

VS120 Whole Slide Scanner

Neurobiology Imaging Facility

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Director

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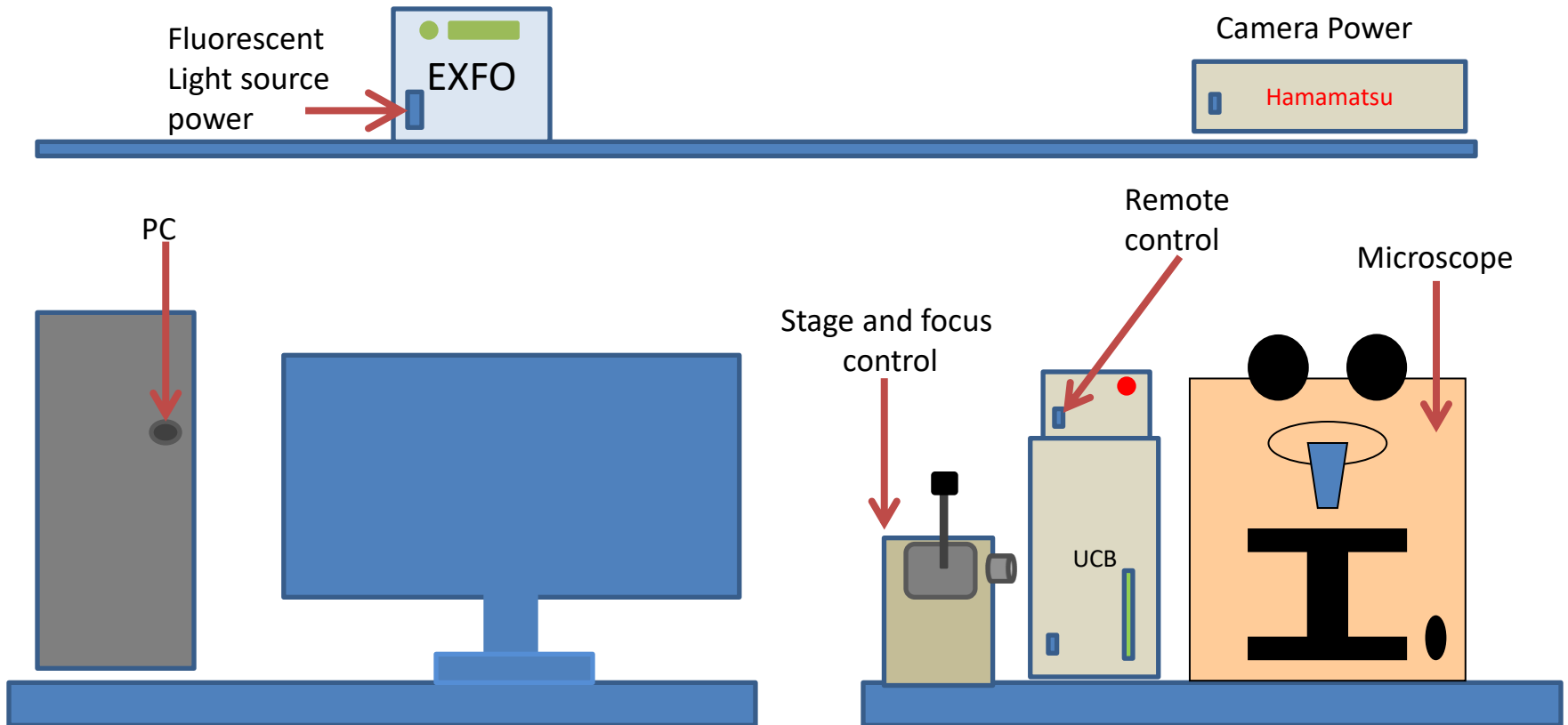
O-617-432-1683

C-617-275-6390

Getting Started

Turn everything on

** If the PC is on , log out and log back in (to reset any network connections)

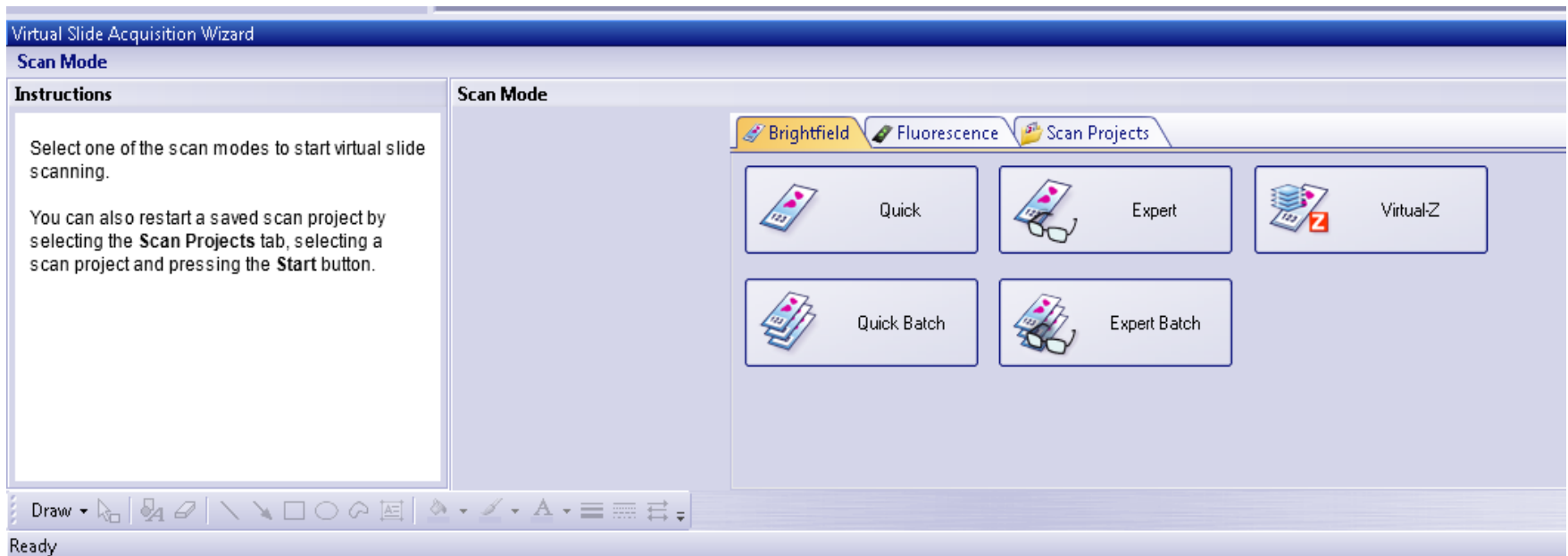


Opening the Software

- If the light source is cold started, wait 2 minutes until the green light stops blinking to turn on the software
- Click on the **ASW** software icon. The software will boot and check equipment. You will see the stage move.
- If there is an error, you forgot to turn something on.

Collecting Images

- Choose the “Brightfield” or “Fluorescence” the wizard on the bottom of the program window.
- Click on the “Expert” button



Collecting Images

- Click on the Automatic load button.
- Load sample into the position labeled you have your sample in.
- Hit OK
- Press Next

