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UroMOCA and StimPod Daily Testing in Pig

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Protocol status: Working

We use this protocol and it's working



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Abstract

This protocol is for the daily testing of StimPods implanted in a pig. Data from the StimPods and UroMOCA are recorded during these sessions.



Tolerance Testing

- 1 Attach BluMOCA receiver/antenna to harness/jacket
- 2 Charge StimPods, then confirm wireless connection to computer
- 3 Wake up UroMOCA
- 4 Stimulation permutations
 - 4.1 20 Hz, 500 Hz, 10 kHz
 - 4.2 Stim0, Stim1
- 5 Stimulation duration: 1-5 seconds ON, >30 s rest
- 6 For each stimulation permutation, determine upper limit of stimulus intensity/amplitude without distress or discomfort to animal
- 7 Document subject's responses

Recruitment Curve

- 8 Attach BluMOCA receiver/antenna to harness/jacket
- 9 Charge StimPods, then confirm wireless connection to computer
- 10 Wake up UroMOCA



11 Administer stimulation while recording bladder pressure and EMG

11.1 Stimulus duration: 5 seconds on, > 30 s rest

11.2 Stimulus amplitude range: [0:25 μ A:tolerance limit]

11.3 Stimulus amplitudes randomized within range

11.4 For each stimulation permutation

11.5 Within tolerance range for that permutation

12 Document subject's responses

Simultaneous Stimulation

13 Attach BluMOCA receiver/antenna to harness/jacket

14 Charge StimPods, then confirm wireless connection to computer

15 Wake up UroMOCA

16 Stimulus duration: 5-10 seconds on

17 Amplitude for 20 Hz stimulation: 90% of full recruitment



- 18 Amplitude for 500 Hz or 10 kHz stimulation: minimum amplitude (threshold) to achieve maximum EMG reduction
- 19 Measure bladder pressure and EMG
- 20 Document subject's responses