The authors wish to thank all of the people who participated in this study, Allison Reid for her technical assistance, and Emily Verlinden for her considerable assistance in the preparation of this poster. Funding for the animal study was provided by the following organizations:

1. Canadian Council on Animal Care (CCAC) surveyed animal care committees (ACCs) to determine the characteristics of analgesia-withholding in the period from August 2008 to August 2009
2. 21% of ACCs received requests for AW; protocols approved accounted for 1.9% of total animal use, affecting 42,711 animals
3. Pharmacological research and models of pain are the most likely studies to involve AW (figures 1 and 2)

Recommendations from the CCAC survey report:

- Pilot studies to assess the effects of analgesics in AW protocols
- Research programs to study the use of novel analgesia where conventional analgesia is proven to interfere with the experimental objectives
- Guidelines to assist in minimizing pain and distress in research where analgesia must be withheld

A Sample Pilot Study

- Generating neuropathic pain models often involves extensive tissue manipulation, resulting in pain and inflammation that may be unrelated to the long-term sensory changes (characteristic of chronic pain) that are of interest; however, postoperative analgesia is routinely withheld since chronic pain is under study
- Models of neuropathic pain can be used to study preventive analgesia (drug administration in the peri-operative interval that persists beyond what is expected by its kinetics)
- A pilot study was set up in conjunction with the primary research study which explored the use of propentofylline (PPF) as a preventive analgesic for neuropathic pain in the spared nerve injury (SNI) model (figure 4)
- The pilot study examined potential interference of the PPF effects by postoperative morphine

Results and Discussion

- PPF had preventive anti-allodynic effects in the SNI model (figure 5) which were not occluded or enhanced by postoperative morphine (figure 6)
- The pilot study described a potential refinement for the SNI model – while animals were given postoperative morphine to improve the probability of translating the findings to the clinical setting, it likely also provided the animals with relief from postoperative pain
- Further research should help to optimize analgesic administration in order to minimize unnecessary pain in analgesia-withholding protocols

References

3. Fenwick N., Tellier C. and Griffin G. (2010) Pain research and models of pain are the most likely studies to involve AW (figures 1 and 2)