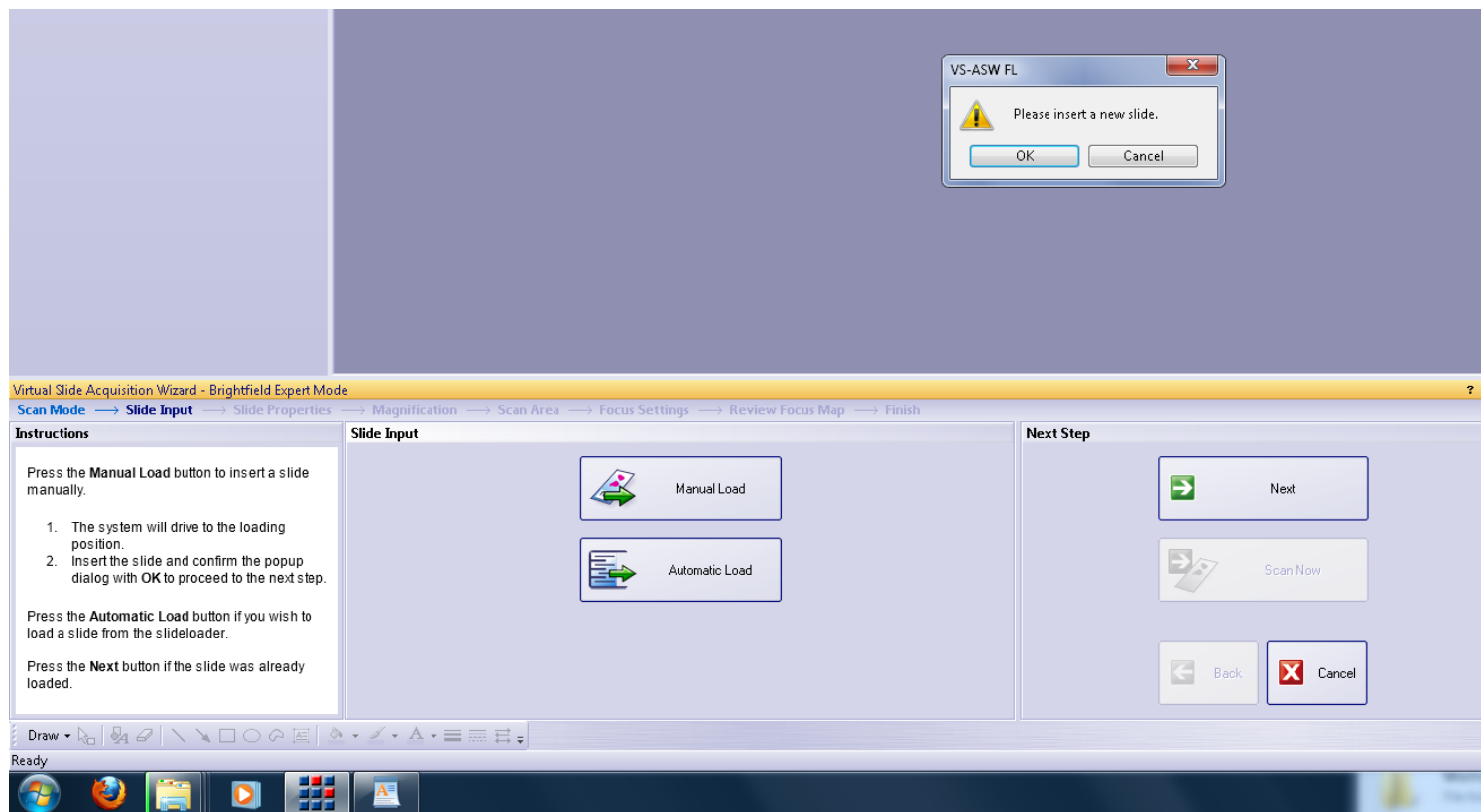


Image Name and Properties

- Add Slide Name and any other identifiers in the text boxes
- Click on the ... button (highlighted) for Properties

Enter text here

More Stuff Button
(Properties)

Virtual Slide Acquisition Wizard - Brightfield Expert Mode

Scan Mode → Slide Input → Slide Properties → Magnification → Scan Area → Focus Settings → Review Focus Map → Finish

Instructions

Click into one of the slide properties fields to type in information on your slide.

Press the ... button next to the Filename preview field to determine how you wish to name your file and save it – e.g. to a database or hard drive.

Press the Overview button to acquire a low resolution image of the sample and proceed to the next step.

Slide Properties

Filename: <Slide Name>_20120814_01

Slide Bar Code	
Slide Name	
Slide Info	
Specimen	
Species	
Tissue	
Preparation	
Staining	

