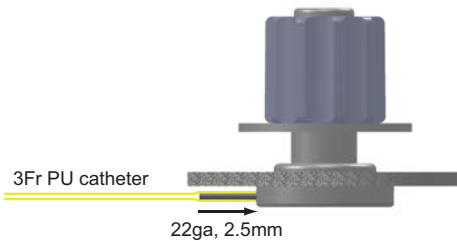


Intended Use

The VAB was developed in collaboration with the Janssen Pharmaceuticals in Belgium for single channel infusion or blood sampling of rats.¹ The button is designed to be implanted under the skin and mate with 3Fr polyurethane catheters. A miniature external port built into the button allows for fast, simple and aseptic access with a septum needle or mating tether.

Success with the VAB is critically dependent upon surgical technique. Instech does not perform surgeries or validate surgical procedures; therefore, we can only offer second-hand tips here based on customer feedback. These should not be considered complete instructions for use. Always validate new models and surgical techniques with appropriate pilot studies.



Implantation

1. A secure connection between the catheter and the VAB over the duration of the study is critical for success. The connection must be able to withstand the forces generated by animal movement and growth (which could pull the catheter off) and the pressures generated during the study, often by a syringe infusion pump (which could blow it off).

Tips for a secure connection:

(a) The 22ga connector is designed for 3Fr polyurethane catheters. Other materials, particularly silicone, are not recommended.

(b) Be sure to push the catheter all the way onto the 0.100in (2.5mm) connector so that it touches the plastic.

(c) If necessary, further secure the catheter to the button by placing a suture around the joint.

2. During catheterization surgery place a loop or other slack in the catheter so that animal growth and move-

ment and stretching does not pull the catheter out of its proper position in the vein or artery, or off of the VAB connector.

3. Expect a tissue reaction that should resolve itself within 5 to 7 days of surgery. Do not connect a tether during this recovery period; direct access with an SN22 needle for flushing during this period is OK.

Use

1. Always use aseptic technique - swab septum with disinfectant prior to accessing it.
2. Flush as needed to maintain patency.
3. To access the septum directly to flush, sample or inject lock solution, use a SN22 septum piercing needle attached to a syringe. Use of any other type of needle can damage the septum.



4. Connect a VAB tether by holding the button and twisting in the blue male tether connector.



5. Always mount swivels in counter-balanced lever arms to reduce the forces on the animal. Instech's lightweight spring-counter balanced MCLA and SMCLA arms will be more responsive to movement than mass-counter balance arms, which can be important over long term studies.

6. The red aluminum cap can be used to protect the VAB when group housing animals. Test the cap on a small number of animals first to be sure it cannot be defeated by your particular strain or set of animals.

Hold the button down with one hand - the flange underneath the cap is meant to take some of the holding force off the animal - and twist the cap for smoothest installation or removal.



¹ Tuens G., Janssen Pharmaceuticals, "Development and implementation of a new access button used in the rat self-administration design," presentation at Infusion Technology Organisation conference, Barcelona Spain, 15 September 2011.