

Materials List for:

# Establishment of a Segmental Femoral Critical-size Defect Model in Mice Stabilized by Plate Osteosynthesis

Mathieu Manassero<sup>1,2</sup>, Adeline Decambron<sup>1,2</sup>, Bui Truong Huu Thong<sup>1</sup>, Véronique Viateau<sup>1,2</sup>, Morad Bensidhoum<sup>1</sup>, Hervé Petite<sup>1</sup>

<sup>1</sup>Laboratoire de Bioingénierie et Biomécanique Ostéo-Articulaires (B2OA - UMR CNRS 7052), Université Paris Diderot

<sup>2</sup>Ecole Nationale Vétérinaire d'Alfort, Université Paris-Est

Correspondence to: Hervé Petite at [herve.petite@univ-paris-diderot.fr](mailto:herve.petite@univ-paris-diderot.fr)

URL: <https://www.jove.com/video/52940>

DOI: [doi:10.3791/52940](https://doi.org/10.3791/52940)

## Materials

| Name  | Company  | Catalog Number | Comments  |
|---|--|----------------|---|
| α-MEM , Minimum Essential Medium Eagle                      | Sigma-Aldrich, France  | M4526          | 500 ml  |
| <i>Acropora</i> sp. coral exoskeleton cubes, Biocoral®      | Biocoral®, Inoteb, France  |                | 3 x 3 x 3 mm cubes, autoclaving (121 °C for 20 min) sterilization   |
| Buprenorphine, Buprecare®                                   | Axience, Pantin, France  |                | 0.3 mg/ml   |
| Xylazine, Rompun® 2%  | Bayer HealthCare, Puteaux, France  | 20 mg/ml       |   |
| Ketamine, Ketamine 500®                                     | Virbac, Carros, France   |                | 50 mg/ml  |
| Isoflurane, Forène®   | Abbott, Arcueil, France  |                |   |
| Enrofloxacin, Baytril® 5%                                   | Bayer HealthCare, Puteaux, France  | 50 mg/ml       |   |
| Pentobarbital, Dolethal®                                    | Vétoquinol, Lure, France   |                | 182.2 mg/ml   |
| Anesthetizing box   | Ugo Basile, Gemonio, Italy   | 7900/10        |   |
| Plastic transparent sterile drape, BusterOpCover 30 x 45 cm | Buster, Coveto, Montagu, France  | 613867         |   |
| 10% povidone iodine, Vétédine® Solution                     | Vétoquinol, Lure, France   |                | 100 mg/ml   |
| Titanium micro- locking plate, MouseFix Plate XL            | RISystem AG, Davos, Switzerland, <a href="http://www.risystem.com/">http://www.risystem.com/</a> | RIS.401.120    | 6 holes, 10 mm long and 1.5 mm wide, autoclaving (121 °C for 20 min) sterilization or cold sterilization (ethylene oxide)                         |
| 0.3 mm drill bit, Drill Bit 0.30 mm                         | RISystem AG, Davos, Switzerland, <a href="http://www.risystem.com/">http://www.risystem.com/</a> | RIS.592.200    | autoclaving (121 °C for 20 min) sterilization or cold sterilization (ethylene oxide)  |
| Engine power  | RISystem AG, Davos, Switzerland, <a href="http://www.risystem.com/">http://www.risystem.com/</a> | AccuPen        | Cold sterilization (ethylene oxide)   |
| Screw driver, Handrill                                      | RISystem AG, Davos, Switzerland, <a href="http://www.risystem.com/">http://www.risystem.com/</a> | RIS.390.130    | autoclaving (121 °C for 20 min) sterilization or cold sterilization (ethylene oxide)  |
| Self-tapping locking screws, MouseFix Screw 2 mm            | RISystem AG, Davos, Switzerland, <a href="http://www.risystem.com/">http://www.risystem.com/</a> | RIS.401.100    | 2 mm long, 0.47 mm outer diameter and 0.34 mm core diameter, autoclaving (121 °C for 20 min) sterilization or cold sterilization (ethylene oxide) |
| Jig, MouseFix XL Drill and Saw Guide                        | RISystem AG, Davos, Switzerland, <a href="http://www.risystem.com/">http://www.risystem.com/</a> | RIS.301.103    | 3.5 mm between the slots, autoclaving (121 °C for 20 min) sterilization or cold sterilization (ethylene oxide)                                    |
| 0.22-mm Gigli saws (0.22 mm Saws)                           | RISystem AG, Davos, Switzerland  |                |   |
| 5.0 glycomer 631, Biosyn                                    | Covidien, Vétoquinol, Lure, France   |                | Tapper-cut needle   |

|   |   |  |                   |
|---|---|--|-------------------|
| 4.0 glycomer 631, Biosyn  | Covidien, Vétoquinol, Lure, France                |  | Tapper-cut needle |
| X-ray, MX20   | Faxitron X-ray Corp, Edimex, Le Plessis Grammorie |  |                   |
| <i>In vivo</i> high-resolution microcomputed tomography, Skyscan 1176 | Skyscan, Aartselaar, Belgium                      |  |                   |
| <i>Ex vivo</i> high-resolution microcomputed tomography, Skyscan 1172 | Skyscan, Aartselaar, Belgium                      |  |                   |
| Resident software: Nrecon (v1.6.9) / Ctan (v.1.14.4)                  | Skyscan, Aartselaar, Belgium                      |  |                   |