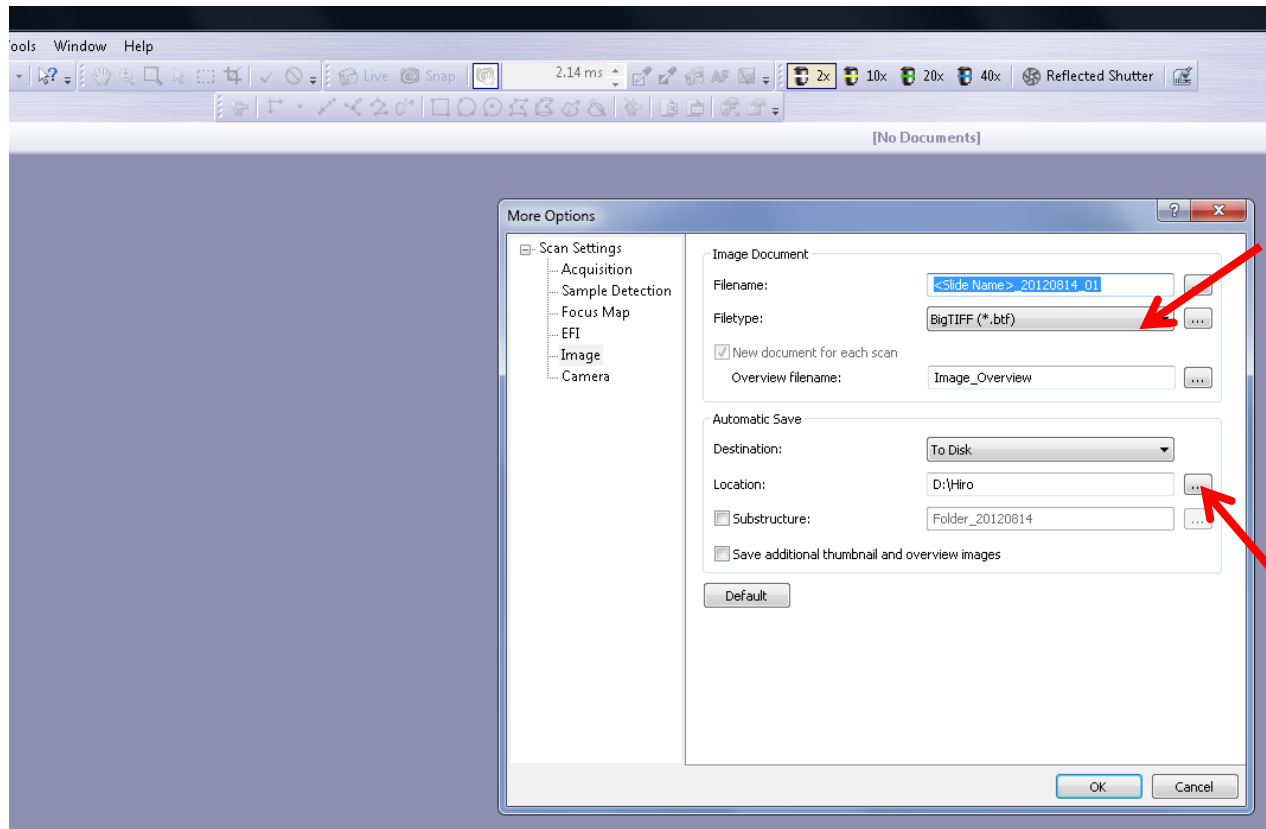
Next Step

Overview

Scan Now

Back Cancel

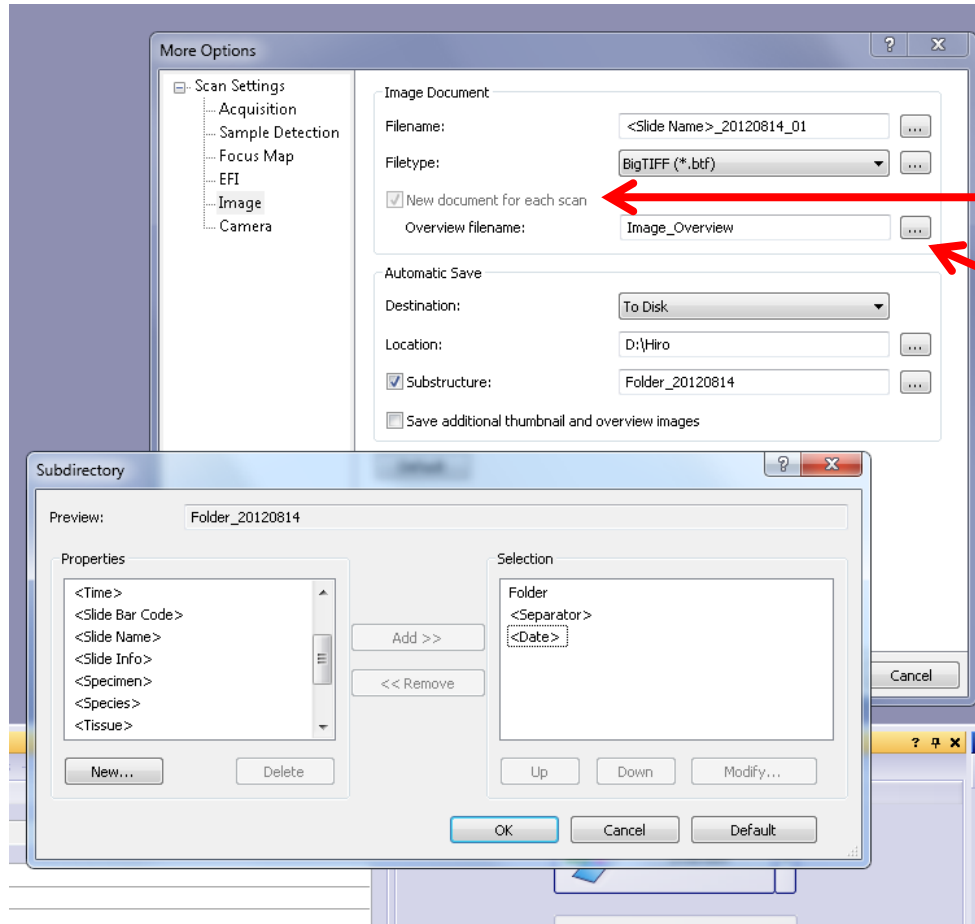
Choosing File Location and Format



Format
VSI for
faster
imaging

Save
Location
D: or F:

Choosing File Location and Format



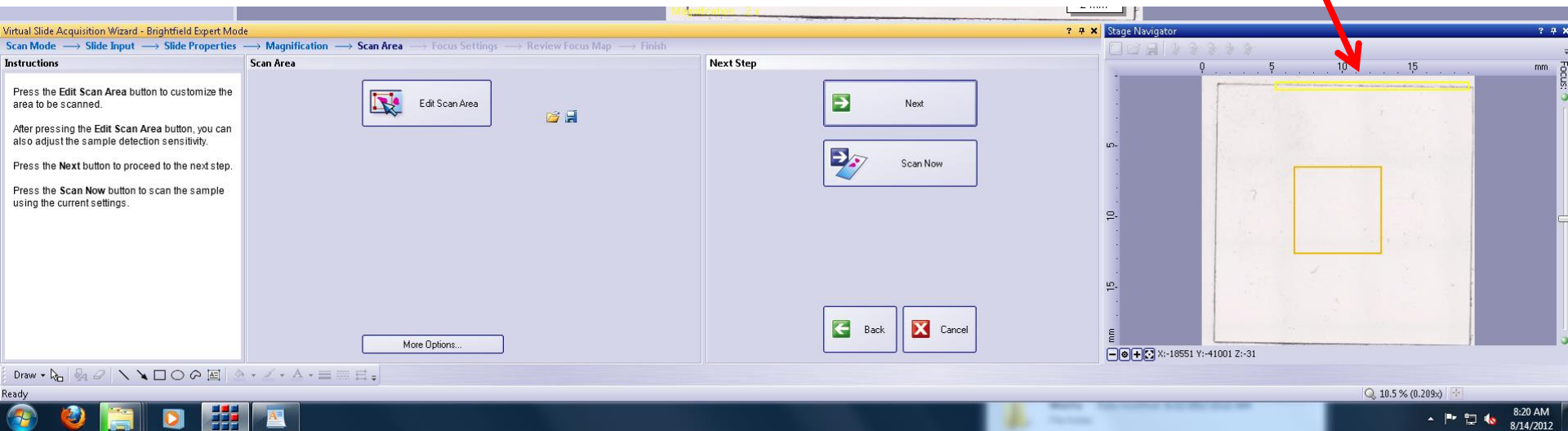
Choosing substructure will allow More naming options. Add naming Identifiers that you think will be Useful for locating and organizing Your samples

Never save your images to the C:
drive!

They will automatically delete on
reboot

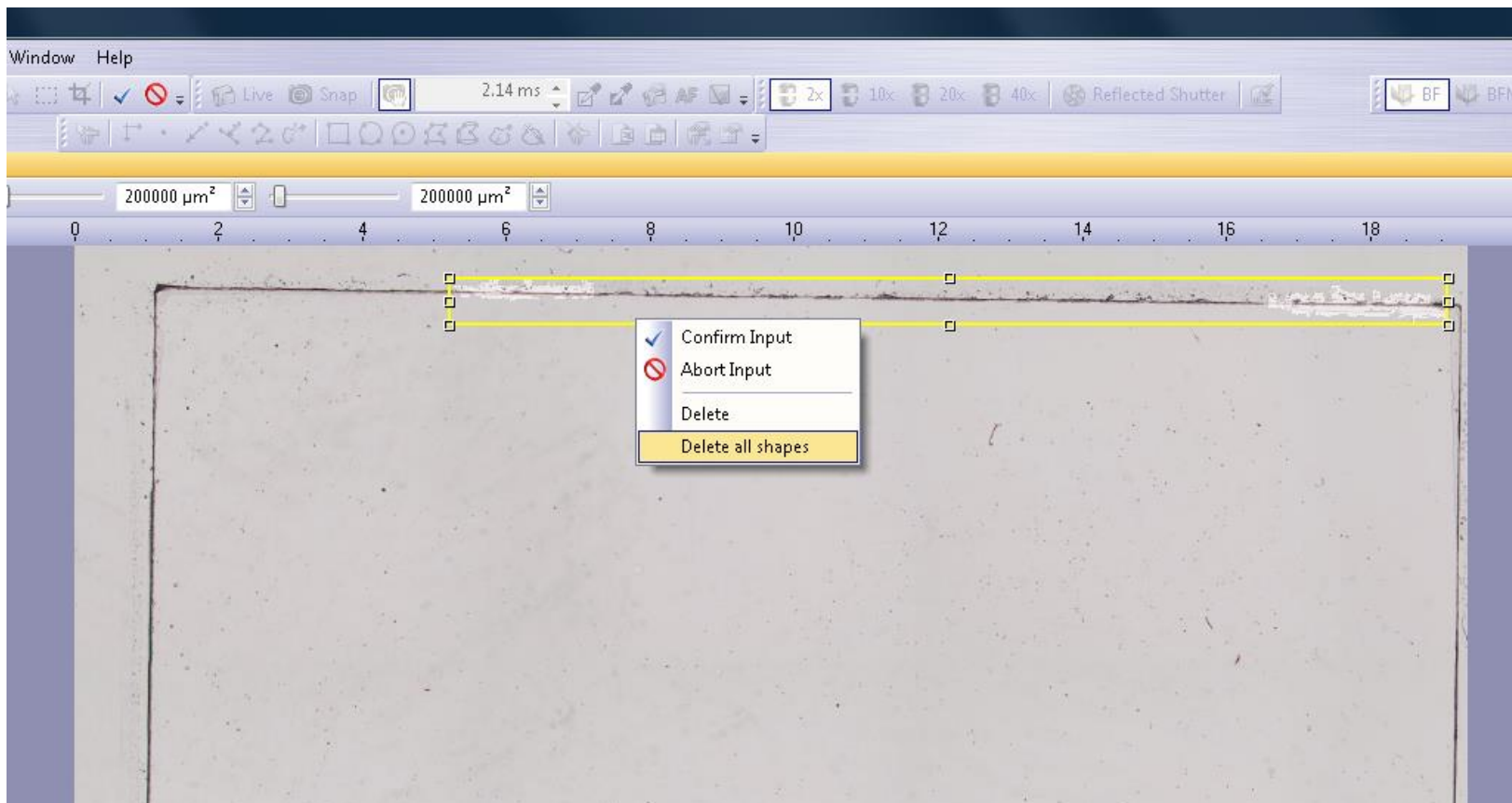
Edit the Scanned Area

- The overview (in low mag) will be visible
- Check to make sure the entire area of the slide or Region of interest has been acquired
- “Edit Scanned Area” to choose how much of the slide you want to acquire. You can acquire the entire slide or just a few regions
- The Scanned Area will appear on the “Stage Navigator” in yellow



