

Materials List for:

# In Vivo Optical Calcium Imaging of Learning-Induced Synaptic Plasticity in *Drosophila melanogaster*

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## Materials

Name	Company	Catalog Number	Comments
1-Octen-3-ol	Sigma-Aldrich, St. Louis, MO, USA	O5284	Chemical used as odorant
3-Octanol	Sigma-Aldrich, St. Louis, MO, USA	218405	Chemical used as odorant
4-Methylcyclohexanol	Sigma-Aldrich, St. Louis, MO, USA	153095	Chemical used as odorant
Bandpass filter for EGFP (525/50 nm)	Carl Zeiss Microscopy GmbH, Jena, Germany		
Clear adhesive tape	Tesa SE, Norderstedt, Germany		Standard clear adhesive tape
Concave-convex jaws	Fine Science Tools, North Vancouver, Canada	10053-09	Blade Holders with concave-convex jaws
Fine forceps	Fine Science Tools, North Vancouver, Canada	11412-11	Forceps with tip 0.1 x 0.06mm
Hypodermic needle	Sterican - B. Braun, Melsungen, Germany	4665120	1.20x40mm
Insect Minutien pins	Fine Science Tools, North Vancouver, Canada	26002-10	Diameter 0.1mm, tip 0.0125mm
Kentoflow	Kent Express Dental Supplies, Gillingham, UK	953683	Blue light-curing glue
Microscope slide	Carl Roth GmbH & Co. KG, Karlsruhe, Germany	0656.1	Standard objective slide 76 x 26 mm
Mineral oil	Sigma-Aldrich, St. Louis, MO, USA	M8410	Used as diluent for odorants
Mode-locked Ti-Sapphire laser Chameleon Vision 2	Coherent Inc., Santa Clara, CA, USA		Tunable infrared femtosecond laser
Multiphoton Microscope LSM 7MP equipped with BiG detectors	Carl Zeiss Microscopy GmbH, Jena, Germany		Multiphoton microscope, multiple companies provide similar devices.
Plan-Apochromat 20x (NA = 1.0) water immersion objective	Carl Zeiss Microscopy GmbH, Jena, Germany	421452-9900-000	Objective W "Plan-Apochromat" 20x/1.0 DIC M27 70mm
Ringer's solution	n.a.	n.a.	5mM KCl, 130mM NaCl, 2mM MgCl <sub>2</sub> , 2mM CaCl <sub>2</sub> , 5mM HEPES-NaOH, 36mM sucrose, pH = 7.4
Stab knife	Sharpnoint, Surgical Specialties Corporation, Reading, PA, USA	72-1551	5.0mm Straight restricted blade depth
Surgical scalpel blade	Swann-Morton, Sheffield, UK	0303	Product No. 11
Surgical scalpel handle	Swann-Morton, Sheffield, UK	0907	Product No. 7S/S
Visual Basics of Applications (VBA) software to receive a trigger from the odor-delivery device and the electric shock application device (power supply) to interact with the ZEN software from Zeiss that controls the microscope.	Custom-written and available upon request	n.a.	n.a.