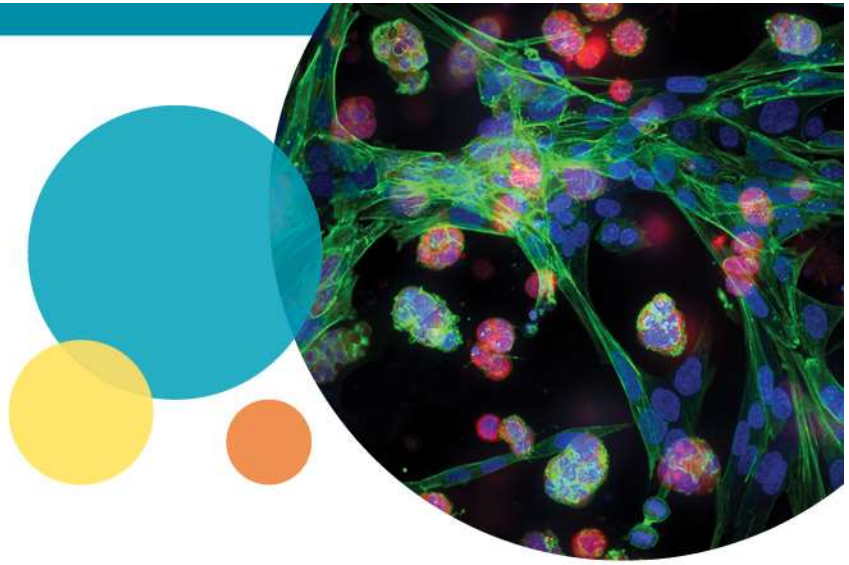


MetaXpress® 6.5 Software Guide

Discontinuous Timelapse Acquisition (Append Timepoint feature)

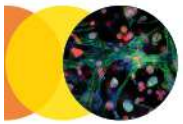
Date Revised 7/18/2019 Version B

MOLECULAR DEVICES
ADVANCING DISCOVERY

Chapter Purpose

- The purpose of this chapter is to guide the user through setting up discontinuous timelapse acquisition using the **Append Timepoint** feature added in MetaXpress 6.5

- With discontinuous timelapse acquisition, the sample plate may be returned to the incubator in between time points, and other plates may be read in the interim.