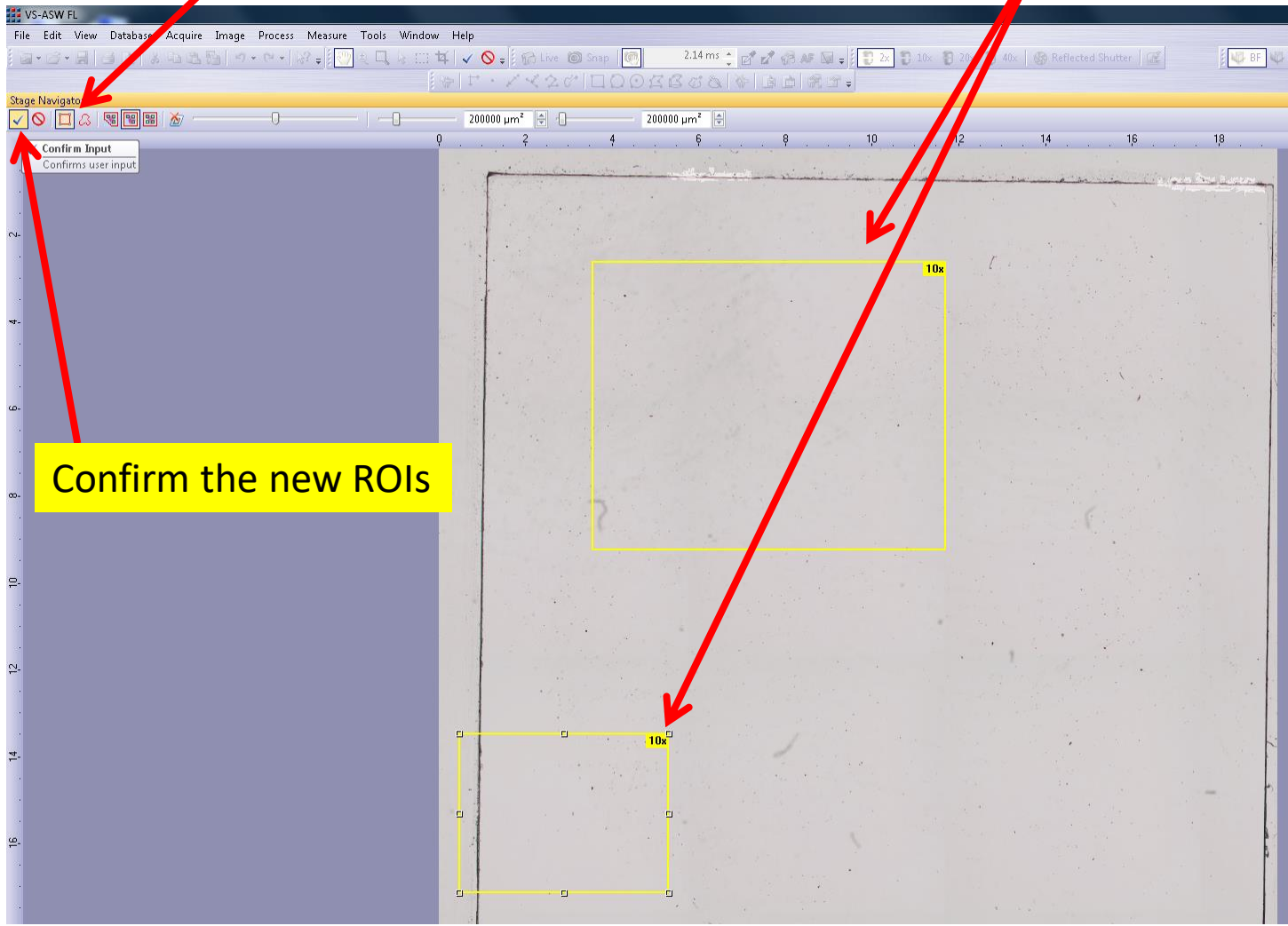
Edit the Scanned Area

Right click on the Image to delete Regions of Interest



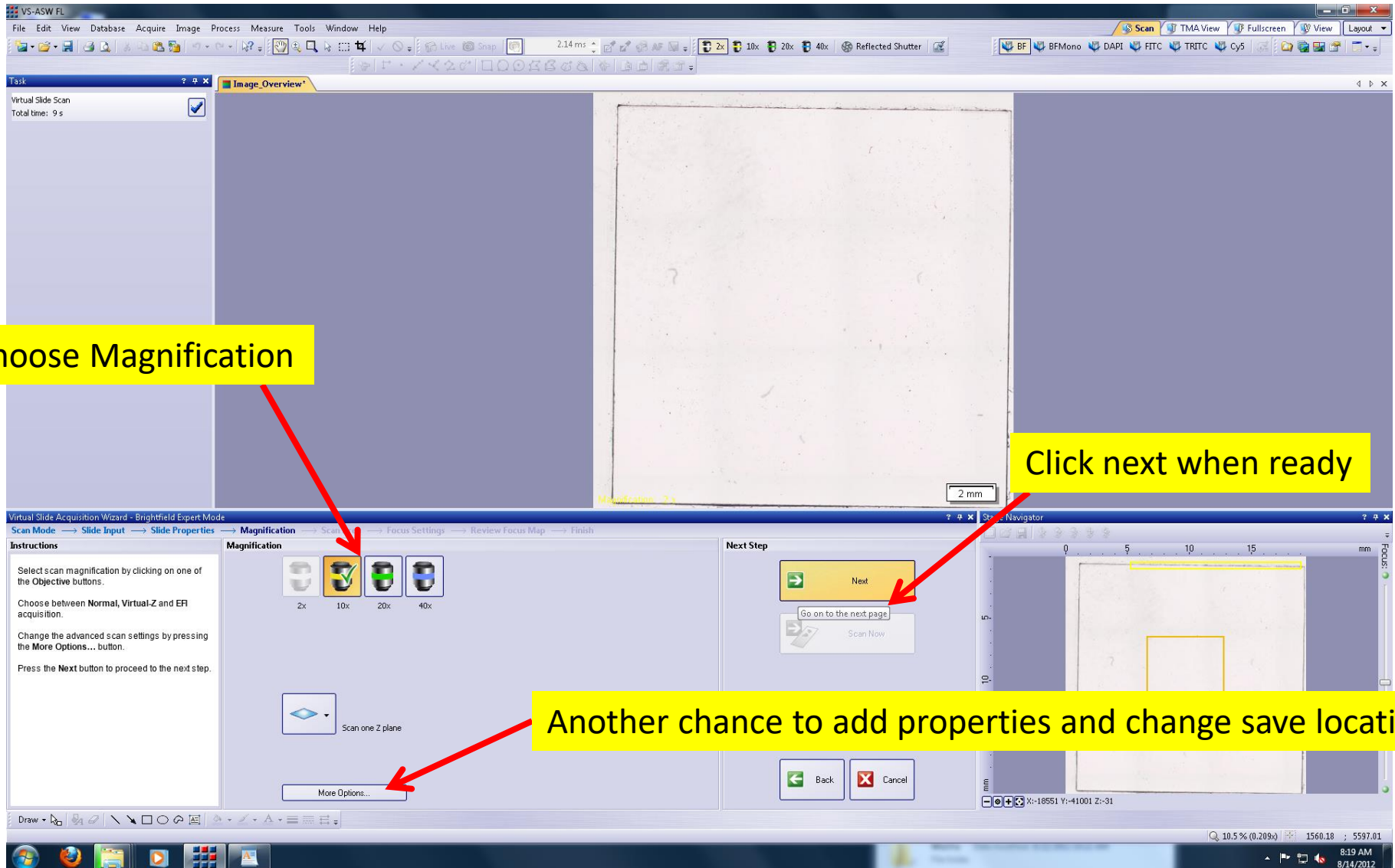
Edit the Scanned Area

Choose a drawing tool and draw your regions



Confirm the new ROIs

Acquiring the Slide



Focusing the Slide

Choose how often and what type of Autofocus (AF)

Grid Density: More AF positions or less. If your sample is not flat you may choose more

Focus Logic:

Autofocus-Without any assistance

Semi-manual-It will AF but request you to check it

Manual-You focus all positions



Edit Focus Map

Choosing the Edit Focus Map allows you to predefine where the AF will occur
You can choose to keep all AF positions or none of them and make your own

Click Input To save

Choose a different grid density

Click on the image to create a new AF position

VS-ASW FL

File Edit View Database Acquire Image Process Measure Tools Window Help

Stage Navigator

10x

10x

Focus Settings

Magnification → Scan Area → Focus Settings → Review Focus Map → Finish

Focus Settings

Edit Focus Map

Focus Method:

☒ PreFocus

☐ In Situ Focus

Grid Density:

Focus Logic:

Please click to draw one or more rectangular areas to specify focus positions.

