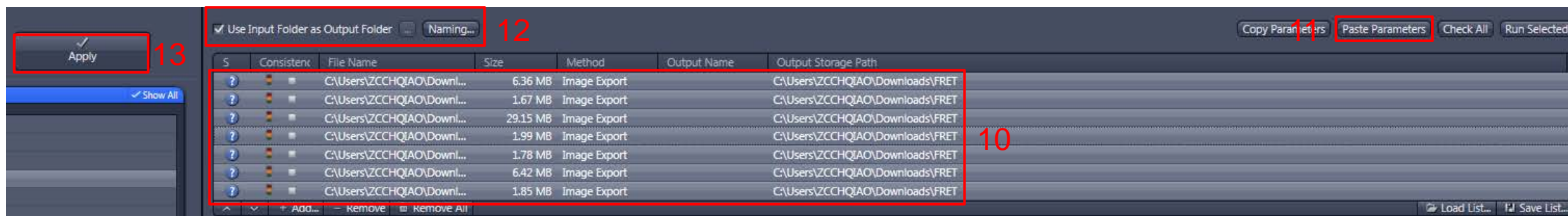
S	Consistent	File Name	Size	Method	Output Name	Output Storage Path
?		C:\Users\ZCCHQIAO\Downl...	6.36 MB	Image Export		C:\Users\ZCCHQIAO\Downloads\FRET
?		C:\Users\ZCCHQIAO\Downl...	1.67 MB	Image Export		C:\Users\ZCCHQIAO\Downloads\FRET
?		C:\Users\ZCCHQIAO\Downl...	29.15 MB	Image Export		C:\Users\ZCCHQIAO\Downloads\FRET
?		C:\Users\ZCCHQIAO\Downl...	1.99 MB	Image Export		C:\Users\ZCCHQIAO\Downloads\FRET
?		C:\Users\ZCCHQIAO\Downl...	1.78 MB	Image Export		C:\Users\ZCCHQIAO\Downloads\FRET
?		C:\Users\ZCCHQIAO\Downl...	6.42 MB	Image Export		C:\Users\ZCCHQIAO\Downloads\FRET
?		C:\Users\ZCCHQIAO\Downl...	1.85 MB	Image Export		C:\Users\ZCCHQIAO\Downloads\FRET