Setting Up a Discontinuous Timelapse Acquisition

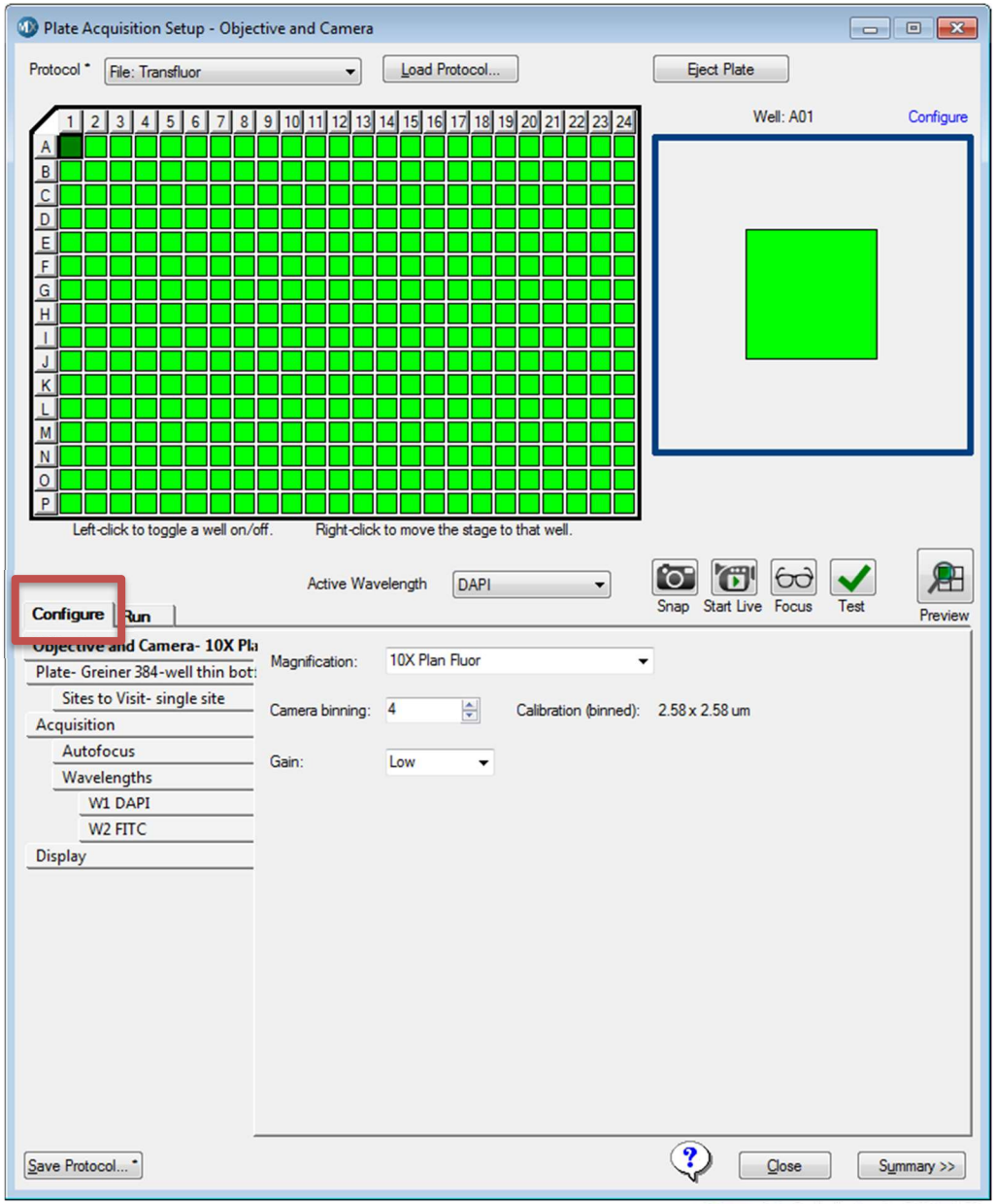
1. Open **Plate Acquisition Setup**

   - In the main toolbar click on

   OR

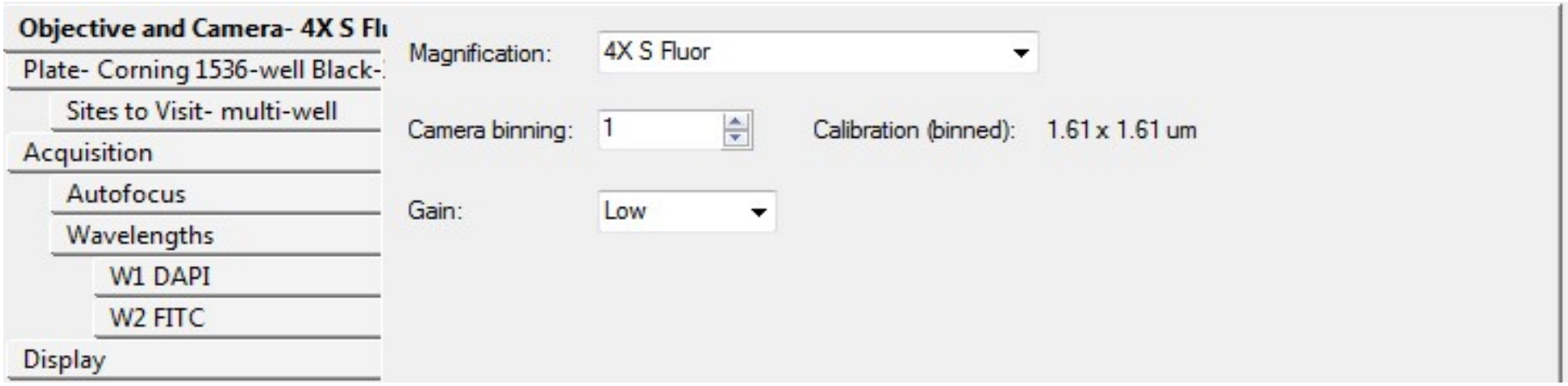
   - Under the **Screening** menu, select **Plate Acquisition Setup**

2. Select the **Configure** tab



Setting Up a Discontinuous Timelapse Acquisition

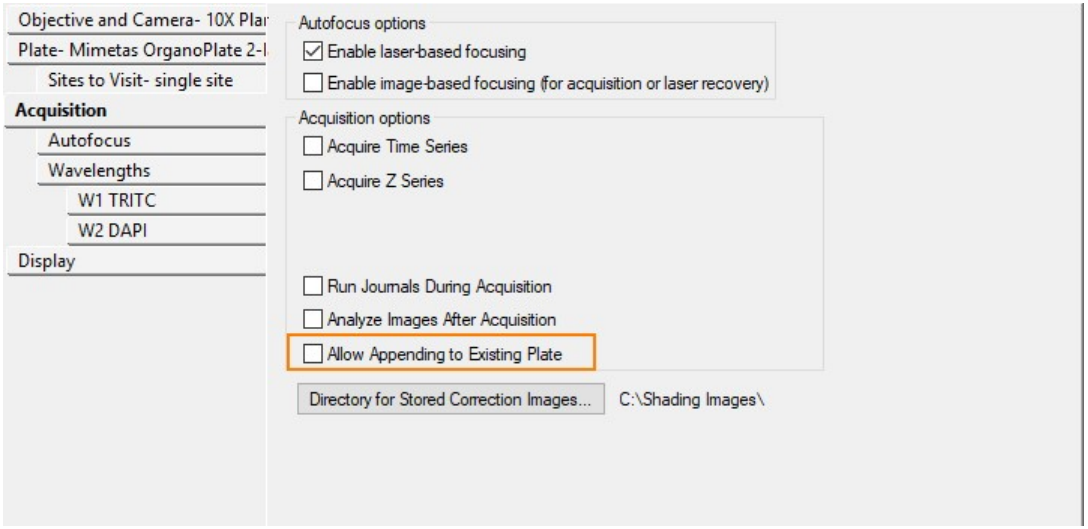
3. Configure your protocol appropriate for your assay.



Setting Up a Discontinuous Timelapse Acquisition

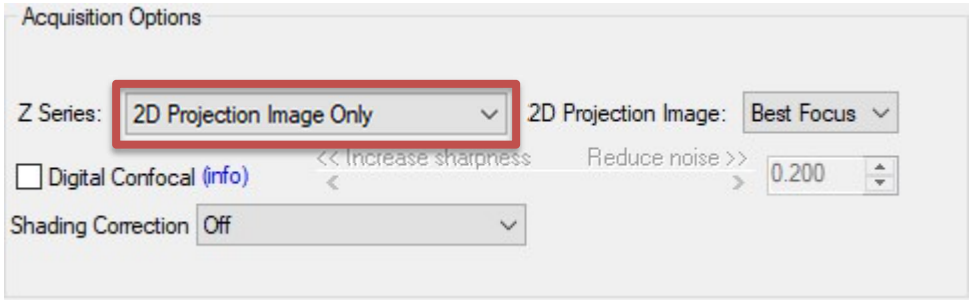
4. Select the **Acquisition** tab
   - Always **Enable laser-based focusing**
   - For certain samples it may be necessary to **Enable image-based focusing**
   - Optionally, enable **Acquire Time Series*** (generally not needed)
   - Optionally, enable **Acquire Z Series**
   - Enable **Allow Appending to Existing Plate** (in MX 6.5.3 and above)
   - **Fluidics** experiments are not recommended with discontinuous acquisition

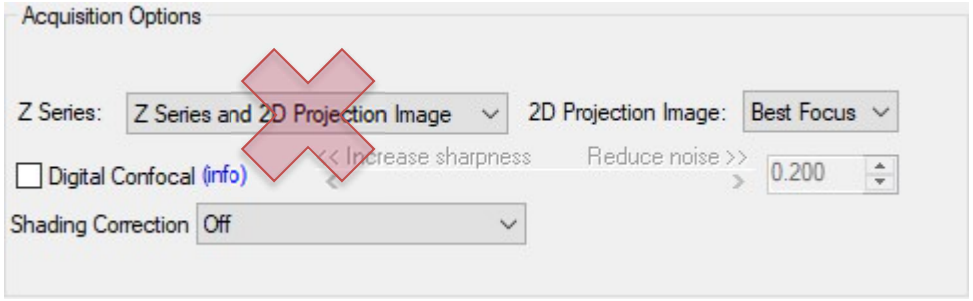
***NOTE**: The Acquire Time Series option is for continuous timelapse acquisition, for time points to be acquired with the plate left in the instrument. This can be optionally included in a discontinuous timelapse acquisition.