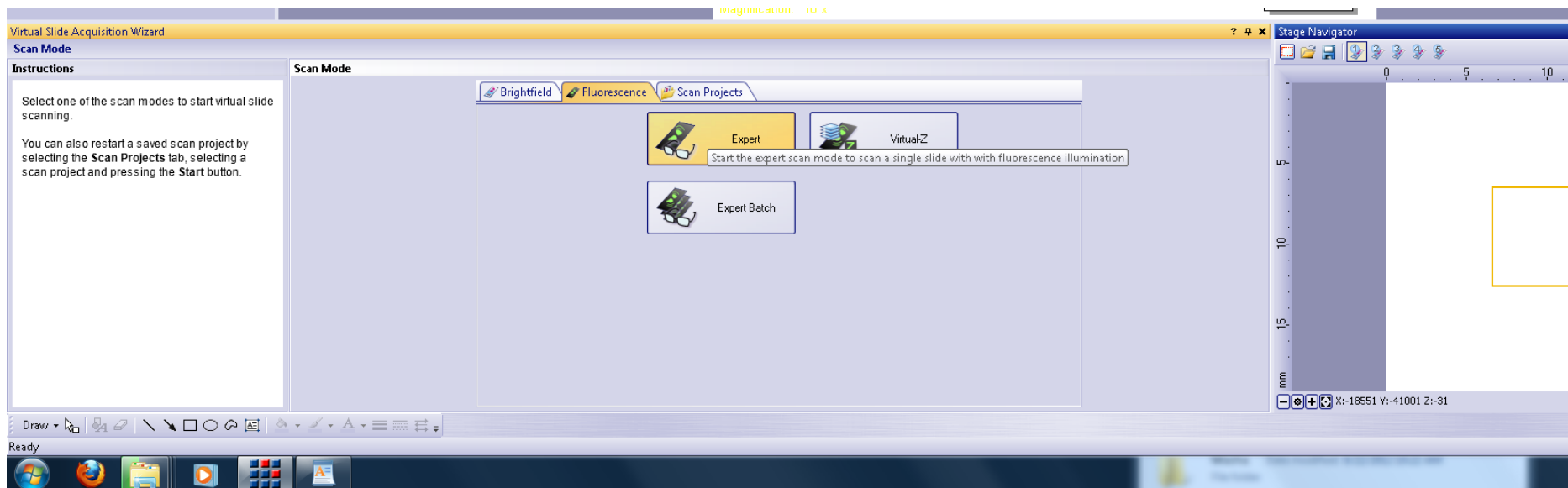
Acquiring the Scanned Image

- Click “Scan Now” when AF is complete



Collecting Fluorescent Images

- Choose the “Fluorescence” tab from the wizard on the bottom of the program window.
- Click on the “Expert” button



Collecting Fluorescence Images

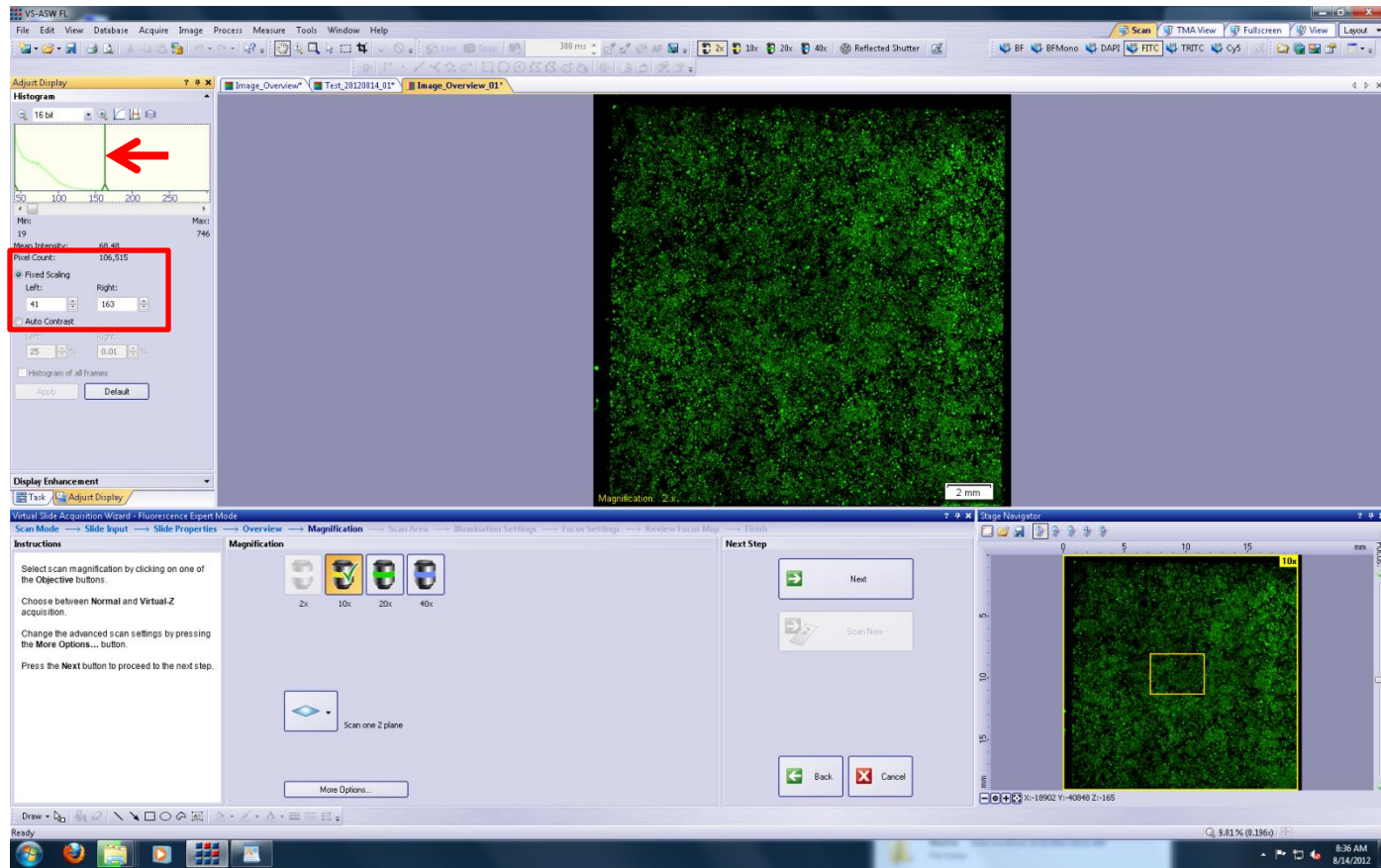
- Choose Brightfield Overview (faster and no bleaching of sample)
- Click on the small arrow to the right of the “Type” button and choose “Dim Sample”
- Click Overview
- ****Optional**** If you want to include the slide label click the dropdown to the right of the Overview arrow and click on Slide label