7、选择其中一个文件设置导出文件参数

8、此处设置导出文件格式，和单个文件导出参数设置类似



9、设置好参数后选择“复制参数”；



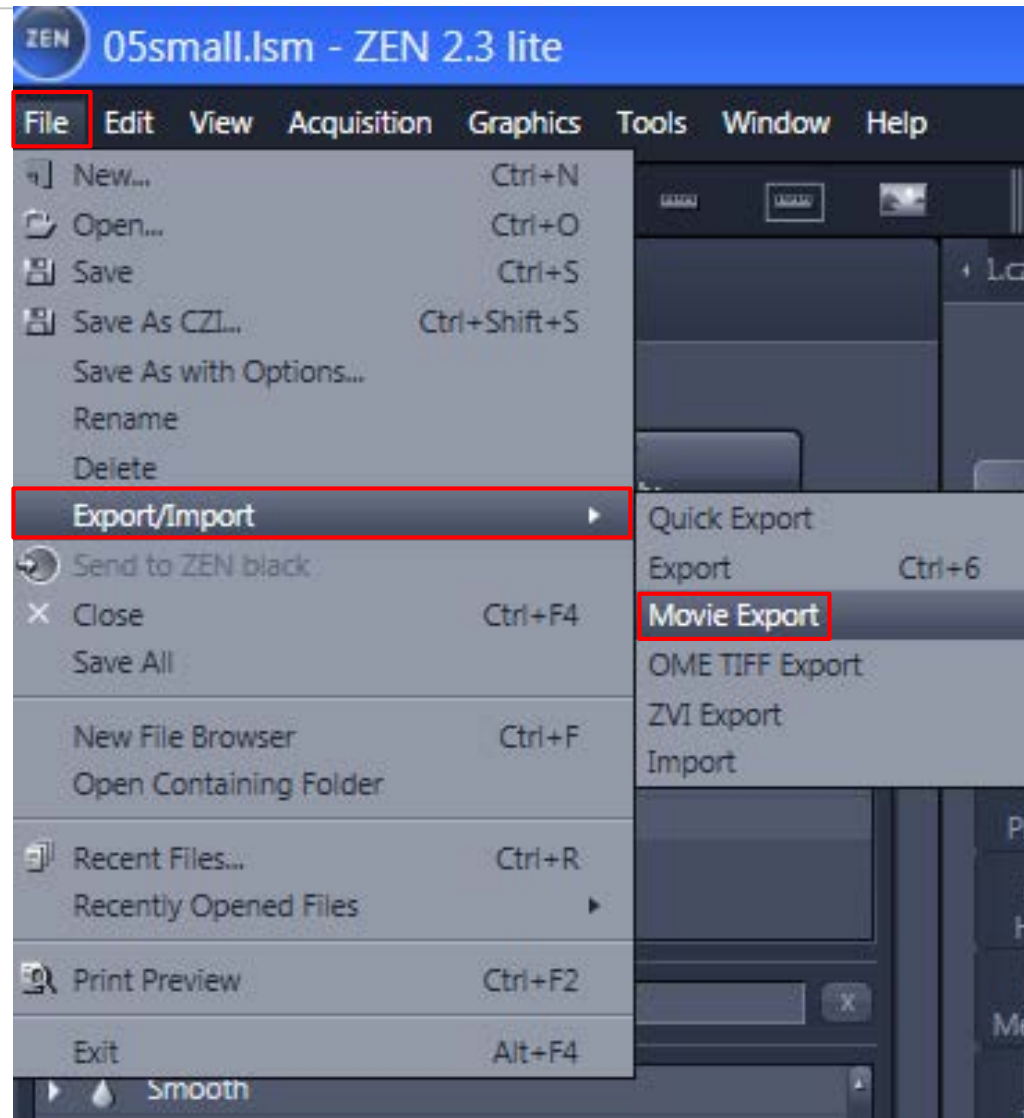
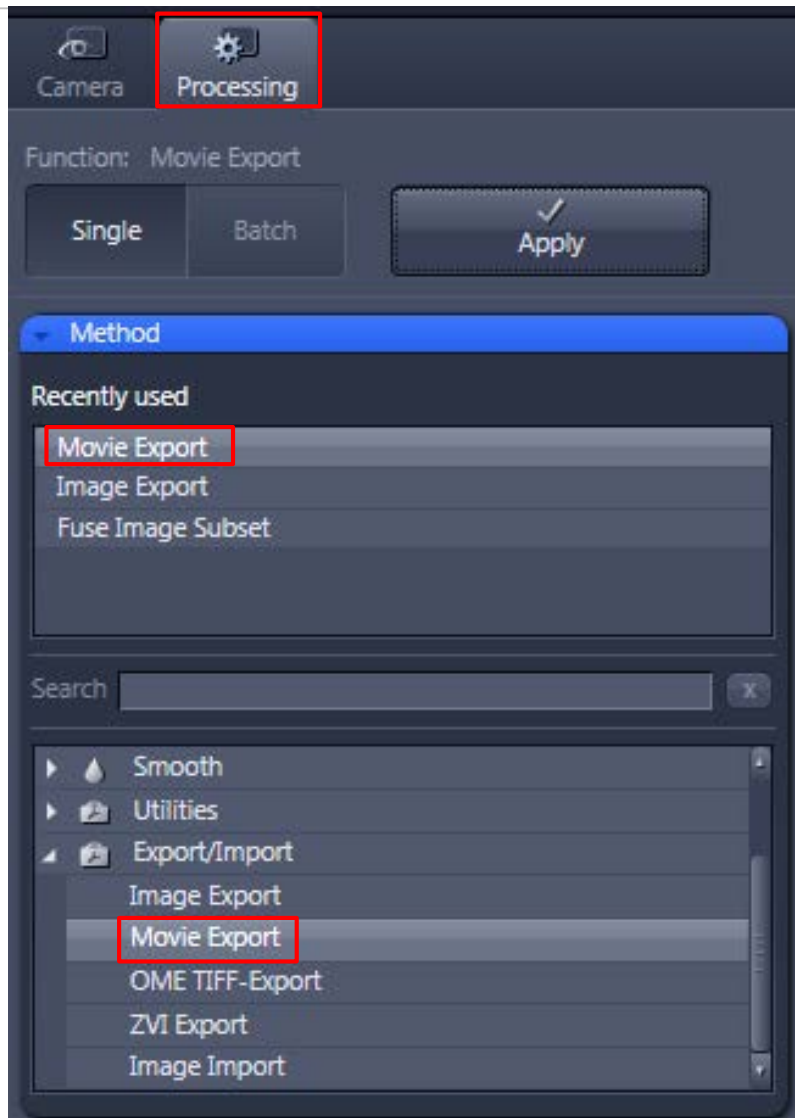
10、选择所有文件（Ctrl+A）；