Optional: Z Series Acquisition

5. If you are using Z-series acquisition, make sure that you are only storing the 2D Projection Image for each wavelength

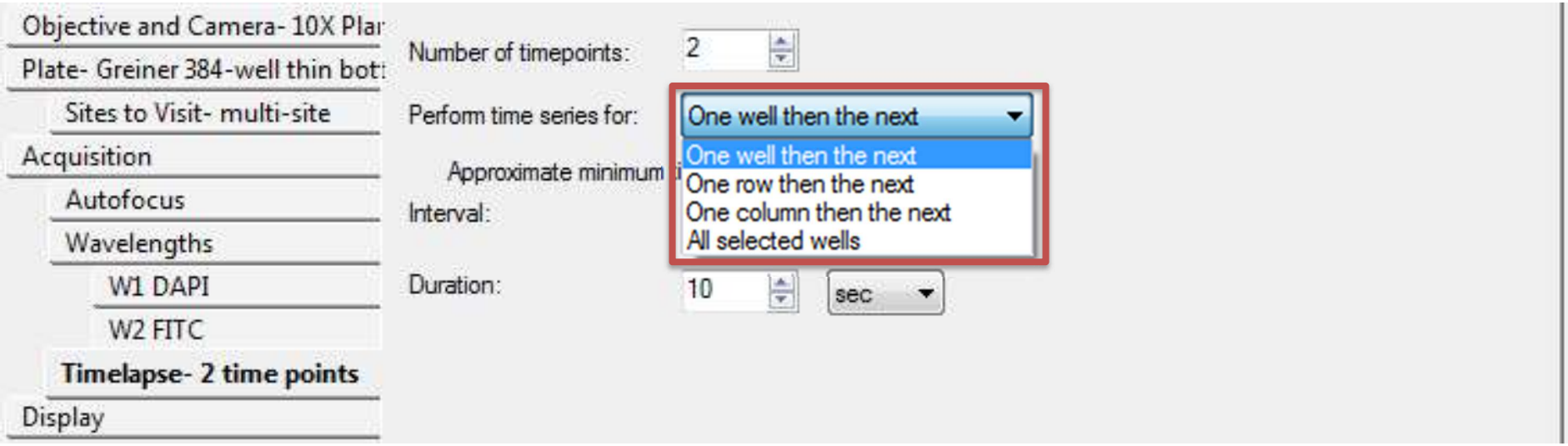




Optional: Adding continuous time points

6. If you enabled the Acquire Time Series option, select the **Timelapse** tab
   - From the drop-down menu, select an option to **Perform time series for**:
     - **One well then the next** for fast kinetic time lapse in a single well (or site). All time points will be collected in one well before moving to the next well.
     - **All selected wells** for long-term time lapse experiments. All wells are acquired during each time point.

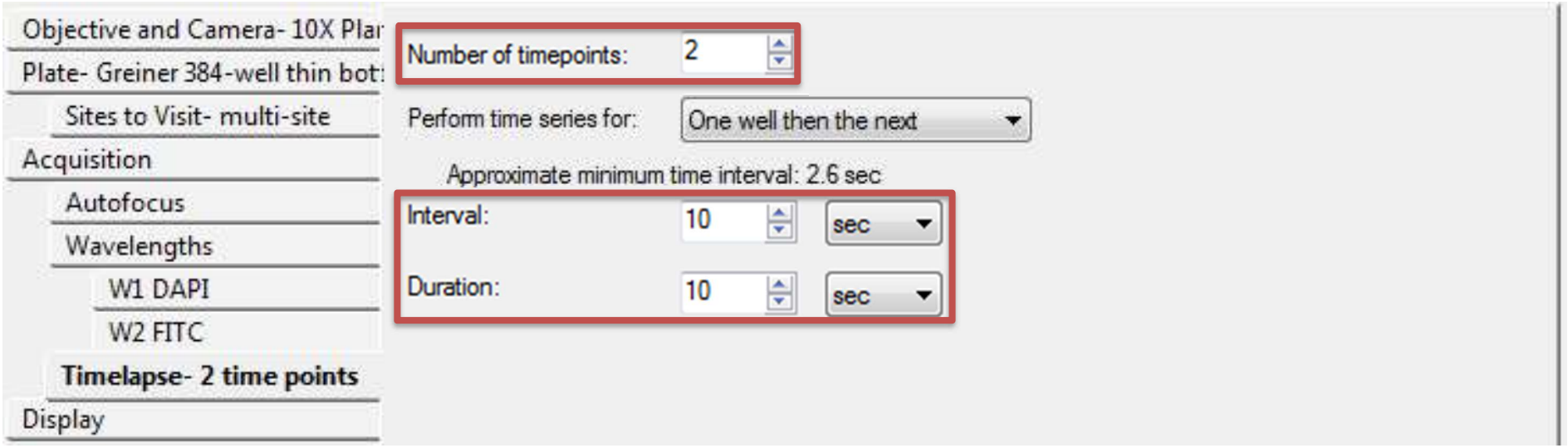
   NOTE: Time points defined here will be acquired in a continuous acquisition. They can be appended to a discontinuous timelapse experiment.



