Materials List for:
Endothelin-1 Induced Middle Cerebral Artery Occlusion Model for Ischemic Stroke with Laser Doppler Flowmetry Guidance in Rat

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**Materials**

1. Animals: Eight-week-old, male, Sprague Dawley rats (Charles River Farms, Wilmington, MA, USA) weighing 250-300 g at the time of surgery.

2. Anesthesia:
   a. Inhalation anesthesia system (VetEquip Inc., Pleasanton, CA, USA)
   b. Isoflurane anesthetic (Baxter Pharmaceutics, Deerfield, IL, USA)

3. Stereotaxic system (David Kopf Instruments, Tujunga, CA, USA):
   a. Small animal stereotaxic system
   b. Non-rupture ear bars for rats
   c. Gas anesthesia head holder for rats

4. Temperature regulation:
   a. BAT-12 microprobe thermometer (World Precision Instruments, Inc., Sarasota, FL, USA)
   b. T/PUMP, TP600 Thermal blanket (Gaymar Industries, Inc., Orchard Park, NY, USA)

5. Surgical instruments
   a. Scalpel handle and #11 blade, iris forceps, Graefe forceps, bulldog clamp retractors, screwdriver, 10 μl syringe with 26 gauge beveled needle (World Precision Instruments, Inc., Sarasota, FL, USA)
   b. Micromotor drill and stereotaxic holder, Quintessential Stereotaxic Injector (St–lting, Wood Dale, IL, USA)
   c. 1.0 mm round drill bur, 1.0 mm inverted cone drill bur (Roboz Surgical Instrument Co., Inc., Gaithersburg, MD, USA)

6. Surgical Supplies
   a. Mounting screws 0-80 X 3/32 with 2.4 mm shaft length, 21-gauge guide cannula [4mm long below the pedestal] and cannula dummy (Plastics one, Roanoke, VA, USA)
   b. Jet denture acrylic and liquid (Lang Dental Manufacturing Co., Inc., Wheeling, IL, USA)
   c. 3.0 nylon suture (Oasis, Mettawa, IL, USA)
   d. Cotton swabs, Puralube eye ointment (Fisher Scientific, Pittsburg, PA, USA)
   e. Electric hair clippers (Oster, Providence, RI, USA)

7. Chemicals:
   a. Endothelin-1 (American Peptide, Sunnyvale, CA, USA)
   b. Chlorhexidine 2% (Agrilabs, St. Joseph, MO, USA)
   c. Buprenorphine HCl (Hospira Inc., Lake Forest, IL, USA)

8. Visualization Equipment
   a. Surgical microscope (Seiler Instrument and Manufacturing; St. Louis, MO, USA)
   b. Fiber Optic illuminator (TechniQuip Corp., Livermore, CA, USA)

9. Laser Doppler flowmetry system (ADInstruments, Inc., Colorado Springs, CO, USA)
   a. Standard Pencil Probe
   b. Probe holder
   c. Blood FlowMeter
   d. Powerlab 4/30 with LabChart 7

10. Measurement of infarct volume:
    a. Rat brain matrix (Zivic-Miller Lab., Inc., Allison Park, PA, USA)
    b. 2,3,5-triphenyltetrazolium chloride (Sigma-Aldrich Co., St Louis, MO, USA) diluted to 0.05% in PBS
    c. Flatbed scanner (Epson Perfection V30, Epson America, Inc., Long Beach, CA, USA)
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<td>Image J software (ImageJ 1.42q software, U.S. National Institutes of Health, Bethesda, MA, USA)</td>
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