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Protocol status: Working
We use this protocol and it's working
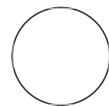
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UroMOCA and ColoMOCA implantation protocol

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ABSTRACT

This protocol describes the implantation of our bladder (UroMOCA) and bowel device (ColoMOCA) in pigs.

Anesthesia

1 Anesthetize/prep the animal for surgery.

Aseptic procedures by trained personnel are utilized during the surgery. All tools are sterilized prior to insertion. Drapes will be used and personnel performing surgery will wear clean surgical scrubs, sterile gowns/gloves and masks.

2 Insert single lumen 8 Fr catheter, and drain bladder. Save some urine for urinalysis.

Laparotomy

3 Place animal in supine position.

4 Administer analgesic at injection site.

5 Make a midline suprapubic incision ~9 cm long to expose the bladder, peritoneal cavity and viscera.

6 Isolate bladder and incise the bladder dome.

UroMOCA placement and bladder closure

7 Place UroMOCA device into bladder.

8   Close bladder incision and evaluate integrity.

9   Place sterile drape on abdomen for UroMOCA transmission coil.

10   Verify function of UroMOCA in vivo.

Colotomy

11   Isolate the region of the colon where the implant will go.

12   Make a single, small incision into the colon.

Insert and anchor ColoMOCA

13   Insert device through the small incision and secure in place with sterile non-absorbable sutures.

Test Wireless Transmission

14   Wake the coloMOCA with radio if not already awake. Confirm data transmission.

Close incision

15
- Close the colon with an absorbable suture in an interrupted pattern
- Close the peritoneum and fascia with absorbable sutures using a continuous suture pattern.
- Close the subcutaneous tissue and skin with non-absorbable monofilament suture with a cutting needle, using an interrupted suture pattern.Skin staples may also be used.

Test Wireless Transmission (2)

16 Confirm data transmission from both the UroMOCA and ColoMOCA, and then put devices to sleep

CT-Imaging

17 Image to verify placement of the sensors.

Place jacket on the pig

18 Place and zip the jacket on the pig while still anesthetized.

Wake up the animal

19 Stay with the animal until fully awake. Return to pig room.