

Supplementary Figure | Screen image showing the exposed spinal cord of a mechanically ventilated Wistar rat in a spinal frame, through the upright microscope onto which the digital camera is mounted.

Supplementary videos 1,2 | The first video shows a stack of “raw” images of background fluorescence of the dorsal surface of the spinal cord at the T13 vertebral level. Note that there are hardly any movement artifacts. The second video shows a stack of subtracted $\Delta F/F$ images. Note the increased AFI signal during electrical stimulation of the sciatic nerve mainly on the left (i.e. upper) side. The bright spot in the center of the subtracted images is due to decreasing volume of the paracentral dural vein on the contralateral side, which can be seen in the raw images video.

Supplementary videos 3,4 | The third video shows a stack of subtracted $\Delta F/F$ images of the dorsal surface of the spinal cord at the T13 vertebral level, before injection of capsaicin. Note the movement artifacts but no increase in AFI signal during innocuous palpation of the left hindpaw. The fourth video shows a stack of subtracted $\Delta F/F$ images of the dorsal surface of the spinal cord at the T13 vertebral level, 32 minutes after injection of capsaicin. Note the increased AFI signal during innocuous palpation mainly on the left (i.e. upper) side.

