

The Muscle Cuff Regenerative Peripheral Nerve Interface for the Amplification of Intact Peripheral Nerve Signals

Shelby R. Svientek¹, Justin P. Wisely¹, Amir Dehdashtian¹, Jarred V. Bratley¹, Paul S. Cederna^{1,2}, Stephen W. P. Kemp^{1,2}

¹Department of Surgery, Section of Plastic Surgery, The University of Michigan Health System ²Department of Biomedical Engineering, The University of Michigan, Ann Arbor

Corresponding Author

Stephen W. P. Kemp
swpkemp@med.umich.edu

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Materials

Name	Company	Catalog Number	Comments
#15 Scalpel	Aspen Surgical, Inc	Ref 371115	Rib-Back Carbon Steel Surgical Blades (#15)
2-N-thin film load cell (S100)	Strain Measurement Devices, Inc	SMD100-0002	Measures force generated by the attached muscle
4-0 Chromic Suture	Ethicon	SKU# 1654G	P-3 Reverse Cutting Needle
5-0 Chromic Suture	Ethicon	SKU# 687G	P-3 Reverse Cutting Needle
8-0 Monofilament Suture	AROSurgical	T06A08N14-13	Black polyamide monofilament suture on a threaded tapered needle
Experimental Rats	Envigo	F344-NH-sd	Rats are Fischer F344 Strain
Fine Forceps - mirror finish	Fine Science Tools	11413-11	Fine tipped forceps with mirror finish ideal for handling delicate structures like nerves
Fluriso (Isoflurane)	VetOne	13985-528-40	Inhalational Anesthetic
Force Measurement Jig	Red Rock	n/a	Custom designed force measurement jig that allows for immobilization of hindlimb to allow for accurate muscle force recording
MATLAB software	Mathworks, Inc	PR-MATLAB-MU-MW-707-NNU	Calculates active force for each recorded force trace from passive and total force measurements
Nicolet Viasys EMG EP System	Nicolet	MFI-NCL-VIKING-SELECT-2CH-EMG	Portable EMG and nerve signal recording system capable of simultaneous 2 channel recordings from nerve and/or muscle
Oxygen	Cryogenic Gases	UN1072	Standard medical grade oxygen canisters
Potassium Chloride	APP Pharmaceuticals	63323-965-20	Injectable form, 2 mEq/mL
Povidone Iodine USP	MediChoice	65517-0009-1	10% Topical Solution, can use one bottle for multiple surgical preps
Puralube Vet Ophthalmic Ointment	Dechra	17033-211-38	Corneal protective ointment for use during procedure

Rimadyl (Carprofen)	Zoetis, Inc.	NADA# 141-199	Injectable form, 50 mg/mL
Stereo Microscope	Leica	Model M60	User can adjust magnification to their preference
Surgical Instruments	Fine Science Tools	Various	User can choose instruments according to personal preference or from what is currently available in their lab
Triple Antibiotic Ointment	MediChoice	39892-0830-2	Ointment comes in sterile, disposable packets
Vannas Spring Scissors - 2mm cutting edge	Fine Science Tools	15000-04	Curved micro-dissection scissors used to perform the epineurial window
VaporStick 3	Surgivet	V7015	Anesthesia tower with space for isoflurane and oxygen canister
Webcol Alcohol Prep	Coviden	Ref 6818	Alcohol prep wipes; use a new wipe for each prep