

## Microscope UV Lamp Alignment

### Procedure

- 1) Place a business card or piece of paper containing a period onto the microscope stage.
- 2) Starting with the lowest magnification (5x objective on the DM4500B or low zoom on the MZFLIII) and increasing to the highest magnification, center the period in the field of view.
- 3) On the DM4500B, remove the 5x objective and pass the light beam through the empty position. On the MZFLIII, zoom out to the lowest magnification.
- 4) Switch to the DAPI filter set.
- 5) Using the collector lens knob (front left knob on the UV lamp housing) get the light to sharpen into two spots (possibly one if the lamp is already well aligned).
- 6) Using the knob on the top of the UV lamp housing and the knob behind the collector lens knob on the left, position the primary beam onto the center (as designated by the period).
- 7) The knobs on the back of the UV lamp housing control the mirror and the secondary beam. Using the center back knob, get the secondary beam to be similar in size to the primary beam.
- 8) Using the back bottom and back top knobs, move the secondary beam to overlap with the primary beam in the center (the period).
- 9) At this point, the lamp is properly aligned. The final step is to use the collector lens knob (front left on the UV lamp housing) to defocus the beam until you see a flat, uniform illumination with no hot spots. You should also view a test slide to confirm that the illumination is uniform.
- 10) Do not touch the knobs after the lamp is properly aligned!
- 11) Replace 5x objective on the DMB4500B if necessary.