Scaling the Fluorescent Image

To make your Overview image look brighter

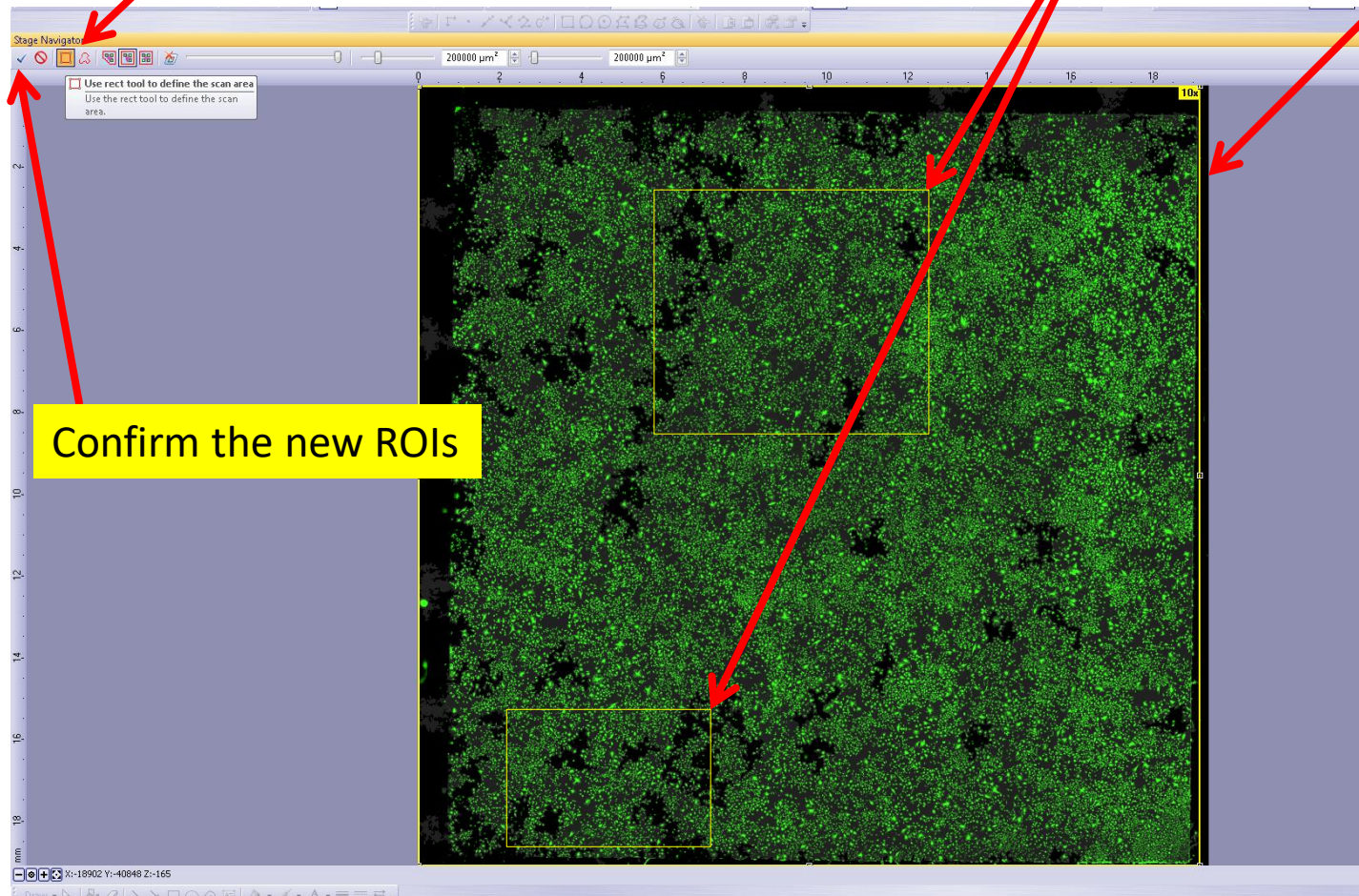
The image auto-scales the brightness upon completion of the Overview. This may not be desired. Click on the “Fixed Scaling” button in Histogram window
Move the green line on the right to the left



Edit the Scanned Area

Choose a drawing tool and draw your regions

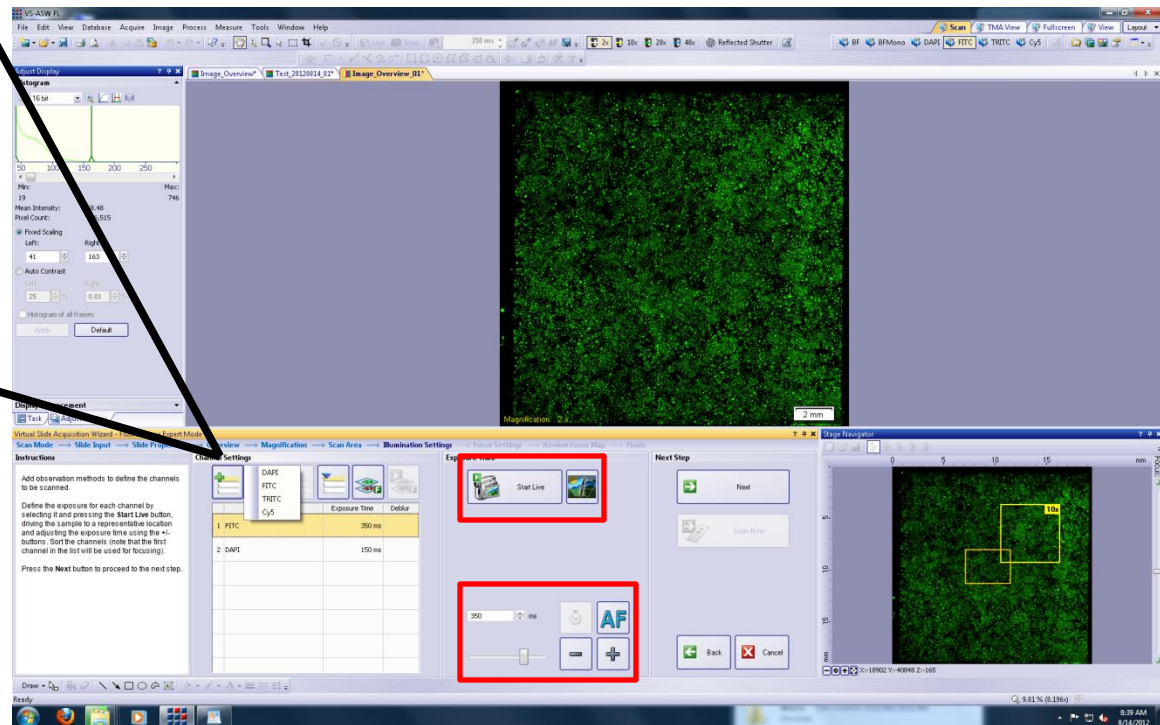
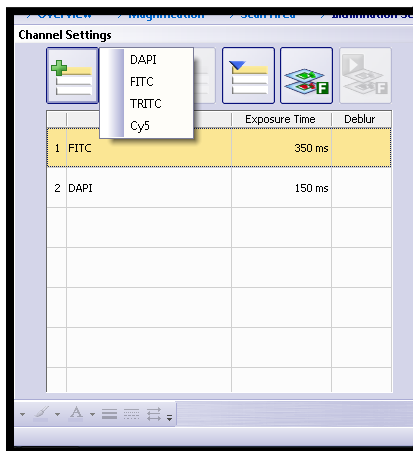
Or choose the entire slide



Choosing your Collection Wavelengths

Click on the + button to add a wavelength or the – to remove

Check each wavelength in “Start Live” mode and adjust the exposure time for each



Focusing the Slide

Choose how often and what type of Autofocus (AF)

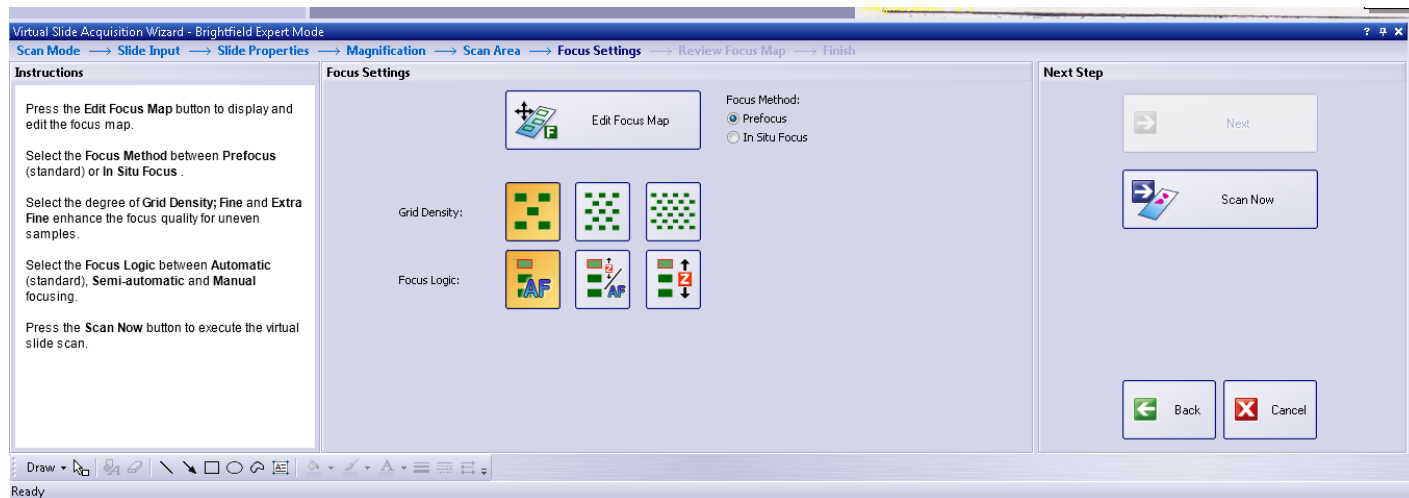
Grid Density: More AF positions or less. If your sample is not flat you may choose more

