Microscopy Metadata Checklist

\*\*\* Asterisks indicate optional items

Microscope Stand and Motorized Components

☐ Microscope Stand manufacturer and Model : *LEICA DMI6000B-CS*  
☐ Illumination Shutter Manufacturer and Model : Mechanical shutter and AOBS from Leica  
☐ Stage Manufacturer and Model : *Stage for SP8 from Leica*  
☐ Linear encoded stage? Yes  
☐ Focusing device manufacturer and model : Super Z-Galvo stage with Galvo Flow from Leica  
☐ Focusing device type : Piezo driven  
☐ Hardware-based Focus maintenance device manufacturer and model : N.A.  
☐ Software based focusing maintenance set up (wavelength, range, step size, algorithm) : N.A.  
☐ Excitation/Emission filter wheel Manufacturer and Model N.A  
☐ Excitation/Emission filter wheel Location in the Lightpath N.A.  
☐ \*\*\*Type   
☐ \*\*\**Commercial*/commercial modified, custom modified   
☐ \*\*\**Upright* or inverted : inverted  
☐ \*\*\*Illumination Shutter speed: N.A.  
☐ \*\*\*Stage precision and speed :  
☐ \*\*\*Focusing device range :   
☐ \*\*\*Focusing device speed :   
☐ \*\*\*Focusing device precision   
☐ \*\*\*Excitation/Emission filter wheel filter change speed

Laser-scanning Confocal-Specific Hardware and Settings

☐ Scan unit Manufacturer and Model *TCS SP8*  
☐ Scanning mechanism (galvo vs resonant) : *galvo*  
☐ Scan directionality : unidirectional   
☐ Scan rate or pixel dwell : *4.88 µs*  
☐ Averaging or sum integration number : No  
☐ Actual pixel or voxel size *1.14×1.14 µm2*  
☐ Pinhole diameter *1 Airy unit*  
☐ \*\*\*Scan area   
☐ \*\*\*Scan or frame size

Illumination

☐ Laser launch/combiner manufacturer and model : AOBS from Leica  
☐ Tunable laser? *Yes, White Light Laser*  
☐ Pulsed? If yes, pulse length *yes*  
☐ Laser line/wavelength *488 nm*  
☐ Laser type (Argon, solid state) *White Light laser from Leica*  
☐ Laser modulation : Pulsed laser, repetition rate 80Mhz, pulse width 200-300ps  
☐ Laser intensity or % transmission *8*

Wavelength Selection

☐ Filter manufacturer and product number : AOBS from Leica and spectral detection from Leica  
☐ Filter center wavelength and bandwidth (FWHM), cut on or cut off wavelength *500 – 550 nm*  
☐ Filter coating method : N.A.  
☐ \*\*\*Additional filters manufacturer and model   
☐ \*\*\*If tunable wavelength selection, range of wavelengths detected

Optics

☐ Objective manufacturer *LEICA*  
☐ Objective correction *HC PL APO CS2*  
☐ Objective magnification *40X*  
☐ Objective numerical aperture *1.1*  
☐ Specified immersion medium *WATER*  
☐ \*\*\*Objective application   
☐ \*\*\*Immersion medium manufacturer and product number (if used) : Immersol W 2010

Detection

☐ Detector type Hybrid Detectors  
☐ Cathode type GaAsP  
☐ Voltage : N.A.  
☐ Offset : N.A.  
☐ Digital gain : No  
☐ \*\*\*Photon counting mode *Yes*

Acquisition Software

☐ Software manufacturer, name, and version LAS X from Leica  
☐ If custom, Author and appropiate citation : No  
☐ State of the shutter during acquisition : Mechanical shutter open during imaging and closed at the end, AOBS off at the end of each line  
☐ Order of experimental acquisition : N.A.  
☐ If custom macro: cite or make available. No  
☐ Time interval : N.A.  
☐ \*\*\*Specific aquisition Modules/Macros/apps

Sample Preparation

☐ Sample holder type, manufacturer and product number : Universal holding frame from Leica  
☐ Coverslip grade : 1.5 Coverslip  
☐ Coverslip coating (type, concentration, detailed protocol) Poly-L-Lysine only for beads  
☐ Detail protocol: fixitive, concentration of fixitive, fixation conditions (buffers, time, temperature), blocking, binding and hybridization buffer composition, Ab manufacturer, lot number, concentration, probe concentration, binding or hybridization conditions (time, temperature, sequential/simultaneous)   
☐ Mounting/imaging medium name, manufacturer and product number   
☐ Specific fluorescent protein variant   
☐ \*\*\*Mounting/imaging medium RI if not specified and curing time.