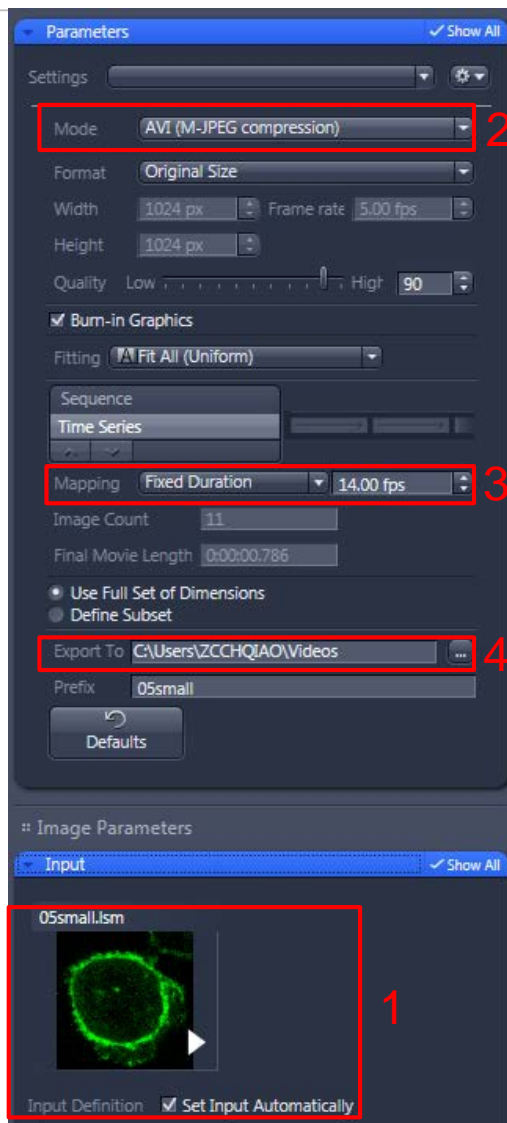
11、“粘贴参数”；

12、默认导出到原始文件的位置处，也可以手动更改；

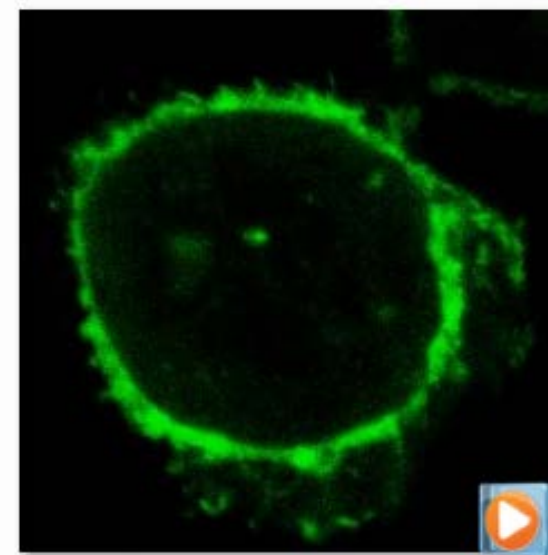
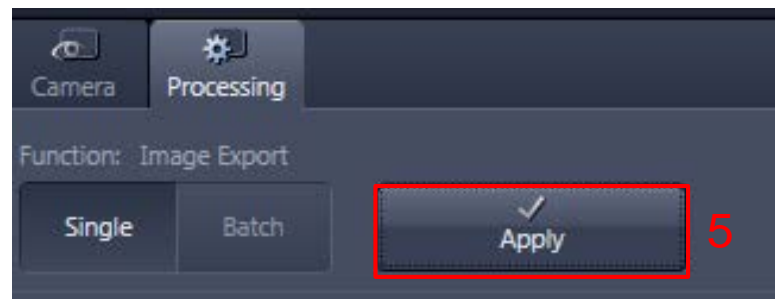
13、点击“应用”