Focus Logic:

Autofocus-Without any assistance

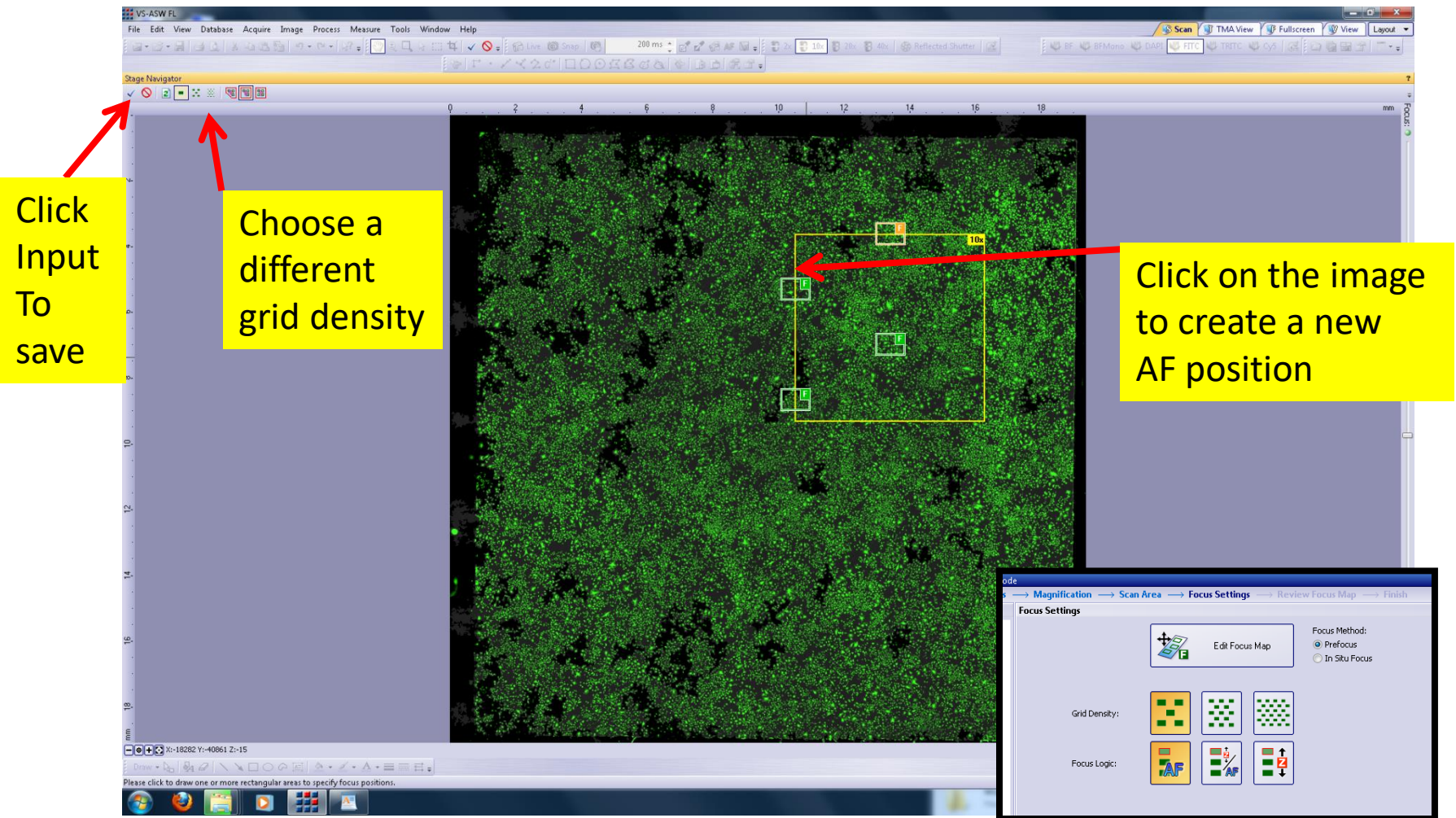
Semi-manual-It will AF but request you to check it

Manual-You focus all positions



Edit Focus Map

Choosing the Edit Focus Map allows you to predefine where the AF will occur
You can choose to keep all AF positions or none of them and make your own



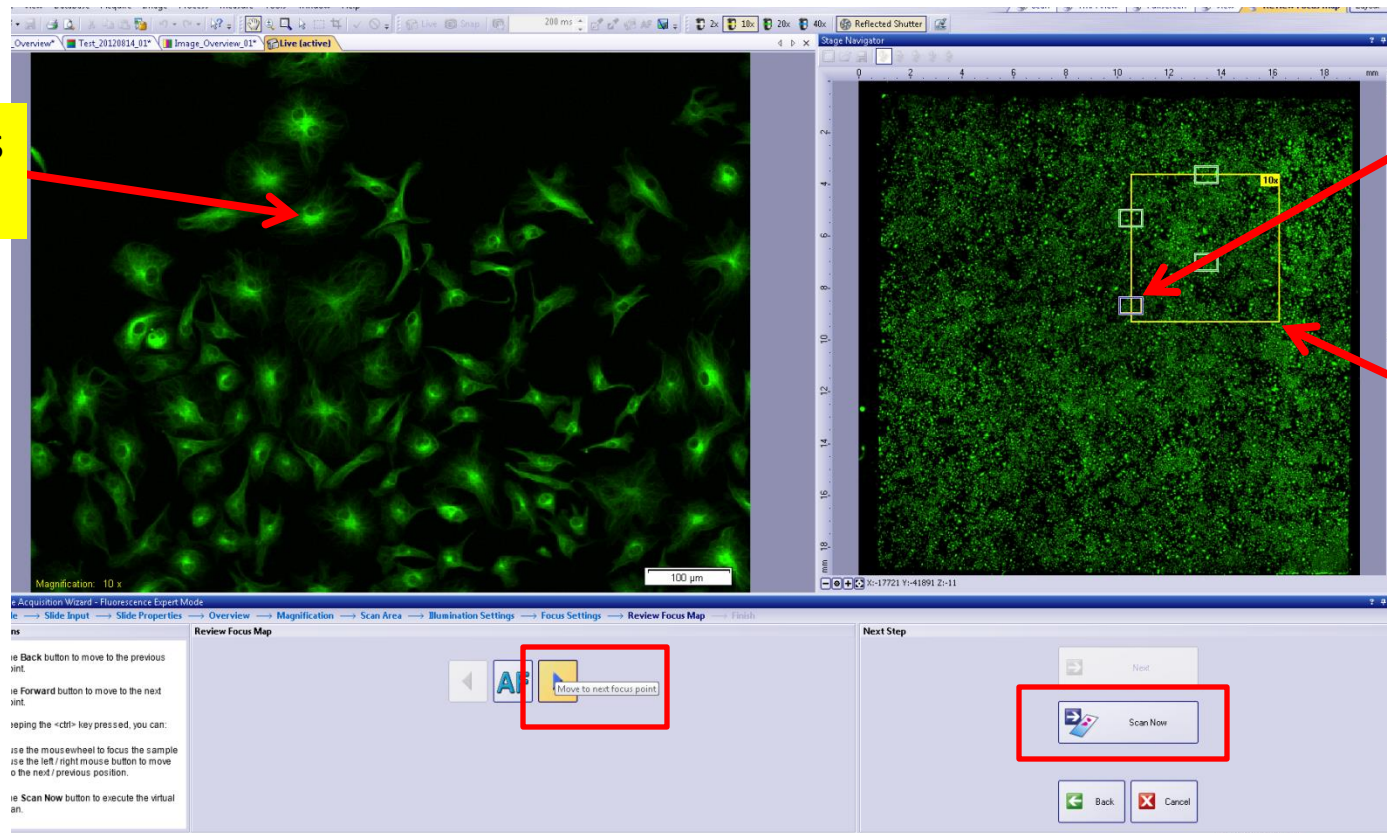
Choosing Semi-Manual Autofocus(AF)

