

In vivo experiment with a fruit-fly embryo (dissected) and a miniature silicon force sensor. Nervous system of the embryo is shown in green (Green Florescent Protein). The sensor contacts the end of an axon that has formed a neuro-muscular synapse and applies a small force by pulling the synapse. The force is given by the misalignment between the two vertical reference structures. The induced stretch in the axon results in increased accumulation of neurotransmitters at the synapse.

Siechen, Yang, Chiba, Saif. Proceedings of the National Academy of Sciences, August 4, 2009 vol. 106 no. 31 12611–12616.