

# Bruker TruLive3D training protocol

## **Training Program**

### **Bruker TruLive3D Light Sheet Microscope**

#### Session 1 – Instrument and Operation Overview\*

##### Microscope Startup Procedure

1. How to turn the microscope and computer on

##### Microscope overview

1. What are the parts of the microscope and what is each one for

##### Optical Path Overview

1. Illumination + Collection objectives
2. Define XYZ directions
3. Using the space mouse to control the translation stage

# Bruker Lux-Bundle Overview

1. Image Viewing Area
2. Calibration
3. Dashboard
4. Image Viewer
5. Image Processing

## Microscope calibration

1. Align the two beams in water
2. Perform the line calibration

\* **This session is now optional!** The calibration will be performed by Beckman center Staff if you prefer not to learn how to do it. You can always book a training to learn how to do it later and be more autonomous on the instrument.

# Session 2 – Setting up an experiment

## Review of microscope calibration

1. Align the two beams in water
2. Perform the line calibration

## Sample finding

1. Load your sample in the chamber
2. Find your sample with the BlackFly camera on the SpinView software
3. Choose an area of your sample with the detection cameras

## Setting up an experiment in LuxBundle

1. Set up different channels
2. Set up z-stacks and scan areas
3. Set up a trigger

## Data saving options

1. Write your data locally and then delete it
2. Write your data directly on your server
3. Fill out the book-keeping form with your data identification

## Data analysis in LuxBundle

1. Image viewing in LuxBundle
2. Image processing in LuxBundle: learn how to create separate imaris headers for each stack

## Shutdown Procedure and Calendar Access

1. System shutdown
2. Cleaning procedure
3. Calendar access

## Session 3 – User-led Session

1. Reserve time on the microscope
2. Notify the Instructor as to the date/time of the session
3. Reserve at least two hours
4. Turn on the microscope
5. Load your sample

6. Calibrate the instrument
7. Find your sample
8. Set up an experiment

The instructor will check in on you throughout to offer assistance

## Optional Session – Photomanipulation module

1. Review of Session 1
2. Beam Calibration
3. Photo-Manipulation Module
4. Calibration of the PM module
5. Load in your sample
6. Find your sample on the SpinView software with the BlackFly camera
7. Explore the different photomanipulation options
8. Set up an experiment with a photomanipulation event

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