

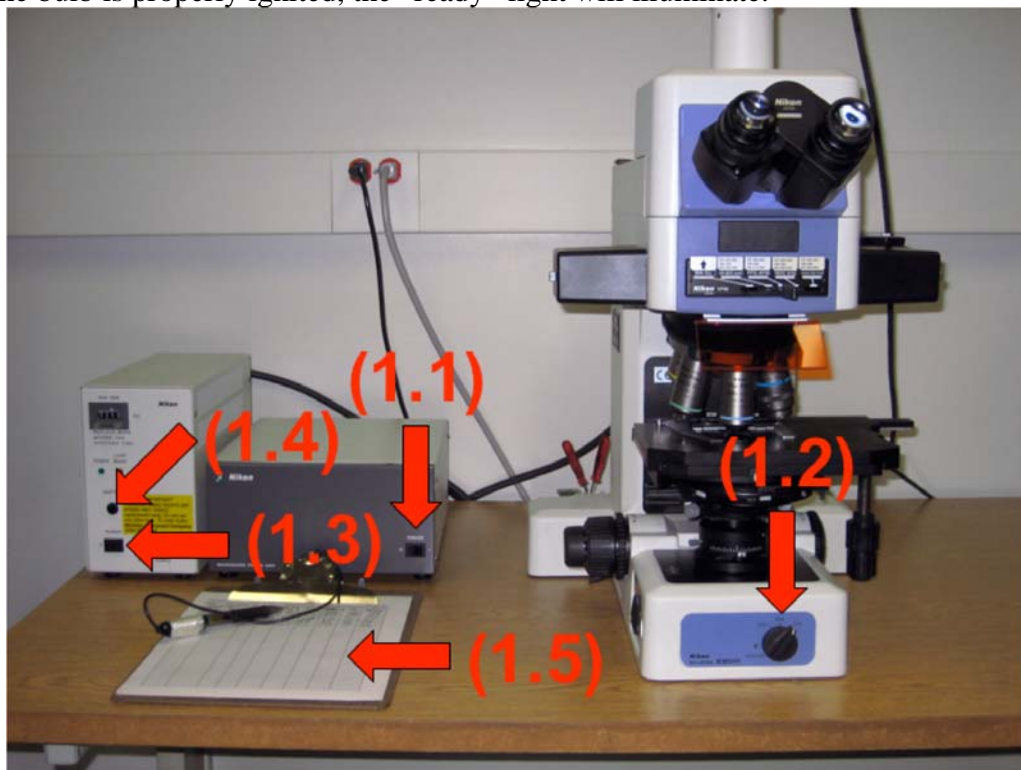
## Nikon Eclipse Instructions

### Microscope Summary

The ImageCORE's Nikon Eclipse E-800 is set up as a high-resolution fluorescence acquisition microscope. The Eclipse is coupled to a 12-bit QImaging Retiga 1300i digital capture camera. Use of this acquisition system should be limited to those investigators that have observed their samples previously on lower resolution systems and require the image quality afforded by this system.

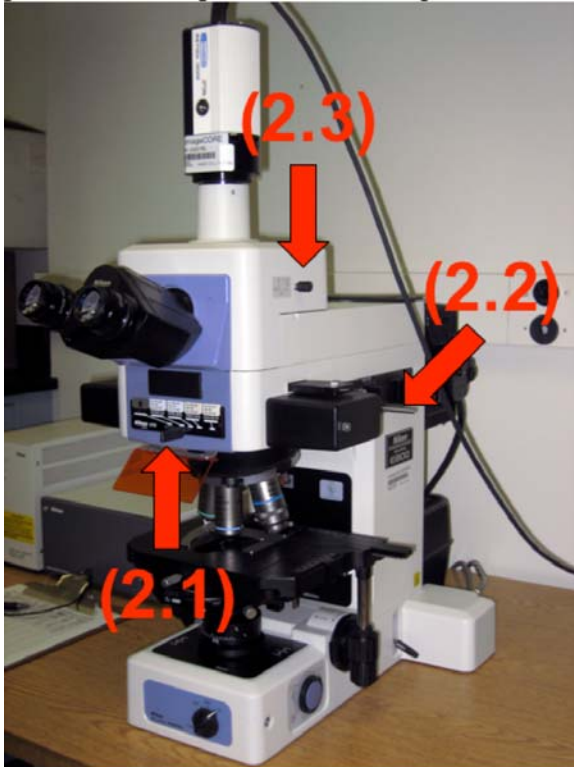
### Power Up Procedure

- For your protection as well as the equipment, please don gloves provided to you by the ImageCORE at no charge
- Carefully remove the protective dust cover from the microscope ensuring that the back of the cover does not catch or move the mercury supply adjustments
- The Nikon Eclipse has 2 power supplies. The order in which these supplies are turned on is important. Begin by turning on the main power supply (1.1). Once the main supply is on, adjust the selector on the base of the scope (1.2) to either "DIA" for brightfield microscopy or "EPI" for fluorescence microscopy. This selector toggles the white light source on and off.
- Should you desire fluorescence excitation, you will need to turn on the mercury light source. It is imperative that the mercury source is used for duration of at least 15minutes. Likewise, it is also imperative that the mercury source not be switched on after prior use for at least 30 minutes.
- In order to illuminate the mercury light source, turn on the power supply (1.3). Next, in order to ignite the bulb, press and hold the "ignition" button (1.4). Once the bulb is properly ignited, the "ready" light will illuminate.



## Image Acquisition

- Select the appropriate excitation wavelength using the filter cube selection slider (2.1). Further compose your image using the focus and translation stage. When you are not actively observing or imaging your sample, it is important to engage the shutter (2.2) and block the excitation light to your sample. When the shutter is depressed, the light path is undisturbed and excitation can occur. Subsequently, when the shutter is pulled out, the light path is disturbed.
- In order to set the scope for digital capture, it is necessary to manipulate the “eyepiece/camera” selector (2.3). When depressed, the eyepieces are in the light path and when pulled out, the digital camera is in the light path.



- Having configured the microscope properly as discussed herein, it is now time to configure the computer system for digital image capture. Please refer to the separate instruction document entitled “Computer Login/Image Acquisition Instructions.”

## Shutdown Procedure

- After properly restarting the computer system as discussed in the “Computer Login/Image Acquisition Instructions,” attention must be paid to the microscope.
- Begin by returning all system on the scope to their “off” positions. This includes moving the filter slider (2.1) left to the “DIA” position. Next make sure the shutter (2.2) is pulled out from the scope and blocking the light path. Lastly, move the “eyepiece/camera” selector (2.3) inward towards the scope to “eyepiece” position.

- Having returned the microscope settings to their respective “off” positions, you may now shut down the power supplies for the microscope and mercury lamp. Again, the order in which you shut down the supplies is important.
- Begin by turning the selector on the base of the scope (1.2) to the “off” position.
- Next, turn off the microscope power supply (1.1).
- Lastly, switch off the mercury lamp supply (1.3).
- After both power supplies have been shutdown and the computer has restarted, please fill out the log sheet (1.5) located to the left of the microscope. **MAKE SURE TO FILL IN THE MERCURY LAMP COUNTER.**
- Allow 15 minutes for the microscope and lamps to cool prior to replacing the dust cover. Again, take care to ensure the dust cover is draped over the scope without impeding the rear lamp housings (see below).