# 视频导出

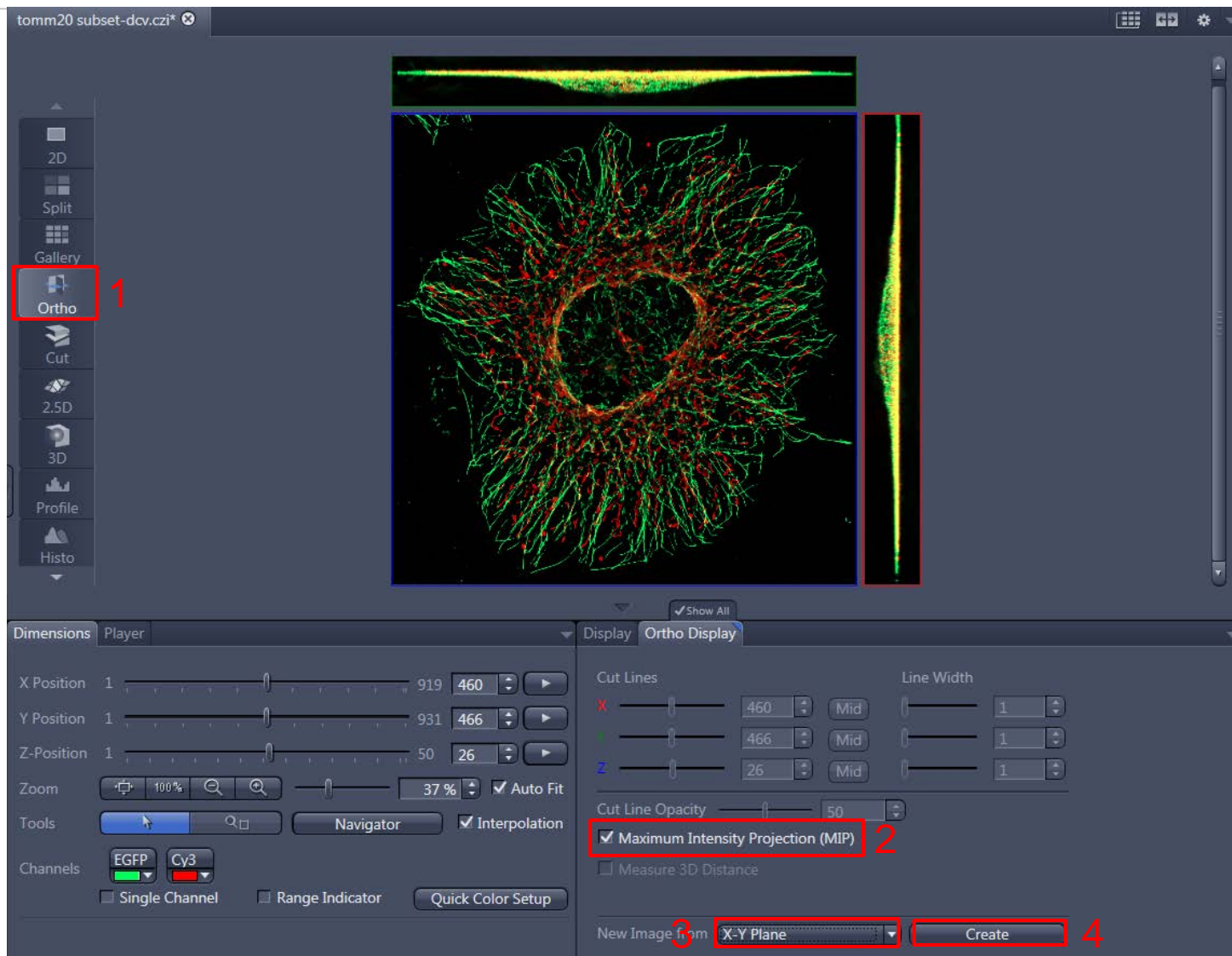




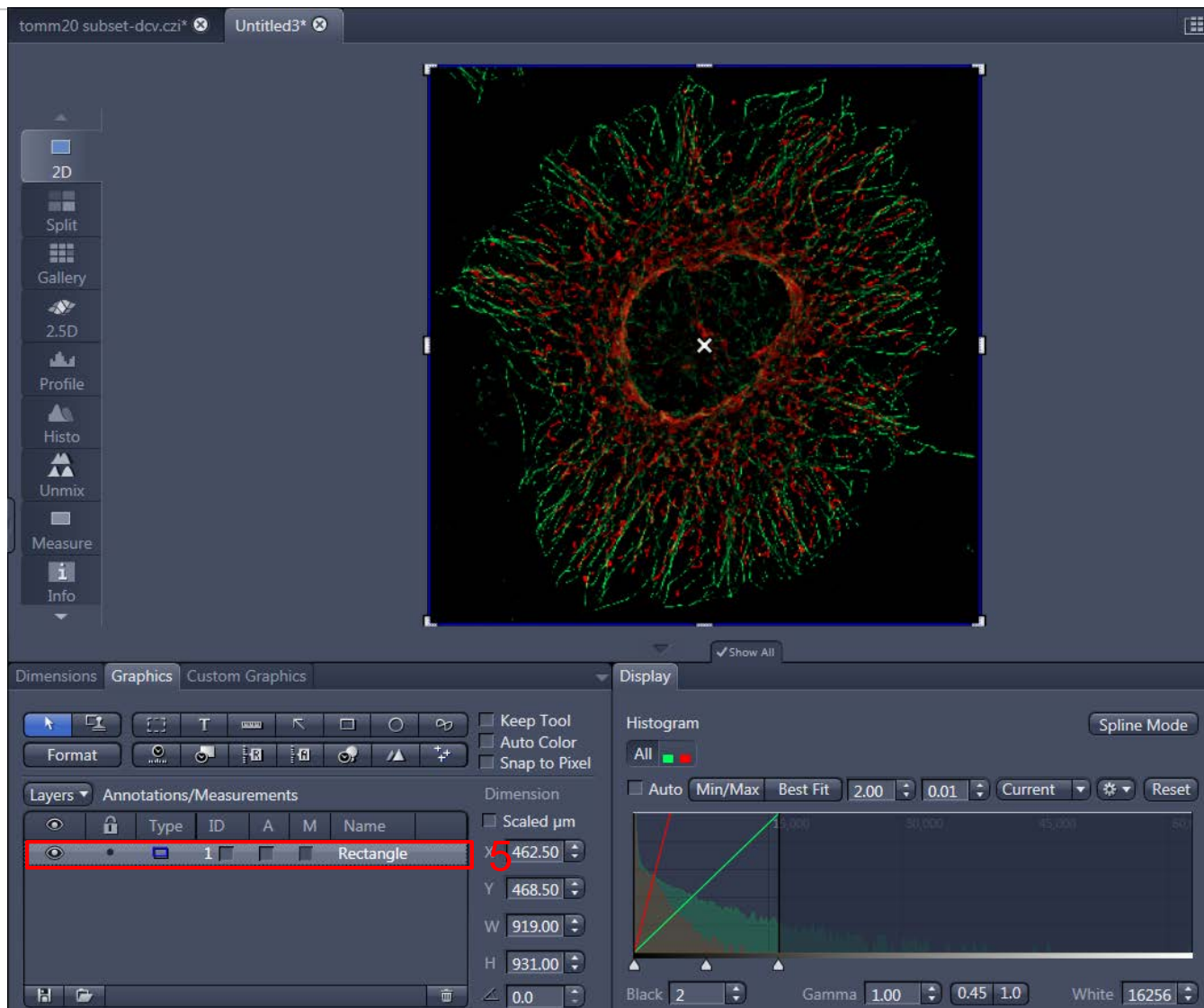
- 1、要导出的文件已经在ZEN中打开，自动输入现在打开的文件，或者手动选择要导出的文件；
- 2、选择导出视频格式；
- 3、选择“Fixed duration”设置每秒播放张数；
- 4、设置导出位置。
- 5、点击“应用”。



