



## Bilateral Brain Cannulation

### Surgery Code: BILBRAIN

The bilateral brain cannulation model is of benefit to preclinical or research for brain studies involving customer-specific target sites within the brain. This model requires that the customer supply the coordinates for their specific target.

#### Animal Models

Typical selections are listed below; however, choices for strain, age and weight may be limited due to model anatomy and/or physiological conditions.

- Rats: male/female, any strain, weight  $\geq$  150 g
- Mice: male/female, any strain, weight  $\geq$  20 g

#### Procedure Details

- **Perioperative care:** Please view our Pre- and Postoperative Care Sheet, which can be found at [www.criver.com/opcare](http://www.criver.com/opcare).
- **Housing:** The animals must be singly housed with adequate clearance to prevent cannula from coming in contact with the lid.
- **Diet:** No special diet is required.
- **Postoperative holding period:** At a minimum, post-op animals are held 2 days, with the majority of animals shipping within 5 days of surgery.
- **Maintenance:** Dummy caps should be checked on arrival and daily to ensure security.

#### Surgical Summary

The animal is placed in the stereotaxic apparatus. Bregma and lambda are then identified and four holes for anchoring screw placement are made. The screws are then mounted onto the skull through the four anchor holes. A guide cannula is loaded onto the holder of the stereotaxic

apparatus, the tip of the cannula is pointed directly over the bregma and the zero coordinates are recorded. This allows the tip of the cannula to be placed over the specified target according to predetermined coordinates. Holes are then drilled into the skull and the guide cannula is lowered through the holes into the brain. A layer of powdered bone graft material is applied to affix the cannula and cover the exposed portion of the skull, and a small amount of bone graft liquid is applied to the powder. Finally, a dummy cannula is inserted into the guide cannula.

#### IACUC

The Charles River Institutional Animal Care and Use Committee (IACUC) governs the entire surgical process, including all anesthesia, analgesia, animal preparation and any post-operative holding in Charles River facilities prior to shipment. Review of experimental protocols, authorization to order animals that are surgically modified from Charles River, and all aspects concerning the use of animals after they arrive at the institution are the responsibility of the receiving institution's IACUC.

#### Contact Us

For more information, visit [www.criver.com/surgery](http://www.criver.com/surgery). For specific surgery-related questions, please contact our technical experts at 1.877.CRIVER.1 (1.877.274.8371) or [askcharlesriver@crl.com](mailto:askcharlesriver@crl.com). To place an order or get a quote, contact our Customer Service Department at 1.800.LABRATS (1.800.522.7287).