Inverted Fluorescent Microscope Procedure

Taking an Image

1. Load the program "QCapture Pro"
2. The camera is coordinated with the software, so it is not necessary to turn the camera on/off (although the switch does need to be in the "On" position for it to work).
3. Turn on the main control box.
4. Turn on the White Light Source using the button on the main body of the microscope (it is coordinate with the box, so there is no need to turn it on/off).
5. If using Fluorescence, you must turn on the switch on the Hg Lamp box. Allow 5 minutes for the lamp to warm up.
6. Click on the Icon of a Video Camera.
7. Click on the "Preview" Tab.
8. Click on "Start Preview" to get a live feed from the Microscope.
9. To acquire an image, click on the "Snap" button. Save all images in the ".tiff" format.
10. Modifying the Images – Under the Preview Tab:
    a. Exposure Time – the larger the exposure time, the greater the signal. Typically in ms.
    b. Binning – To alter, just change the "Horizonal" value. *Increasing* the binning will *increase* the intensity of light (by merging and increasing the size of pixels in the image) but it *decreases* the resolution.
    c. Gain – *increasing* the gain will *increase* the signal intensity but also *increase* the amount of noise.
11. Once finished, turn off the Fluorescent Lamp, the White Light source. Allow the Fluorescent Lamp at least 15 min to cool down. The camera will turn-off automatically when the computer shuts down.

Creating a Movie

1. Load the program as before; "QCapture Pro"
2. Click on the Icon of the Video Camera.
3. Under the "Image" Tab, under "Multiple Images", check the box next to "Enable Multiple Image Capture" (the text around this should now light up)
4. Parameters for the Video
    a. Number of Images: This is the total number of still pictures that will compose the movie.
    b. Time between Images: This will only be available if the Box next to "Use minimum possible interval" is not checked.
    c. Thus, the greater the number of images and the greater time between images, the longer the movie will be.
5. Click on the "Start Preview" button at the bottom-left corner of the box.
6. Click on "Snap"; after ~1 second of lag time, the movie will begin to record.
7. Once finished, a "Sequencer Toolbar" will appear. Before you can save the movie in its entirety, you have to click the icon with multiple picture frames that is over the "Apply To" text. This saves all of the still-images together as a movie.
8. Save the file as a ".avi"
9. You can edit the Start/Stop points of the movie by changing the frame numbers on the "Sequencer Toolbar".