

Cannulation of the Cerebral Ventricle

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Implantation of a cerebral ventricle cannula allows investigators to evaluate physiological responses following central administration of various compounds. Anesthetized mice are placed in a digital stereotaxic apparatus (0.001 mm accuracy, Cartesian Instruments) specifically designed for mice. The dorsal scalp will be shaved, wiped with a betadine solution, and then a small midline incision over the dorsal surface is made to allow access to the cranium. After the affixed centering scope is used to "zero" lambda and bregma landmarks, a single guide cannula (2.5 mm length, 26-gauge, Plastics One) is positioned 1.0 mm above the lateral ventricle (coordinates: 0.6 mm posterior to bregma, 1.5 mm lateral to midline, 1.4 mm below the surface of the skull) and fixed to the skull using two stainless steel screws and dental cement. The incision in the scalp is then closed with surgical thread. Animals are removed to a post-surgical warming bed, and then individually housed for several hours until fully awake. Animals will be allowed to recover from surgery for a minimum of 7 days prior to testing, during which time a 30-gauge dummy cannula is left inside the guide cannula to prevent blockage.