

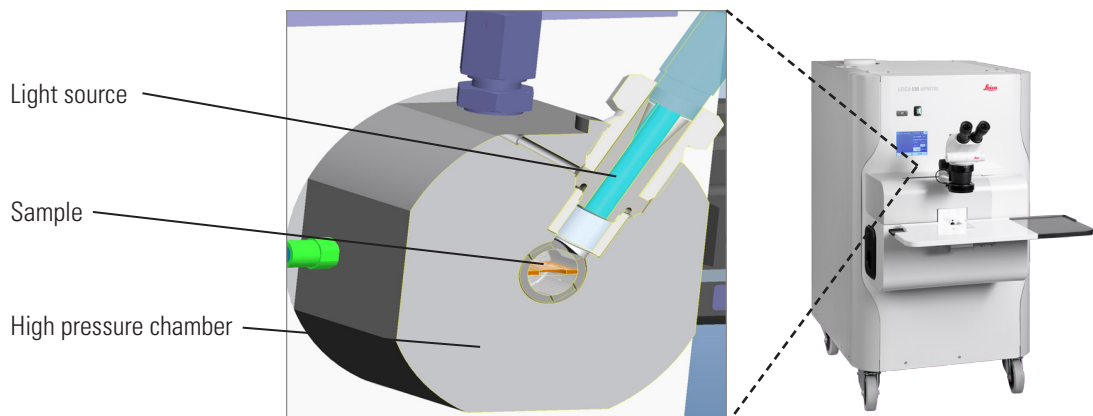
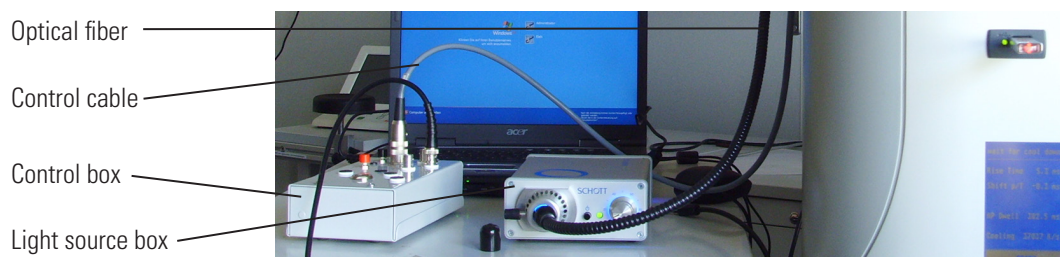
## Light holds the promise for a brighter future

### Leica EM HPM100 with light stimulation

Optogenetic techniques enable selective activation or inactivation of cellular functions by employing light. This new tool can literally shine light on the processes defining specific malfunctions related to neurotransmission, protein interactions and muscle contraction.

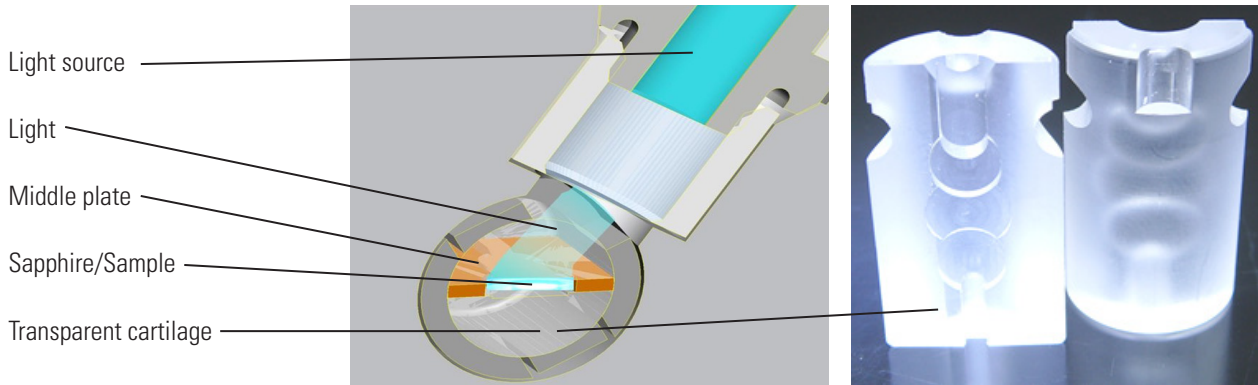
The tool to capture cellular responses induced by light stimulation with a temporal resolution of milliseconds, is the Leica EM HPM100. The **Leica EM HPM100 with light stimulation** is a high pressure freezer which enables the synchronisation of light stimulation and cryo-fixation in a precisely defined time frame.

The optical fiber transmits the light from the light source to the sample inside the high pressure chamber. It can be connected to any light trigger box (see images below).



# Living up to Life

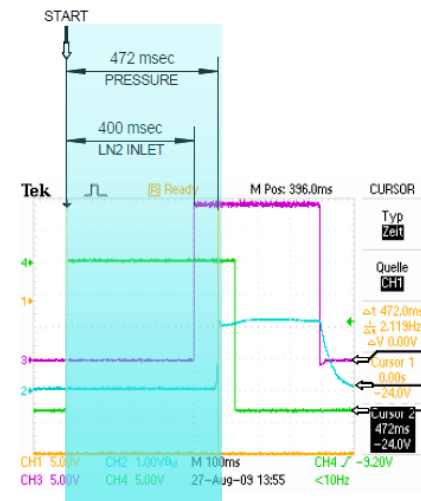
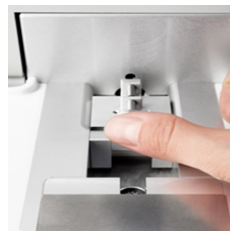
Zooming in:



Light pulses can be defined manually or automatically. They can also have a different duration according to the specific experiment.

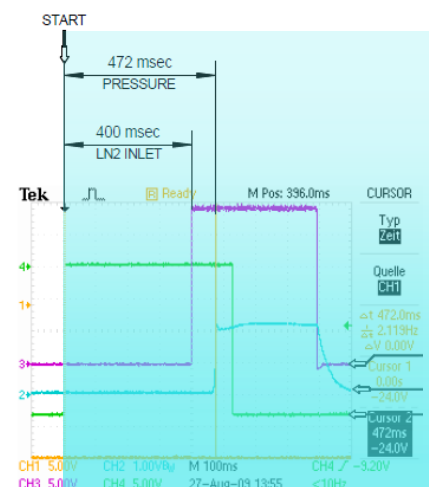
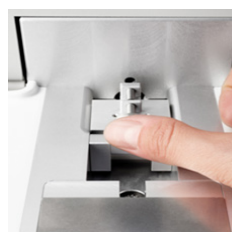
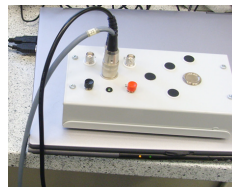
Short light pulses:

Loading and pressing the process button will initiate the light stimulation and the freezing process automatically



Long light pulses:

Loading and pressing the process button will initiate the light stimulation but the freezing process must be activated manually via the control box.



... High Pressure Freezing with Light is the next step towards understanding dynamic processes