- The scope will move through the defines AF areas and pause
- Manually adjust focus and click on the next arrow
- The AF position will be highlighted on the Overview area to the right
- “Scan Now” when finished

Live Focus Image

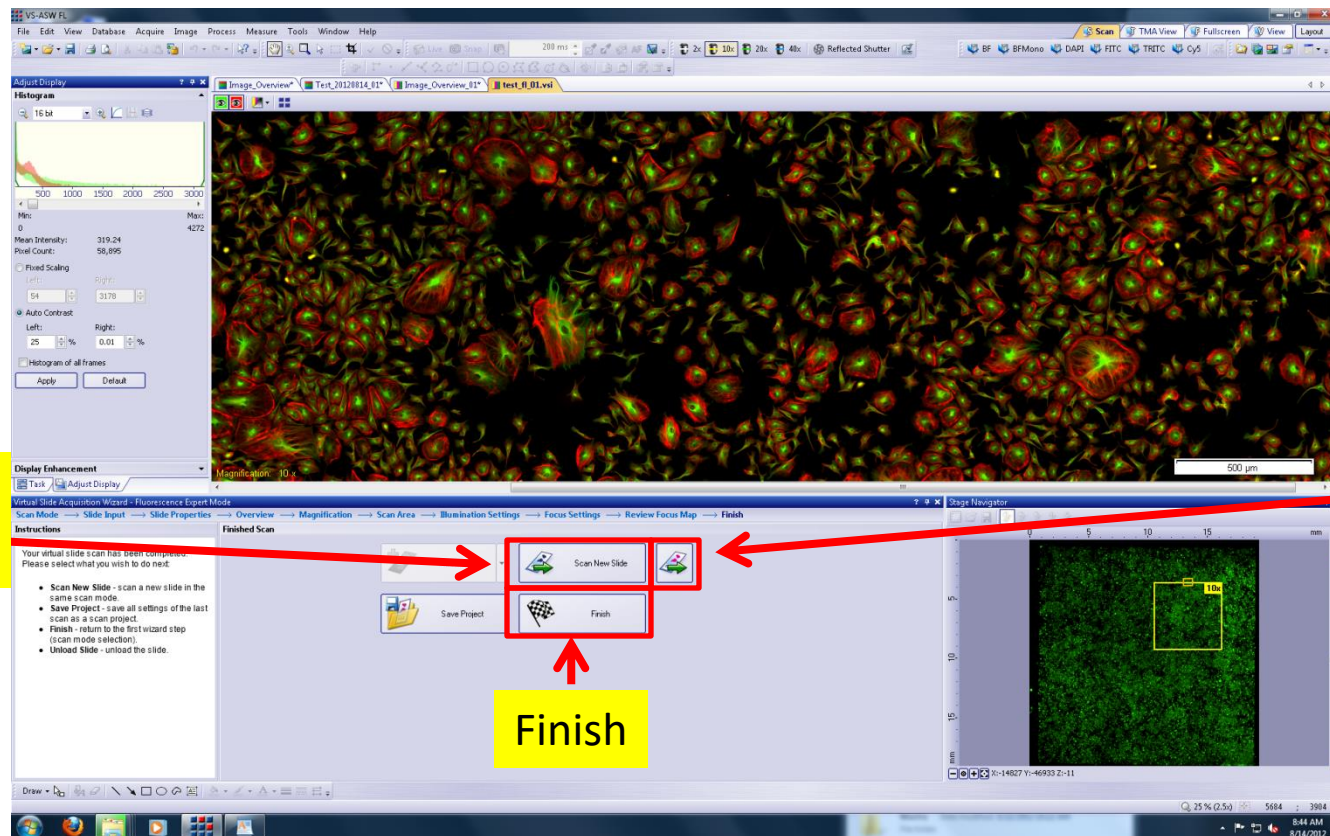
Focus Location

Defined Scanning Area



Final Scan

- Scroll with the cursor on the Slide scan image to zoom in or out
- Click Finish to complete
- Click “Scan New Slide” to scan another with the same parameters



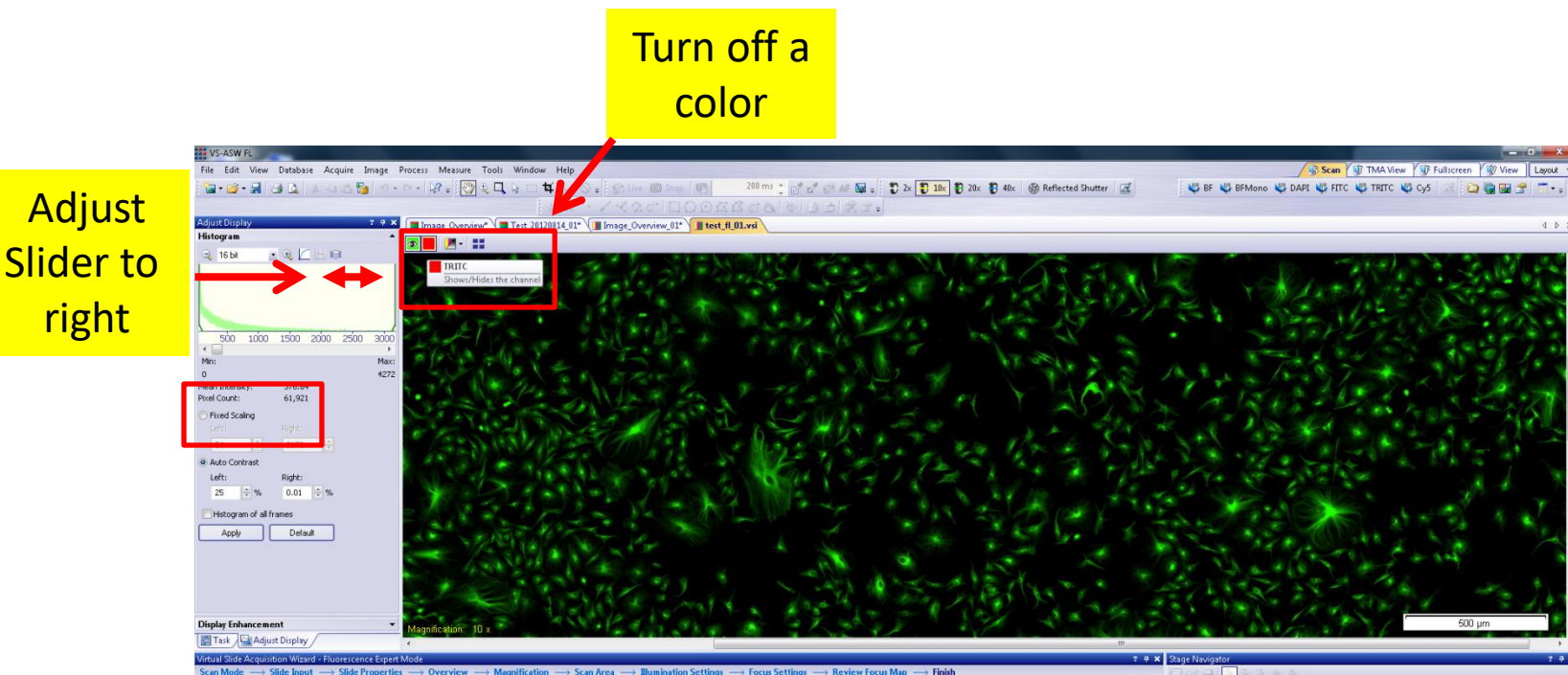
Scan new
Slide

Load/Unload Slide

Finish

Adjusting Brightness/Contrast on Final Image

- Composite (multi-color) images must be adjusted in monochrome (single color)
- Turn off a color
- Click the “Fixed Scaling” Radio button in the Histogram window
- Drag the green line on the right to the left to adjust brightness



Shutting Down

- Check the schedule at <https://ppms.us/hms-neuroimaging/> to see if anyone is signed up after you
- If there is someone with 2 hours of you then leave the light source on.
- **Restart the computer at the end of your session**