UPRIGHT FLUORESCENT MICROSCOPE: Olympus BX60

Operating Instructions:
1. **Turn on PC:**
   a. Press power switch on PC (if not already on)
   b. Login with **user= smic; pswd = B!01ogy**
2. **Turn on the microscope:**
   a. Switch on the back right corner to turn on transmitted light.
3. **For fluorescence: turn on the Mercury lamp.**
   a. The power supply is located to the side of the microscope. Allow the bulb to warm up for approx. 2 min before beginning imaging.

**Note: it is helpful to first find and focus your specimen using transmitted light, then switch to fluorescence. Use this method (see below) until you are proficient with using fluorescence.
4. **Load your slide onto the stage:**
   a. Lower the stage with the coarse focus knob, and then clip your slide onto the stage.
5. **Select the desired objective lens (usually start with a lower objective 4, 10, or 20x):**
   a. Rotate the objective turret.
   b. Then raise the stage with coarse focus knob (make sure you don't get too close to the lens!!)
6. **Remove any filters/shutters (**See Figure 1):**
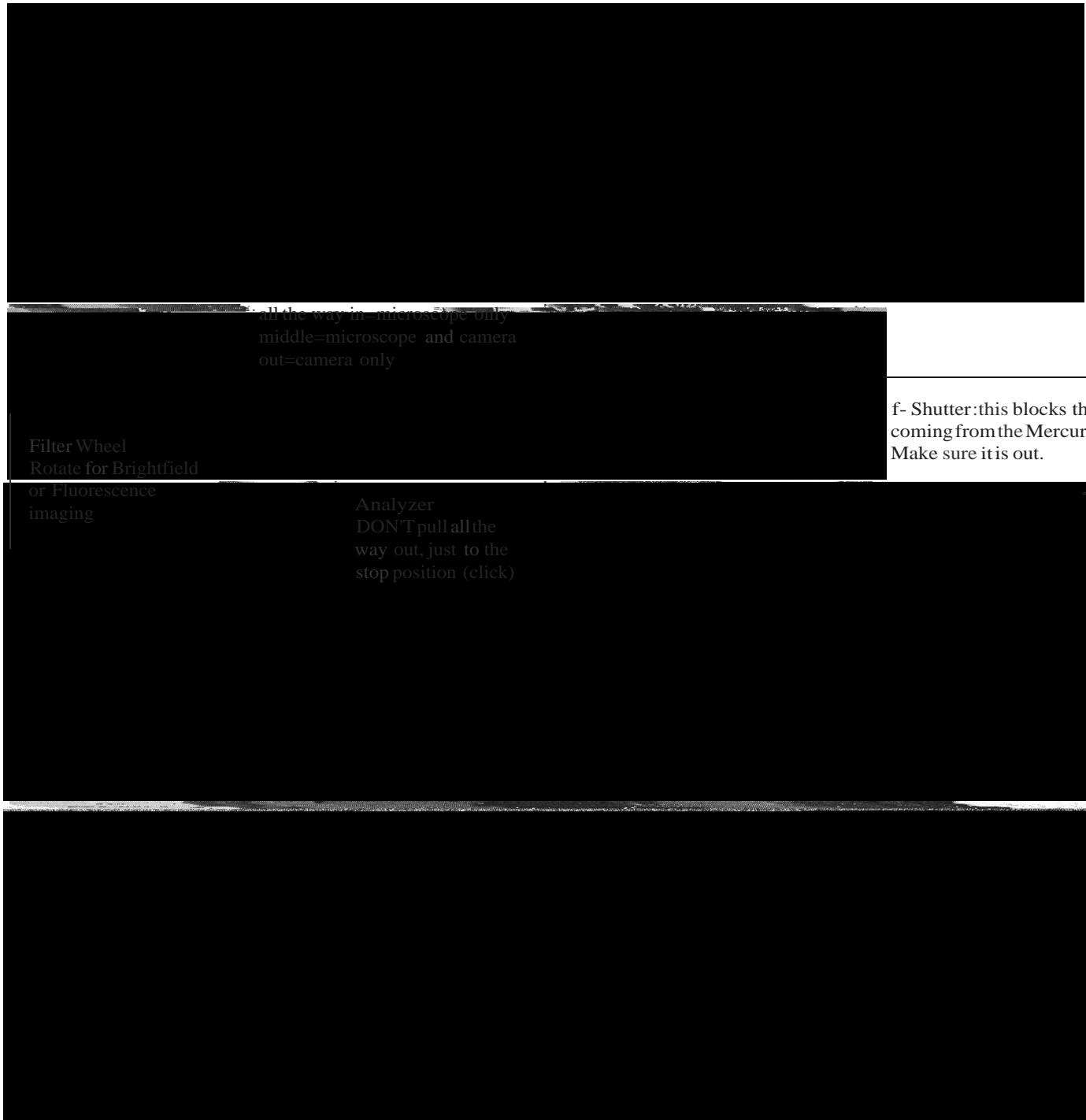   a. Rotate the black 'wheel' above the objective turret until it says 0

take an image (see Imaging Instructions below) or switch to fluorescence.

Fluorescence Instructions:

1. Turn off transmitted light.
2. Rotate the filter wheel to your desired filter for your specific sample. (Green for CY3, TRITC; blue of Alexa488, FITC; UV for DAPI, etc.)
   a. You should see a colored light coming through the objective lens (i.e. blue, green)
3. Find an area of your specimen that you want to image using the XY stage control and fine focus knob.

Imaging Instructions:

1. Pull out slider to block the light to the objective lens (right side level with the oculars)
   a. Third stop, camera icon
2. Open the software on the computer: **cellSens Entry**
3. Click the **live** button to turn on the camera
4. Adjust the exposure by moving the slider to right until your image appears properly exposed
   a. The exposure normally can be set as **auto** in bright field image mode and as **manual** in fluorescent image mode
5. Normalize background:
   a. For Bright field images: on the top right toolbar, click the white dropper icon
   b. For fluorescent images: on the top right toolbar, click the black dropper icon
   c.

all the way in=microscope only
middle=microscope and camera
out=camera only

f- Shutter: this blocks the light
coming from the Mercury lamp.
Make sure it is out.

Filter Wheel
Rotate for Brightfield
or Fluorescence
imaging

Analyzer
DON'T pull all the
way out, just to the
stop position (click)

Fig. 1: Slider, Filter Wheel, Analyzer, Shutter and DIC