Optional: Adding continuous time points

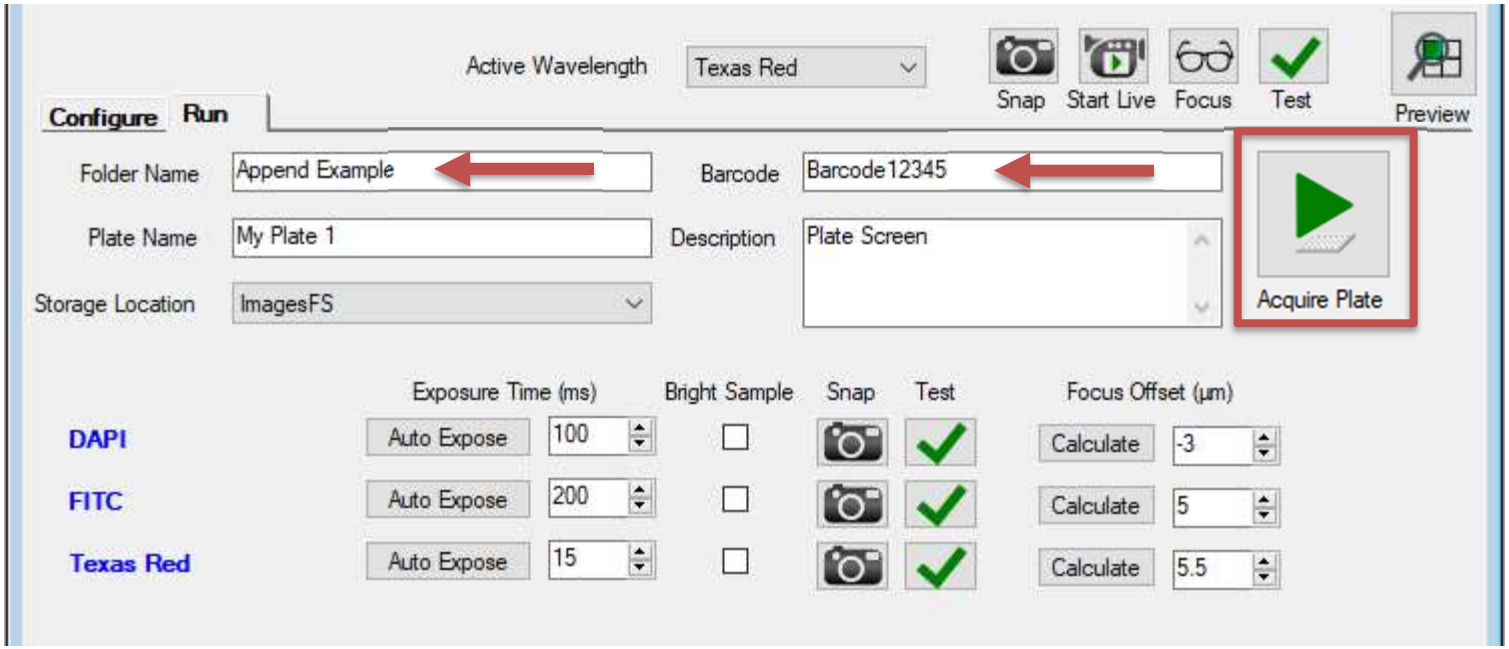
7. If you enabled the Acquire Time Series option, on the **Timelapse** tab
   - Enter the **Number of timepoints**
   - Set the **Interval**: time between each image taken (ms, sec, min, or hr)
   - Set the **Duration**: total time of experiment (ms, sec, min, or hr). This is equivalent to Interval x Number of timepoints

   NOTE: Time points defined here will be acquired in a continuous acquisition. They can be appended to a discontinuous timelapse experiment.



