

Materials List for:

A Comparative Study of Drug Delivery Methods Targeted to the Mouse Inner Ear: Bullostomy Versus Transtympanic Injection

Silvia Murillo-Cuesta^{*1,2,3}, Néstor Vallecillo^{*1}, Rafael Cediel^{1,2,4}, Adelaida M. Celaya^{1,2}, Luis Lassaletta^{3,5}, Isabel Varela-Nieto^{1,2,3}, Julio Contreras^{1,2,4}

¹Instituto de Investigaciones Biomédicas (IIBm) Alberto Sols CSIC-UAM

²Centro de Investigación Biomédica en Red de Enfermedades Raras (CIBERER), Instituto de Salud Carlos III (ISCIII)

³Instituto de Investigación Sanitaria La Paz (IdiPAZ)

⁴Facultad de Veterinaria, Universidad Complutense de Madrid

⁵Departamento de Otorrino laringología, Hospital Universitario La Paz

* These authors contributed equally

Correspondence to: Silvia Murillo-Cuesta at smurillo@iib.uam.es

URL: <https://www.jove.com/video/54951>

DOI: [doi:10.3791/54951](https://doi.org/10.3791/54951)

Materials

Name	Company	Catalog Number	Comments
Ketamine (Imalgene)	Merial	# 2529	CAUTION: avoid contact of the drug with skin or eyes or accidental self-inflicted injections
Xylacine (Xilagesic)	Calier	# 6200025225	
Lubricant eye gel (Artific)	Angelini	# 784710	
Water pump	Gaymar	# TP472	
Surface disinfectant	José Collado SA	# CR-36	
Subdermal needle electrodes	Spes Medica	# MN4013D10SM	
Low Impedance Headstage (RA4LI)	Tucker-Davis Technologies		
Speakers (MF1 Multi-Field Magnetic Speaker)	Tucker-Davis Technologies		
System 3 Evoked Potential Workstation	Tucker-Davis Technologies		The System is composed of: RP2 processor, RA16 base station, PA5 attenuator, SA1 amplifier, MA3 microphone amplifier, RA4LI impedance headstage and RA4A medusa pre-amplifier
SigGenRP software	Tucker-Davis Technologies		
Warming pads (TP pads)	Gaymar	# TP3E	
Statistics software (SPSS)	IBM		
Chitosan (deacetylated)	Sigma-Aldrich	# C3646	
Acetic acid (glacial)	VWR	# 20103.295	CAUTION: flammable liquid, skin corrosion, respiratory and skin sensitizer
Glycerophosphate	Sigma	# SLBG3671V	
Ringer's lactate buffer	Braun	# 1520-ESP	
Medetomidine (Domtor)	Esteve	# 02400190	
Phentanine (Fentanest)	Kern Pharma	# 756650.2	CAUTION: avoid contact of the drug with open wounds or accidental self-inflicted injections
Isoflurane (IsoVet)	Braun	# 469860	CAUTION: Avoid exposures at ceiling concentrations greater than 2 ppm of any halogenated

			anesthetic agent over a sampling period not to exceed 1 h.
Surgical microscope (OPMI pico)	Zeiss		
Sterile drape (Foliodrape)	Hartmann	# 277546	
Sterilizer	Fine Science Tools	# 18000-45	
Scalpel blade	Swann Morton	# 0205	CAUTION
Scalpel handle	Fine Science Tools	# 91003-12	
Povidone iodine-based antiseptic (Betadine)	Meda Pharma SAU	# M-12207	
Adventitia scissors (SAS18-R8)	S&T	# 12075-12	
Curved scissors	CM Instrumente	# AJ023-18	
Forceps	CM Instrumente	# BB019-18	
Gelatine sponge (Spongostan)	ProNaMAc	# MS0001	
Micro lance 27 G	Becton Dickinson	# 302200	
Micro liter syringe (701 RN SYR)	Hamilton	# 80330	
Catheter (Microfil 34 G)	World Precision Instruments	# MF34G-5	
Tissue Adhesive (Vetbond)	3M	# 1469SB	
Needle holder (Round handled needle holder)	Fine Science Tools	# 12075-12	
Silk surgical suture (Braided Silk 5/0)	Arago	# 990011	
Chlorhexidine (Cristalmina)	Salvat	# 787341	
Pentobarbital (Dolethal)	Ventoquinol	# VET00040	CAUTION: avoid contact of the drug with open wounds or accidental self-inflicted injections
Stereomicroscope (Leica)	Meyer Instruments	# MZ75	
Vannas Micro-dissecting (Eye) Scissors Spring Action	Harvard Apparatus	# 28483	
Jeweller's forceps (Dumont)	Fine Science Tools	# 11252-00	
RNase Decontamination Solution (RNaseZap)	Sigma-Aldrich	# R2020	
RNA Stabilization Solution (RNAlater)	Thermo Fisher Scientific	# R0901	
Purification RNA kit (RNeasy)	Qiagen	# 74104	
cDNA Reverse Transcription Kit	Thermo Fisher Scientific	# 4368814	
Gene expression assay (TaqMan probes)	Thermo Fisher Scientific	Il1b: Mm00446190_m1 Il6: Mm00446190_m1 Tgfb1: Mm01178820_m1 Tnfa: Mm99999068_m1 Il10: Mm00439614_m1 Dusp1: Mm00457274_g1 Hprt1: Mm00446968_m1	
Real-time PCR System (7900HT)	Applied Biosystems	# 4329001	
Paraformaldehyde (PFA)	Merck	# 1040051000	TOXIC: PFA is a potential carcinogen
Ethylenediaminetetraacetic acid (EDTA)	Merck	# 405491	CAUTION: harmful if inhaled, may cause damage to respiratory tract through prolonged or repeated exposure if inhaled.
Hematoxylin solution	Sigma-Aldrich	# HHS16	
Eosin Y	Sigma-Aldrich	# E4382	Hazards: causes serious eye irritation