

Assessing Changes in Synaptic Plasticity Using an Awake Closed-Head Injury Model of Mild Traumatic Brain Injury

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Materials

Name	Company	Catalog Number	Comments
3D-printed helmet			Designed and constructed by Christie laboratory (See Specifications in Christie et al. (2019), Current Protocols in Neuroscience)
Agarose	Fisher Scientific (BioReagents)	BP160500	
Anesthesia chamber	Home Made	N/A	Plexiglass Container
Automatic Heater Controller	Warner Electric	TC-324B	
Axon Digidata	Molecular Devices	1440A	Low-noise Data Acquisition System
Balance beam			Can be constructed or purchased (100 cm long x 2 cm wide x 0.75 cm thick)
Calcium Chloride	Bio Basic Canada Inc.	CD0050	For aCSF
Camera	Dage MTI	NC-70	
Carbogen tank	Praxair	MM OXCD5C-K	Carbon Dioxide 5%, Oxygen 95%
Clampex Software	Molecular Devices	Clampex 10.5 Version	
Compressome Vibrating Microtome	Precisionary	VF 310-0Z	
Concentric Bipolar Electrode	FHC Inc.	CBAPC75	
Dextrose (D-Glucose)	Fisher Scientific (Chemical)	D16-3	aCSF
Digital Stimulus Isolation Amplifier	Getting Instruments, Inc.	Model 4D	
Disodium Phosphate	Fisher Scientific (Chemical)	S373-500	PBS
Dissection Tools			
Feather Double Edge Blade	Electron Microscopy Sciences	72002-10	
Filter Paper	Whatman 1	1001-055	
Flaming/Brown Micropipette Puller	Sutter Instrument	P-1000	
Hair Claw Clip			Can be obtained from any department store

Home and Recovery Cages			Normal rat cages from animal care unit.
Hum Bug Noise Eliminator	Quest Scientific	726300	
Isoflurane USP	Fresenius Kabi	CP0406V2	
Isotemp 215 Digital Water Bath	Fisher Scientific	15-462-15	
Leica Impact One CCI unit	Leica Biosystems		Tip is modified to hold 7mm rubber impact tip
Long-Evans rats, male	Charles River Laboratories (St. Constant, PQ)		
Low-Density Foam Pad			3" polyurethane foam sheet
Magnesium Chloride	Fisher Scientific (Chemical)	M33-500	aCSF
Male Long Evans Rats	Charles River Laboratories		Animals ordered from Charles River Laboratories, or pups bred at the University of Victoria
MultiClamp 700B Amplifier	Molecular Devices	Model 700B	
pH Test Strips	VWR Chemicals BDH	BDH83931.601	
Potassium Chloride	Fisher Scientific (Chemical)	P217-500	aCSF, PBS
Potassium Phosphate	Sigma	P9791-500G	PBS
Push Button Controller	Siskiyou Corporation	MC1000e	Four-axis Closed Loop Controller Push-Button
Sample Discs	ELITechGroup	SS-033	For use with Vapor Pressure Osmometer
Small towel			
Sodium Bicarbonate	Fisher Scientific (Chemical)	S233-500	aCSF
Sodium Chloride	Fisher Scientific (Chemical)	S271-3	For aCSF, PBS
Sodium Phosphate	Fisher Scientific (Chemical)	S369-500	aCSF
Soft Plastic Restraint Cones	Braintree Scientific	model DC-200	
Stopwatch			Many lab members use their iPhone for this
Table or large cart with raised edges			For NAP and ACHI
Thin Wall Borosilicate Glass (with Filament)	Sutter Instrument	BF150-110-10	Outside diameter: 1.5 mm; Inside diameter: 1.10 mm; Length: 10 cm
Upright Microscope	Olympus	Olympus BX50WI	5x MPlan 0.10 NA Objective lens
Vapor Pressure Osmometer	Vapro	Model 5600	aCSF should be 300-310 mOSM
Vetbond Tissue Adhesive	3M	1469SB	
Vibraplane Vibration Isolation Table	Kinetic Systems	9101-01-45	