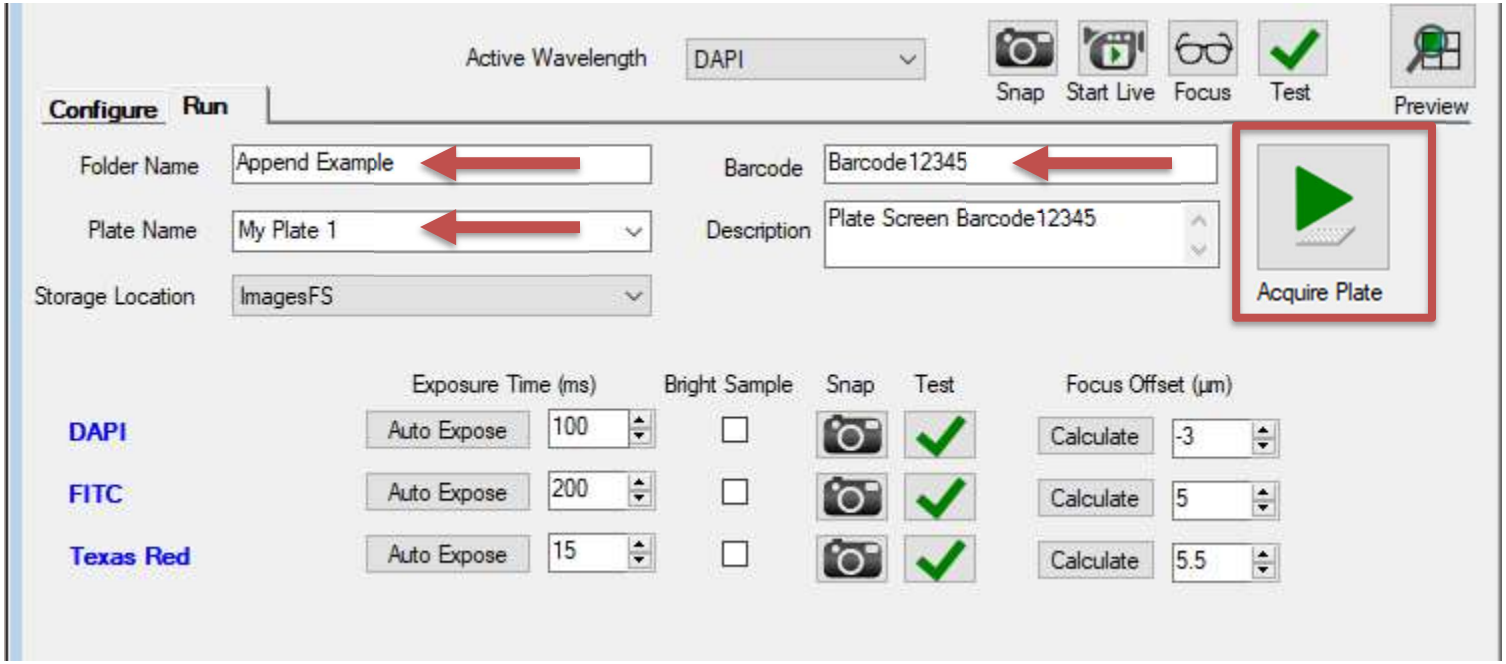
MX 6.5.0 – 6.5.2: Configuring Protocol

8. Add an appropriate **Folder Name** and **Barcode**.
9. Click **Acquire Plate** to begin acquisition of the plate



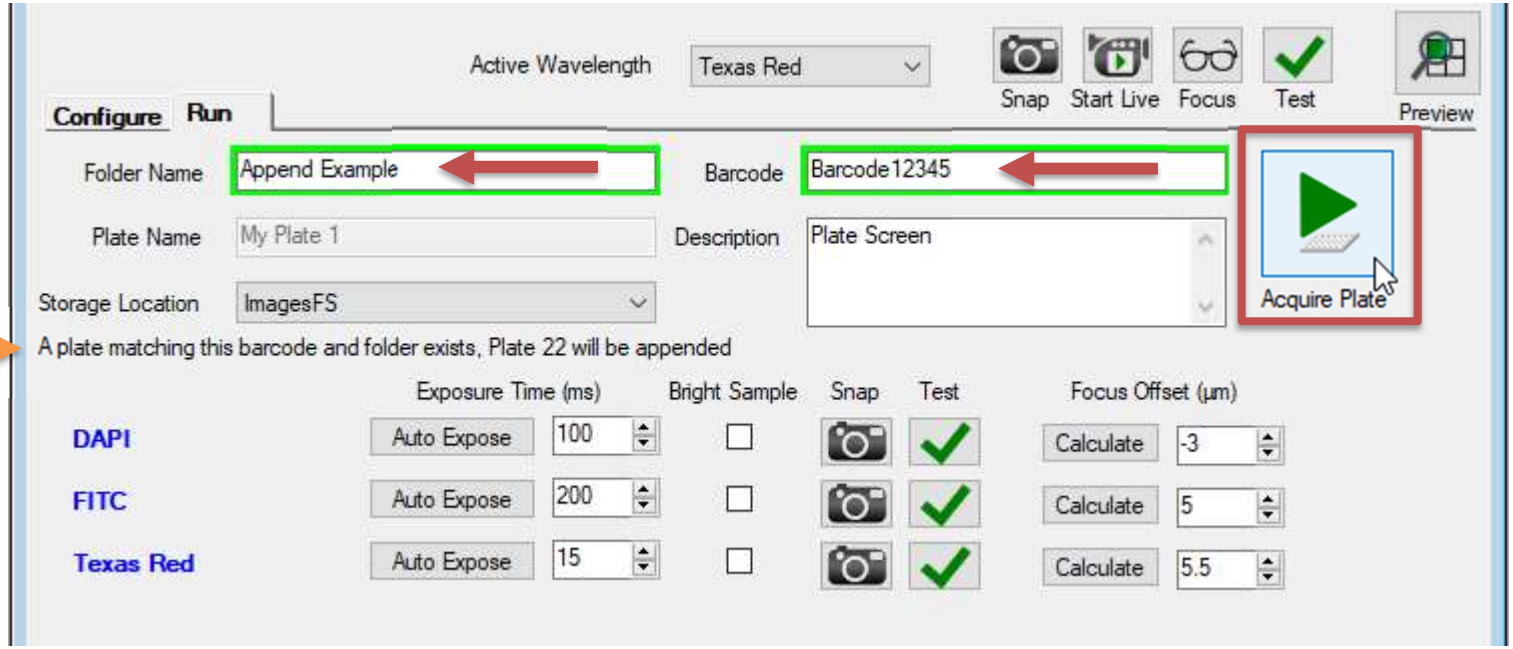
MX 6.5.3 and above: Configuring Protocol

8. Add an appropriate **Folder Name**, **Plate Name**, and **Barcode**.
9. Click **Acquire Plate** to begin acquisition of the plate



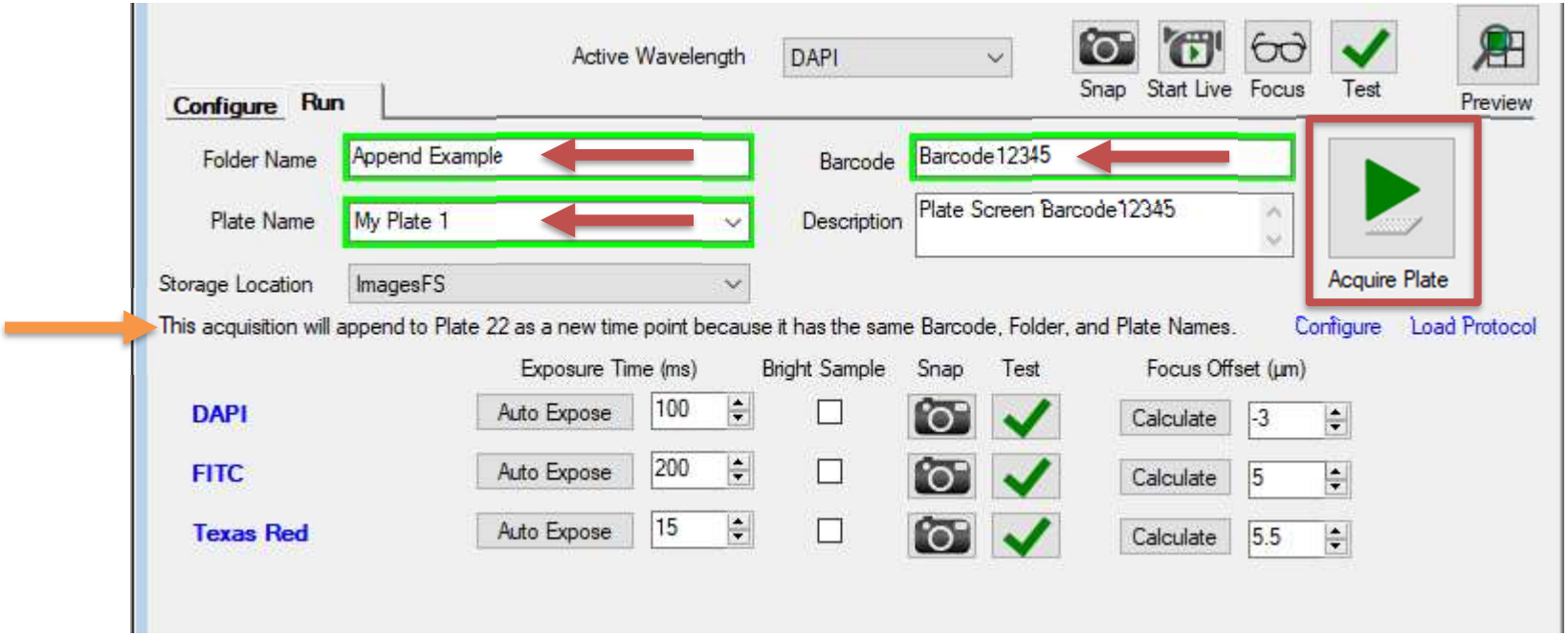
MX 6.5.0 – 6.5.2: Configuring Protocol

10. The next time you acquire the same plate to the same database with the same protocol, match the **Folder Name** and **Barcode**. The software will automatically append it to the existing plate as a new time point.



