

Materials List for:**Effects of Blast-Induced Neurotrauma on Pressurized Rodent Middle Cerebral Arteries**Uylissa A. Rodriguez^{1,2}, Yaping Zeng^{1,2}, Margaret A. Parsley^{1,2}, Bridget E. Hawkins^{1,2}, Donald S. Prough^{1,2}, Douglas S. DeWitt^{1,2}¹Charles R. Allen Research Laboratories, Department of Anesthesiology, University of Texas Medical Branch²The Moody Project for Translational Traumatic Brain Injury Research, University of Texas Medical BranchCorrespondence to: Uylissa A. Rodriguez at uarodrig@utmb.eduURL: <https://www.jove.com/video/58792>DOI: [doi:10.3791/58792](https://doi.org/10.3791/58792)**Materials**

Name	Company	Catalog Number	Comments
Advanced Blast Simulator (ABS)	Dyn-FX Consulting, Ltd. and ORA, Inc.	N/A	Blast-simulating shock tube used to induce primary blast injuries
Adult, male, Sprague-Dawley rats	Charles River Laboratories	N/A	Experimental animals
Arteriograph	Living Systems Instrumentation, Inc.	Arteriograph	Mounting of harvested arteries and measurement of lumen diameter
Bone rongeurs, large	FST Fine Science Tools	Friedman Rongeur	Brain extraction from skull
Bone rongeurs, small	FST Fine Science Tools	Boynton Rongeur	Brain extraction from skull
CaCl ₂	Sigma	Calcium chloride	Preparation of rodent middle cerebral arterial physiological salt solution (PSS)
Ear plugs	3M	Foam Ear Plugs 1100 Class AL	Prevent injury of ear tympanic membrane when in the blast machine
Glucose	Sigma	D-[+]-Glucose	Preparation of rodent middle cerebral arterial physiological salt solution (PSS)
Isoflurane	Piramal Enterprises Limited	Isoflurane, USP	Anesthetic
KCl	Sigma	Potassium chloride	Preparation of rodent middle cerebral arterial physiological salt solution (PSS)
MgSO ₄ •7H ₂ O	Sigma	Magnesium sulfate	Preparation of rodent middle cerebral arterial physiological salt solution (PSS)
Microforceps	Buxton Biomedical Inc.	Micro Tying Fcps, 180mm	Brain extraction from skull
Mylar sheets	Texas Art Supply	Mylar	Membrane used for compressed air build-up during blasting
NaCl	Sigma	Sodium chloride	Preparation of rodent middle cerebral arterial physiological salt solution (PSS)
NaHCO ₃	Sigma	Sodium bicarbonate	Preparation of rodent middle cerebral arterial physiological salt solution (PSS)
Nylon suture	Ethicon	10-0 Ethilon nylon suture black monofilament 5" (13 cm)	Mounting of harvested arteries and measurement of lumen diameter
Scalpel blade #10	Bard-Parker	10 Stainless Steel Surgical Blade	Brain extraction from skull
Surgical spatula	Delmaks Surgico	Cement Spatula	Brain extraction from skull
Thermometer	Physitemp Instruments, Inc.,	Thermalert Monitoring Thermometer	Monitoring of experimental animal's core body temperature

Volume ventilator	Harvard Apparatus, Inc.	Small Animal Ventilator	Constant and steady breathing of the intubated experimental animal
Water blanket	Gaymar Industries, Inc.	Mul-T-Pad Temperature Therapy Pad	Maintenance of experimental animal's body temperature