05small.avi



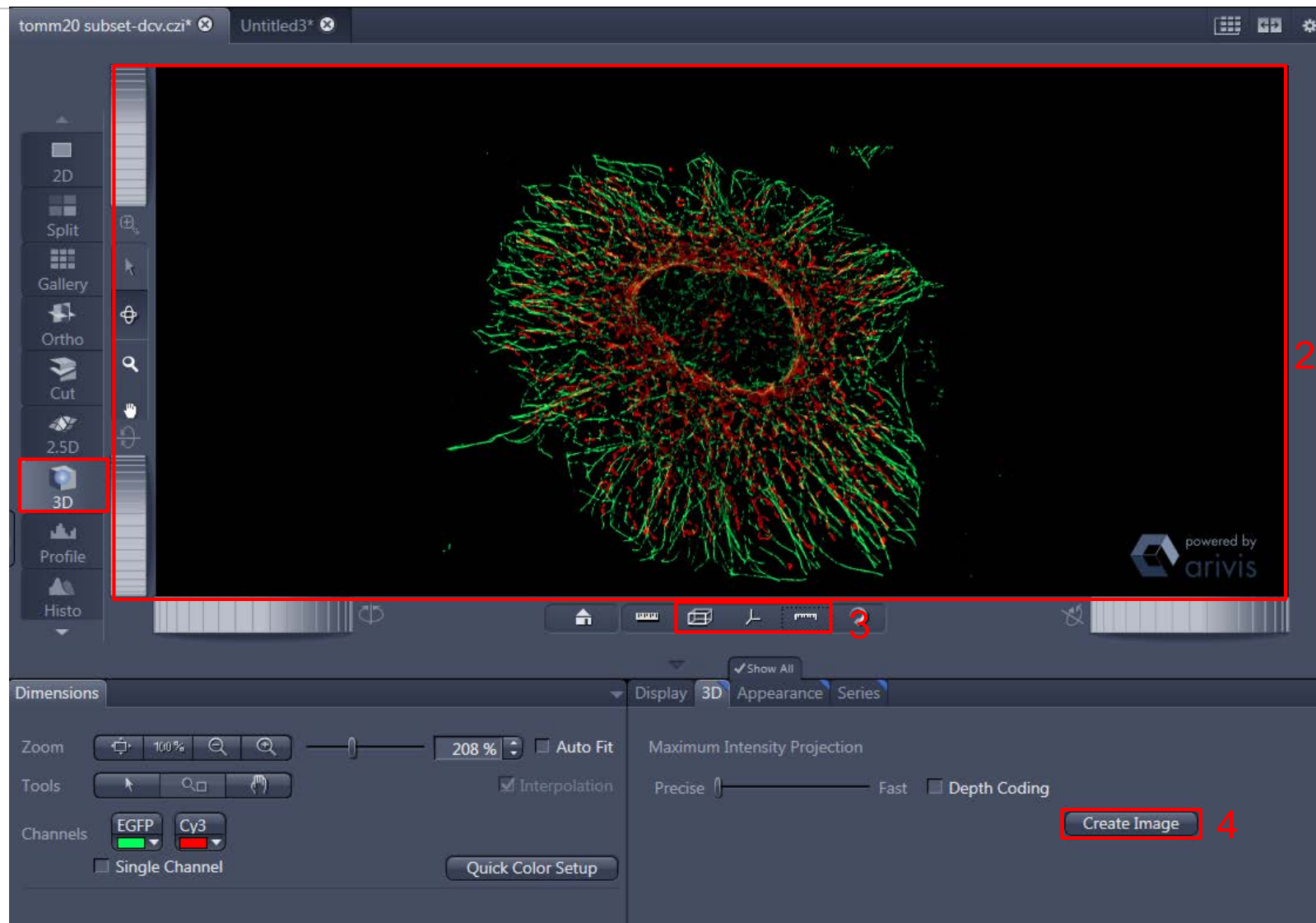
- 1、在Z-stack文件选择“Ortho”页面
- 2、勾选“Maximum Intensity Projection”前方复选框
- 3、选择“X-Y Plane”
- 4、点击“生成”



5、选中蓝色矩形框，按“Delete”删除。



# 3维图像特定角度截图



- 1、在Z-stack文件选择“3D”页面
- 2、用鼠标把图像调整至合适角度
- 3、选择隐藏或显示辅助信息，从左至右依次为：网格、坐标轴和标尺
- 4、点击“生成图像”



We make it visible.