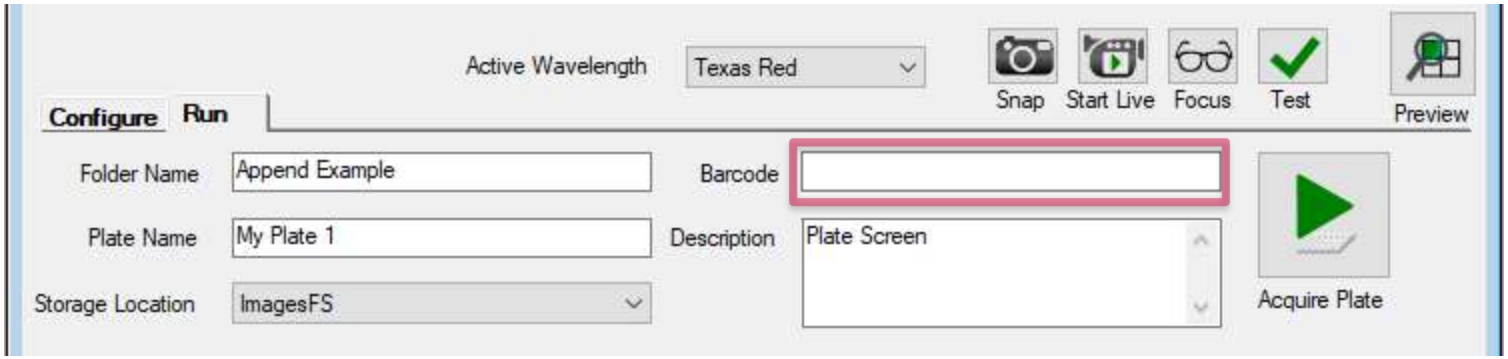
MX 6.5.3 and above: Configuring Protocol

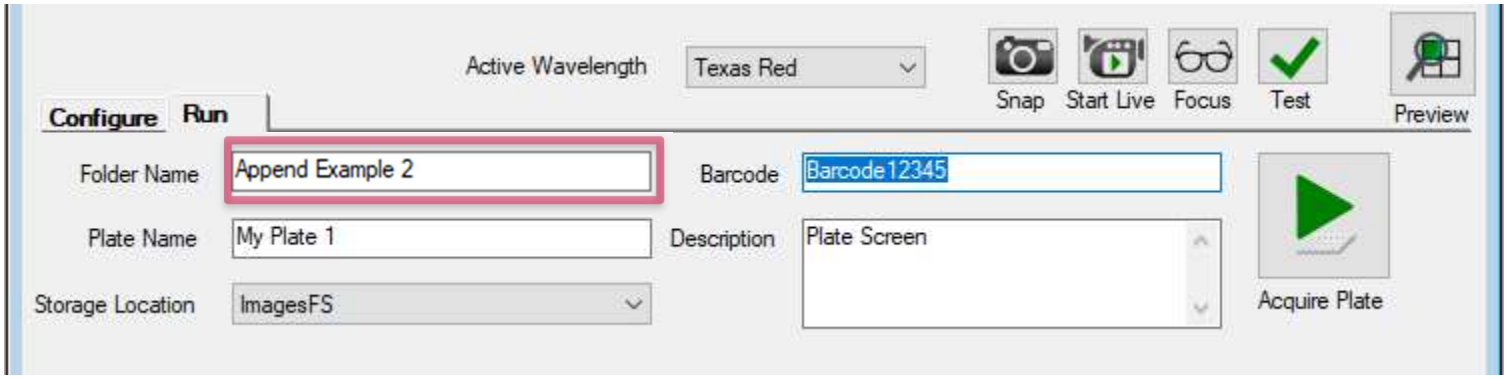
10. The next time you acquire the same plate to the same database with the same protocol, match the **Folder Name**, **Plate Name**, and **Barcode**. The software will automatically append it to the existing plate as a new time point, if the “Allow Appending” option is enabled.



