**Quantification of TH immunoreactivity**

**Apparatus**

1. Confocal microscope
2. Image J software

**Procedure**

1. TH signals from bilateral striatum and cortex are imaged under a 20x objective lens using identical imaging settings.
2. Open the confocal files in Image J software.
3. Using the “Rectangle” function to select an area (width x high = 150 x 150) in striatum sections from both hemispheres for TH quantification.
4. Using the “Measure” function to measure the gray value of the selected area and write down the mean value of striatum slice, Mstriatum-LHS and Mstriatum-RHS.
5. Using the “Rectangle” function to select an area (width x high = 150 x 150) in cortical sections from both hemispheres for TH quantification.
6. Using the “Measure” function to measure the gray value of the selected area and write down the mean value of cortical slice, Mcortex-LHS and Mcortex-RHS.
7. TH quantification = (Mstriatum-LHS- Mcortex-LHS)/(Mstriatum-RHS- Mcortex-RHS).