

DESCRIPTION OF ADDITIONAL SUPPLEMENTARY FILES

File Name: Supplementary Movie 1

Description: Demonstration of CL-FOS system performing sinusoidal movement task. Video was taken from a trial performed in a transgenic mouse with implanted sonomicrometry crystals, which directly measured fascicle lengths. In addition, an external distance sensor was used (red laser can be seen on the footsole).

File Name: Supplementary Movie 2

Description: CL-FOS system response to staircase square wave control signal. Video was acquired during a trial performed in a virally-transduced rat.

File Name: Supplementary Movie 3

Description: Demonstration of CL-FOS system performing invasive light delivery and response to square wave control signal.

File Name: Supplementary Movie 4

Description: Three-phase photokinetic behavior of CL-FOS system.