MX 6.5.0 – 6.5.2: Configuring Protocol

11. If either the Folder Name or the Barcode does not match, the plate will be acquired as a separate, new plate.



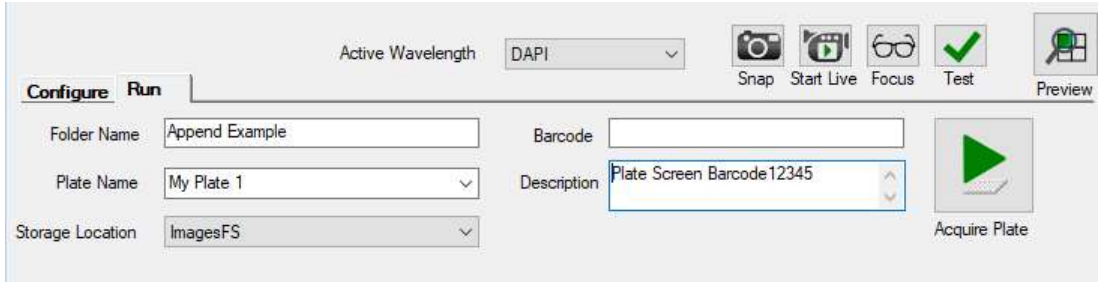


MX 6.5.3 and above: Configuring Protocol

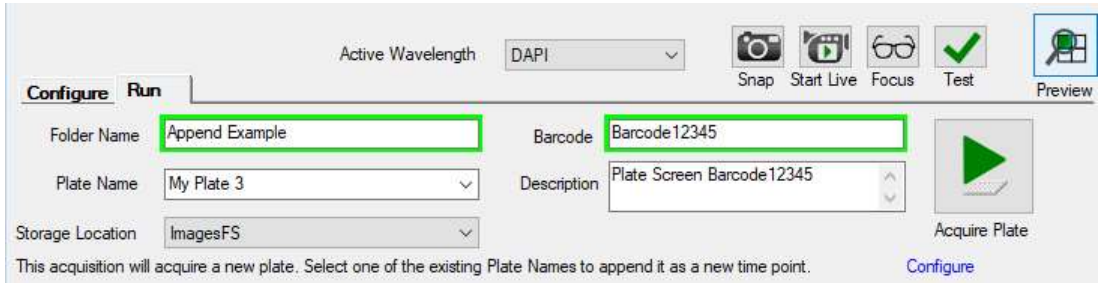
11. If the Plate Name, Folder Name, or Barcode does not match, the plate will be acquired as a separate, new plate.

Different Folder Name:

Different or Missing Barcode:



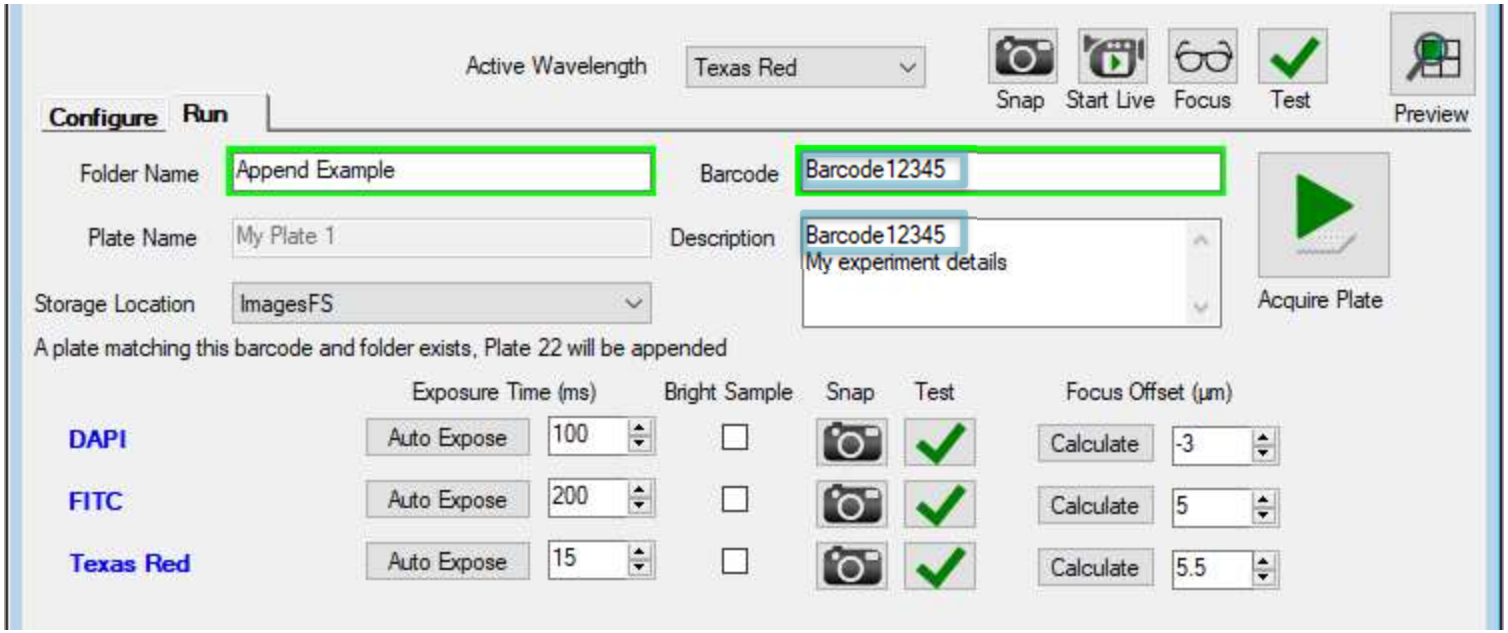
Different Plate Name:



Entering Barcodes

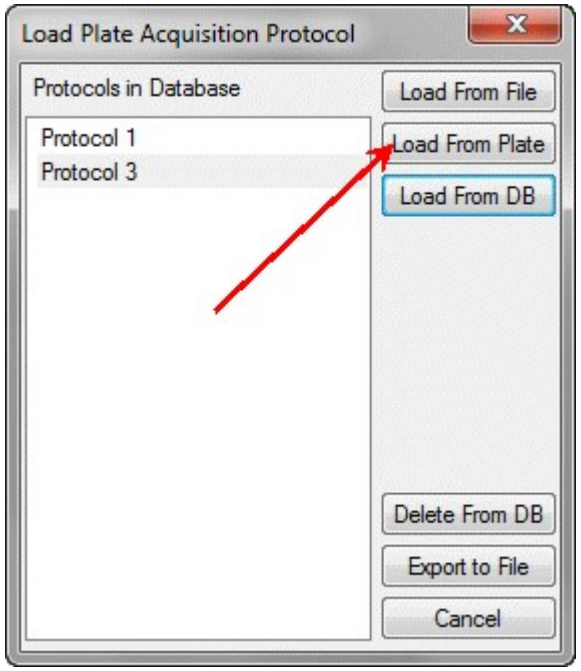
The Barcode can be entered manually or with a barcode scanner. Only alphanumeric characters should be used. There is no length requirement.

Note: The Barcode field is cleared after every acquisition. If you are reusing a manually entered barcode, keep a copy of it in the Description field (which is retained with the protocol) so that you can easily copy it to the Barcode field.



Locating the Protocol

- The Protocol should match previous protocols used for the same plate.
- If you did not save your previous protocol, use the option to **Load From Plate**.



Error Handling

- If an inappropriate protocol is selected, an error is displayed and you cannot append to the existing plate.

