

Materials List for:

# Construction of Cell-based Neurotransmitter Fluorescent Engineered Reporters (CNiFERs) for Optical Detection of Neurotransmitters *In Vivo*

Emre Lacin<sup>1</sup>, Arnaud Muller<sup>2</sup>, Marian Fernando<sup>1</sup>, David Kleinfeld<sup>2,3</sup>, Paul A. Slesinger<sup>1</sup>

<sup>1</sup>Department of Neuroscience, Icahn School of Medicine at Mount Sinai

<sup>2</sup>Department of Physics, University of California, San Diego

<sup>3</sup>Section of Neurobiology, University of California, San Diego

Correspondence to: David Kleinfeld at [dk@physics.ucsd.edu](mailto:dk@physics.ucsd.edu), Paul A. Slesinger at [Paul.Slesinger@mssm.edu](mailto:Paul.Slesinger@mssm.edu)

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## Materials

Name	Company	Catalog Number	Comments
pCDH-CMV-MCS-EF1-Puro	System Biosciences	CD510B-1	Cloning: for generating lentivirus
12x75 *BD Falcon High Clarity Polypropylene Round Bottom Test Tube	BD Biosciences	352063	FACS
BD 40 um Falcon cell strainers	BD Biosciences	352340	FACS
0.05% Trypsin EDTA	Invitrogen	25200056	FACS
96 Well Plate, flat bottom, clear	Corning	3596	FACS
96 well cell culture plates	Corning	CLS3997	Flexstation
Optilux black clear bottom	Corning	3603	Flexstation
Flexstation pipet tips	Molecular Devices	9000-0911	Flexstation
Acetylcholine Chloride	Sigma-Aldrich	A2661	Flexstation
Norepinephrine	Sigma-Aldrich	A7256	Flexstation
Dopamine Hydrochloride	Sigma-Aldrich	PHR1090	Flexstation
GABA	Sigma-Aldrich	A2129	Flexstation
Histamine	Sigma-Aldrich	H7125	Flexstation
Glutamate	Sigma-Aldrich	49621	Flexstation
Epinephrine	Sigma-Aldrich	E4642	Flexstation
Somatostatin	Sigma-Aldrich	S1763	Flexstation
5HT	Sigma-Aldrich	H9523	Flexstation
VIP	Alpha Diagnostics Inc.	SP-69627	Flexstation
Orexin A	Alpha Diagnostics Inc.	12-p-01	Flexstation
Substance P	Sigma-Aldrich	S6883	Flexstation
Adenosine	Sigma-Aldrich	A4036	Flexstation
Melatonin	Sigma-Aldrich	M5250C	Flexstation
Fluorescence Plate Reader & software	Molecular Devices	Flexstation 3	Flexstation
DMEM (high glucose) with Glutamax	Life Technologies	10569-010	Tissue culture
Fetal bovine serum	Life Technologies	10082-139	Tissue culture
Pen/Strep antibiotics	Life Technologies	15140-122	Tissue culture
Puromycin	InvivoGen	ant-pr-1	Tissue culture
Fibronectin	Sigma-Aldrich	F0895	Tissue culture
CoolCell LX Alcohol-free controlled-rate cell freezing box	Bioexpress	D-3508)	Tissue culture

cyanoacrylate glue	Loctite	Loctite no. 495	surgery and stereotaxic injection
plastic paraffin film	VWR	Parafilm®	surgery and stereotaxic injection
Nanoinjector	Drummond	3-000-204	surgery and stereotaxic injection
Glass electrodes	Drummond	3-000-203G	surgery and stereotaxic injection
hand held drill	OSADA	ExI-M40	surgery and stereotaxic injection
Burrs for drill	Fine Scientific	19007-05; 19007-07)	surgery and stereotaxic injection
Sterilizing bath	FST	18000-45, Hot Bead Sterilizer	surgery and stereotaxic injection
isoflurane chamber/mask	Highland Medical Equipment	564-0427, HME 109 Table Top Anesthetic Machine with Isoflurane Vaporizer, O2 Flowmeter, Gang Valve; 564-0852, Induction Chamber 16X7X7.5cm	surgery and stereotaxic injection
3D scope with arm	Zeiss		surgery and stereotaxic injection
fiber optic light			surgery and stereotaxic injection
Betadine			surgery and stereotaxic injection
70 % (v/v) isopropyl alcohol			surgery and stereotaxic injection
Povidone-Iodine Prep Pads	dynarex	1108	surgery and stereotaxic injection
NaCl 0.9% (injection, USP, 918610)			surgery and stereotaxic injection
CYCLOSPORINE (INJECTION, USP)			surgery and stereotaxic injection
Buprenex (injection) buprenorphine (0.03 µg per g rodent)	Sigma-Aldrich		surgery and stereotaxic injection
Ophthalmic ointment	Akorn	NDC 17478-235-35	surgery and stereotaxic injection
Surgifoam	Ethicon		surgery and stereotaxic injection
Grip dental cement	Dentsply	#675571, 675572	surgery and stereotaxic injection
Instant SuperGlue	NDIndustries		surgery and stereotaxic injection
LOCTITE 4041			surgery and stereotaxic injection
METABOND	C&B		surgery and stereotaxic injection
no. 0 cover glass	Fisher		surgery and stereotaxic injection
stereotaxic frame	Kopf		surgery and stereotaxic injection
Rectal probe and heating pad	FHC	40-90-8D, DC Temperature Controller,40-90-2-06, 6.5X9.5cm Heating Pad40-90-5D-02, Rectal Thermistor Probe	surgery and stereotaxic injection
optical breadboard for imaging	Thorlabs		surgery and stereotaxic injection
Mineral oil	Fisher	S55667	surgery and stereotaxic injection
Kwik-Cast (Silicone elastomer)	World Precision Instruments		surgery and stereotaxic injection
Suture	Ethicon	18", 1667, 4-0	surgery and stereotaxic injection
Scissors	Fine Scientific Tools	91500-09, 15018-10	surgery and stereotaxic injection
Forceps	Fine Scientific Tools	11252-30; #55, 11295-51; Grafe, 11050-10	surgery and stereotaxic injection
Student Halsted-Mosquito Hemostats	Fine Scientific Tools	91308-12	surgery and stereotaxic injection
Small Vessel Cauterizer Kit	Fine Scientific Tools	18000-00	surgery and stereotaxic injection
Hot Bead Sterilizers	Fine Scientific Tools	18000-45	surgery and stereotaxic injection
Instrument Case with Silicone Mat	Fine Scientific Tools	20311-21	surgery and stereotaxic injection
Plastic Sterilization Containers with Silicone Mat	Fine Scientific Tools	20810-01	surgery and stereotaxic injection

2P fixed-stage fluorescence scope for in vivo imaging	Olympus	FV1200 MPE	in vivo imaging
Multiphoton laser	SpectraPhysics	Mai Tai DeepSee	in vivo imaging
Green Laser	Olympus	473 nm Laser	in vivo imaging
xy translational base	Scientifica	MMBP	in vivo imaging
FRET filter cube for YFP and CFP	Olympus		in vivo imaging
10x and 40x water immersion objectives	Olympus		in vivo imaging
air table	Newport		in vivo imaging
custom built light-tight cage	Thorlab		in vivo imaging