AcquiredDate The acquisition date of the Image. Description A multi-line description for the image. Name A short description for the image. This would be used to, for example, select the image from a list. **ImagingEnvironment** Describes the environment that the biological sample was in during the experiment. AirPressure in millibars[mbar]. AirPressure CO2Percent %CO2 as a percent-fractions from 0.0 to 1.0 [%]. Humidity Humidity as a percent-fraction from 0.0 to 1.0 [%]. **Temperature** Temperature [degrees Celsius]. **ObjectiveSettings** Describes any settings on or around the objective CorrectionCollar An adjustable ring on the objective that corrects for changes in immersion medium refractive imdex. Arbitrary scale and unitless. Medium A description of a Medium used for the lens. e.g., Oil, Water, WaterDipping, Air, Multi, Glycerol, Other RefractiveIndex Refractive index is that of the immersion medium. Pixels Defines the location and paramater sof the Pixels, the actual binary image The order in which the individual planes of data are interleaved. e.g., **DimensionOrder** XYZCT, XYZTC, XYCTZ, XYCZT, XYTCZ, XYTZC PhysicalSizeX **PhysicalSizeY** Physical size in x, y, z of a pixel in microns[um] **PhysicalSizeZ** SizeC SizeT SizeX Dimensional size x, y, z, c, t of pixel data array SizeY SizeZ Used for time series that have a global timing specification instead of per-**TimeIncrement** timepoint timing info, e.g., a video stream. [s]. The variable type used to represent each pixel in the image. e.g., int8, Type int16, int32, uint8, uint16, uint32, float, bit, double, complex, doublecomplex BinData If the pixel data is stored dierctly in the XML it is enclosed in BinData TiffData If the pixel data is stored in an OME-TIFF file it is described by TiffData Elements **FirstC FirstT** The TiffData element describes how the TIFF IFD numbers are mapped to the **FirstZ IFD** Pixels. **PlaneCount UUID** The TiffData UUID and Filename are used for multi-file datasets to maintain connections between the files **FileName** Channel AcquisitionMode AcquisitionMode describes the type of microscopy performed. e.g., WideField, LaserScanningMicroscopy, LaserScanningConfocal, SpinningDiskConfocal, SlitScanConfocal, MultiPhotonMicroscopy, StructuredIllumination, SingleMoleculeImaging, TotalInternalReflection, FluorescenceLifetime, SpectralImaging, FluorescenceCorrelationSpectroscopy, NearFieldScanningOpticalMicroscopy, SecondHarmonicGenerationImaging, Color A color used render this channel ContrastMethod The technique used to achieve contrast. e.g., Brightfield, Phase, DIC, HoffmanModulation, ObliqueIllumination, PolarizedLight, Darkfield, Fluorescence, Other **EmissionWavelength** Emission wavelength of excitation for a particular channel, in nanometres [nm]. **ExcitationWavelength** Excitation wavelength of excitation for a particular channel, in nanometres [nm]. Fluor The name of the fluorophore used to produce this channel. The method of illumination used to capture the channel. e.g., Transmitted, IlluminationType Epifluorescence, Oblique, NonLinear, Other Name A short name for the channel, used to, for example, identify the channel from a list. **NDFilter** Specifies the combined effect of any neutral density filters used. [% Specifies adjustable pin hole diameters for confocal microscopes (microns **PinholeSize** [um]). **PockelCellSetting** Amount the polarization of the beam introduced by Pockel Cell, if any. SamplesPerPixel The number of samples the detector takes to form each pixel value. **DetectorSettings** Represents the number of pixels that are combined to form larger pixels. **Binning** e.g., 1x1, 2x2, 4x4, 8x8, Other Gain The Gain of the detector. Offset The Offset of the detector. ReadOutRate Detector read speed (MHz) The Voltage of the detector. volts[V] Voltage LightSourceSettings The Attenuation of the light source. [%] **Attenuation** Wavelength The Wavelength of the light source. [nm] Plane DeltaT Elapsed time since the beginning of the experiment [s] ExposureTime Elapsed time during image recording. [s] **PositionX** The x, y, z position of the stage. [µm] **PositionY PositionZ** StageLabel Short name for this stage location This would be used to, for example, Name identify the channel from a list. X Υ The labeled x, y, z position of the stage. [µm]

Describes the actual image and its metadata.

Image