Site selection has changed:

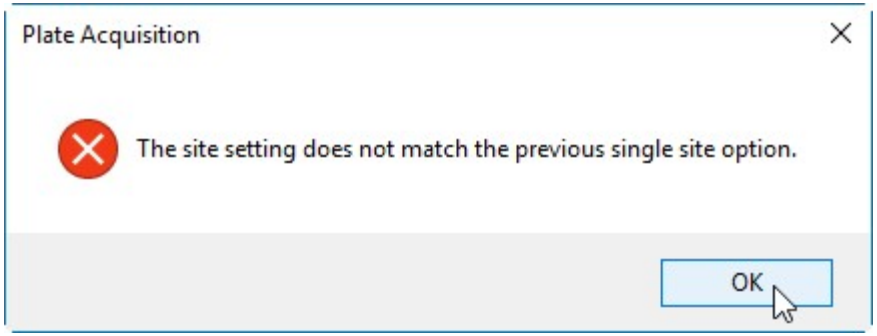
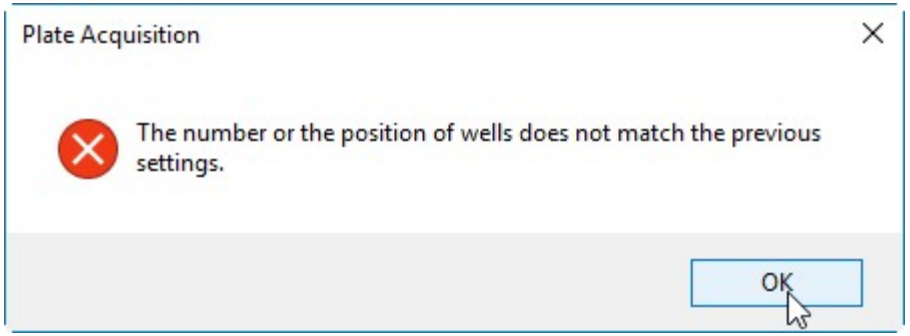
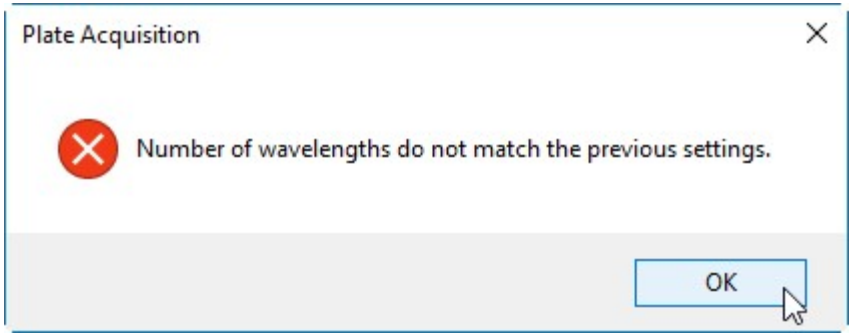


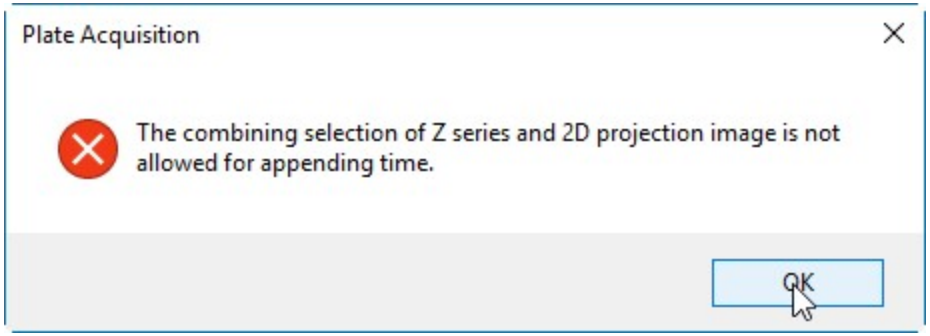
Plate type and/or well selection changed:

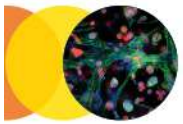


Wavelength selection has changed:



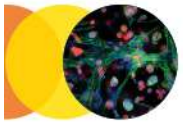
Z-Series option set to save all Z planes:

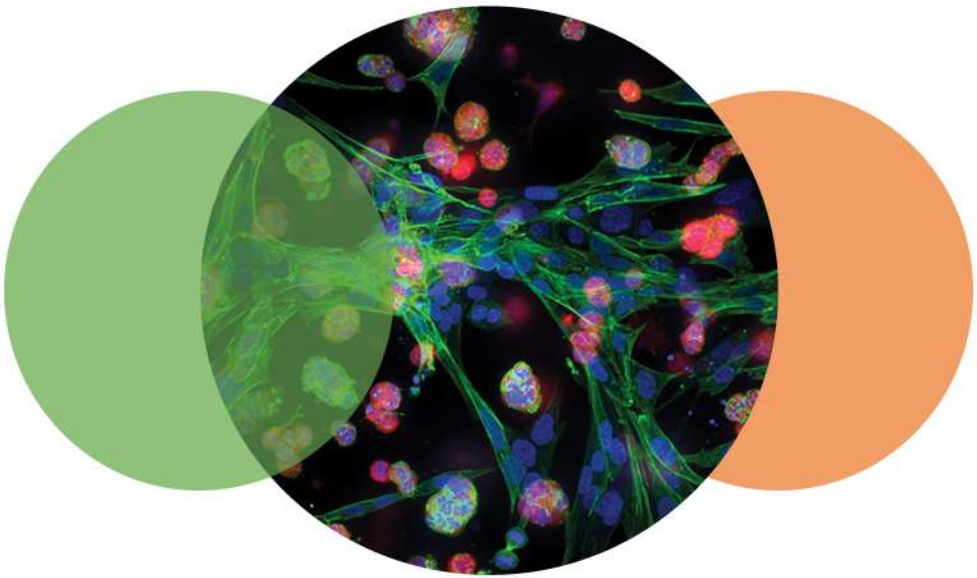




Support Resources

- F1 / HELP within MetaXpress® Software
- Support and Knowledge Base: http://mdc.custhelp.com/
- User Forum: http://metamorph.moleculardevices.com/forum/
- Request Support: http://mdc.custhelp.com/app/ask
- Technical Support can also be reached by telephone:
  - 1 (800) 635-5577
  - Select options for Tech Support → Cellular Imaging Products → ImageXpress Instruments





MOLECULAR DEVICES

ADVANCING DISCOVERY