

Materials List for:

Optocardiography and Electrophysiology Studies of Ex Vivo Langendorff-perfused Hearts

Luther M. Swift^{1,2}, Rafael Jaimes III^{1,2}, Damon McCullough^{1,2}, Morgan Burke^{1,2}, Marissa Reilly^{1,2}, Takuya Maeda^{1,2,3}, Hanyu Zhang⁴, Nobuyuki Ishibashi^{1,2,3}, Jack M. Rogers⁴, Nikki Gillum Posnack^{1,2,5}

¹Sheikh Zayed Institute for Pediatric Surgical Innovation, Children's National Hospital

²Children's National Heart Institute, Children's National Hospital

³Center for Neuroscience Research, Children's National Hospital

⁴Department of Biomedical Engineering, School of Engineering, University of Alabama at Birmingham

⁵Department of Pediatrics, Department of Pharmacology & Physiology, School of Medicine and Health Sciences, George Washington University

Correspondence to: Nikki Gillum Posnack at NPOSNACK@childrensnational.org

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Materials

Name	Company	Catalog Number	Comments
(-)-Blebbistatin	Sigma-Aldrich	B0560-5MG	Mechanical Uncoupler
2,3-Butanedione monoxime (BDM)	Sigma-Aldrich	B0753-100G	Mechanical Uncoupler
Albumin	Sigma-Aldrich, St. Louis, MO	A9418	
Analog signal interface	emka Technologies	itf16USB	
Antifoam	Sigma-Aldrich	A5758-250ML	
Antifoam Y-30 Emulsion	Sigma-Aldrich, St. Louis, MO	A5758	
Aortic cannula, 5/16"	Cole-Parmer	45509-60	
Bubble trap	Sigma-Aldrich	CLS430641U-100EA	
CaCl ₂	Fisher Scientific, Fair Lawn, NJ	C77-500	
Camera, sCMOS	Andor Technology	Zyla 4.2 PLUS	
Coaxial stimulation electrode (atria)	Harvard Apparatus	73-0219	
Defibrillator	Zoll	M Series	
Dichroic mirror	Chroma Technology	T660lpxrxt-UF2	
Differential amplifier	Warner Instruments	DP-304A	
Emission filter, calcium	Chroma Technology	ET585/40m	
Emission filter, voltage	Chroma Technology	ET710lp	
EP stimulator (Bloom)	Fisher Medical	DTU-215B	
Excitation filter	Chroma Technology	CT510/60bp	
Excitation lights	Thorlabs	SOLIS-525C	
Filter	McMaster-Carr	8147K52	
Filter cartridge, polypropylene	Pentair	PD-5-934	
Filter housing	McMaster-Carr	9979T21	
Flow transducer	Transonic	ME6PXN	
Glucose	Sigma-Aldrich, St. Louis, MO	158968	
Heating coil	Radnoti	158821	
Hemofilter	Hemocor	HPH 400	
Hemostatic Forceps	World Precision Instruments	501326	
Image Splitter	Cairn Research	OptoSplit II	
KCl	Sigma-Aldrich, St. Louis, MO	P3911	
KH ₂ PO ₄	Fisher Scientific, Fair Lawn, NJ	423-316	

Large-bore tubing, I.D. 3/8"	Fisher Scientific	14-169-7H	
Lens 50 mm, 0.95 f-stop	Navitar	DO-5095	
Metamorph	Molecular Devices		Image Alignment
MgSO ₄	Sigma-Aldrich, St. Louis, MO	M-7506	
Mucosol detergent	Sigma-Aldrich	Z637181-2L	
Na Pyruvate	Sigma-Aldrich, St. Louis, MO	P2256	
NaCl	Sigma-Aldrich, St. Louis, MO	S-3014	
NaHCO ₃	Fisher Scientific, Fair Lawn, NJ	S-233	
Needle Electrodes 29 G, 2 mm	AD Instruments Inc.	MLA1204	
Noise eliminator	Quest Scientific	Humbug	
Perfusion pump	PolyStan	A/S 1481	
Pressure transducer	World Precision Instruments	BLPR2	
Reservoir, 2 L	Cole-Parmer	UX-34541-07	
RH237	AAT Bioquest Inc.	21480	
Rhod2-AM	AAT Bioquest Inc.	21062	
Stimulation electrode (ventricle)	Harvard Apparatus	73-0160	
Surgical Suture	McKesson Medical-Surgical	890186	
Transducer amplifier	World Precision Instruments	TBM4M	
Tubing flow console	Transonic	TS410	
Umbilical tape	Jorvet	J0025UA	
Water bath/circulator	VWR	89400-970	
Surgical Tools			
Bandage shears	Harvard Apparatus	72-8448	Lister Bandage Scissors, Angled, Blunt/Blunt, 42.0 mm blade length, 17.0 cm
Electrocautery	Dalwha Corp. Ltd.	BA2ALD001	Model: 200 Basic
Hemostat	Roboz	RS-7476	St Vincent Tube Occluding Forceps
Hemostatic forceps	Harvard Apparatus	72-8960	Hartmann Hemostatic Forceps, Curved, Serrated 2.2 mm tip width, 9.5 cm
Hemostats	Harvard Apparatus	72-8985	Halstead-Mosquito Hemostatic Forceps Curved, Serrated, 2 mm tip 14 cm
Mayo scissors	WPI	501749	14.5 cm, Straight
Metzenbaum scissors	WPI	501747	11.5 cm, Straight
Mosquito forceps	Harvard Apparatus	72-8980	Halstead-Mosquito Hemostatic Forceps Straight, Smooth, 2 mm tip width 12 cm
Needle holder	Harvard Apparatus	72-8828	Webster Needle Holders, Straight, Smooth, 13.0 cm overall length
Pediatric cross clamp	Roboz	RS-7660	Cooley-Derra Clamp 6.25" 5 mm Calibrations
Right angle forceps	WPI	501240	Baby Mixer Hemostatic Forceps, 14 cm, Right Angle
Scalpel	Ted Pella	549-4	Scalpel Handle No. 4, 13.7 cm Stainless Steel and 10 No. 22 Blades
Scissors	Harvard Apparatus	72-8380	Operating Scissors, Straight, Blunt/Blunt, 42 mm blade, 12 cm
Straight Serrated forceps	WPI	500363	Dressing Forceps 15.5 cm

Towel clamp	WPI	501700	Backhaus Towel Clamp, 13 cm, Curved, Locking handle, SS
Weitlaner retractor	WPI	501314	Weitlaner Retractor, Self-Retaining, 10.2 cm, 2x 3 Sharp Prongs
Disposables			
3-0 prolene suture	Various vendors	Various vendors	
Vessel loop	Aspen surgical	011001PBX	Sterion® Vessel Loop, 0.8 mm x 406 mm
Cardioplegia (Plegisol)	Pfizer	00409-7969-05	Plegisol; St Thomas crystalloid cardioplegia solution 20 mL/kg
Heparin	Various vendors	Various vendors	300 U/kg
Syringe and Needle	Various vendors	Various vendors	60 mL & 18 G respectively
Umbilical tape	Ethicon	U12T	