

Materials List for:

# Promotion of Survival and Differentiation of Neural Stem Cells with Fibrin and Growth Factor Cocktails after Severe Spinal Cord Injury

Paul Lu<sup>1,2</sup>, Lori Graham<sup>2</sup>, Yaozhi Wang<sup>2</sup>, Di Wu<sup>2</sup>, Mark Tuszynski<sup>1,2</sup>

<sup>1</sup>Veterans Administration Medical Center, San Diego

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

Correspondence to: Paul Lu at [plu@ucsd.edu](mailto:plu@ucsd.edu)

URL: <https://www.jove.com/video/50641>

DOI: [doi:10.3791/50641](https://doi.org/10.3791/50641)

## Materials

Name	Company	Catalog Number	Comments
Fibrinogen (rat)	Sigma	F6755-25MG	2 hr at 37 °C to dissolve Stock Concentration: 50 mg/ml Final Concentration: 25 mg/ml
Thrombin (rat)	Sigma	T5772-100UN	Dissove in 10 mM CaCl <sub>2</sub> Stock Concentration: 50 U/ml Final Concentration: 25 mg/ml
bFGF (human)	Sigma	F0291 (25 µg)	Stock Concentration: 200 ng/µl Final Concentration: 10 ng/µl
EGF (murine)	Sigma	E1257 (0.1 mg)	Stock Concentration: 200 ng/µl Final Concentration: 10 ng/µl
BDNF (human)	Peprtech	452-02 (1 mg)	Stock Concentration: 1,000 ng/µl Final Concentration: 50 ng/µl
NT-3 (human)	Peprtech	452-03 (1 mg)	Stock Concentration: 1,000 ng/µl Final Concentration: 50 ng/µl
GDNF (rat)	Sigma	G1401 (10 µg)	Stock Concentration: 200 ng/µl Final Concentration: 10 ng/µl
IGF-1 (mouse)	Sigma	I8779 (50 µg)	Stock Concentration: 200 ng/µl Final Concentration: 10 ng/µl
aFGF (human)	Sigma	F5542 (25 µg)	Stock Concentration: 200 ng/µl Final Concentration: 10 ng/µl
PDGF-AA (human)	Sigma	P3076 (10 µg)	Stock Concentration: 200 ng/µl Final Concentration: 10 ng/µl
HGF (human)	Sigma	H9661 (5 µg)	Stock Concentration: 200 ng/µl Final Concentration: 10 ng/µl
MDL28170	Sigma	M6690 (25 mg)	Stock in DMSO Stock Concentration: 1 mM Final Concentration: 50 µM
PBS	Millipore	BSS-1005-B	Stock Concentration: 1x Final Concentration: 1x
DMSO	Sigma	D2650	
Ketamine	Putney	26637-411-01	40-80 mg/kg Stock Concentration: 100 mg/ml Final Concentration: 25 mg/ml
Xylazine	Lloyd	0410,	2.5-8 mg/ml Stock Concentration: 100 mg/ml Final Concentration: 5.8 mg/ml
Acepromazine	Butler	003845	0.5-4 mg/ml Stock Concentration: 10 mg/ml Final Concentration: 0.25 mg/ml
Betadine	Healthpets	BET16OZ	

Ringers	Abbott	04860-04-10	2-3 ml/inj
Banamine	Schering-Plough	0061-0851-03	2.5-5 mg/kg Stock Concentration: 50 mg/ml Final Concentration: 0.5 mg/ml
Ampicillin	Sandoz	0781-3404-85	80-100 mg/kg Final Concentration: 50 mg/ml
LH-RH	Sigma	L4513	200 µg/kg Final Concentration: 200 µg/ml
HBSS	Gibco	14175-096	
Trypsin	Gibco	25200056	Stock Concentration: 0.25 % Final Concentration: 0.125 %
DMEM	Gibco	11995073	
FBS	Gibco	16000044	Stock Concentration: 100 % Final Concentration: 10 %
Neurobasal Medium	Gibco	21103049	
B27	Gibco	17504044	Stock Concentration: 100x Final Concentration: 1x
Note, use human reagents for grafts of human NSCs			