Implementation of analgesic refinement in rats used as models for arthritis and inflammatory pain

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Previous project 2014-2016

The hypothesis
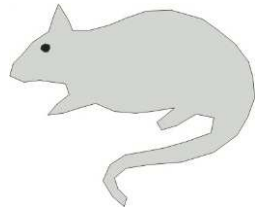
Control

Negative control: Arthritis without pain relief
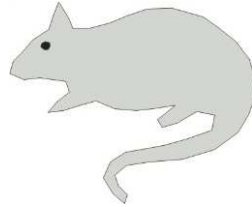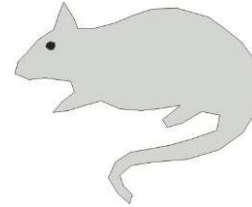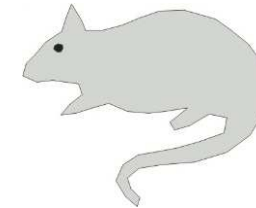
Positive control: Arthritis with anti-inflammatory pain relief

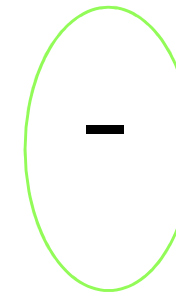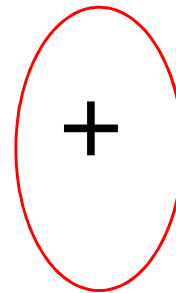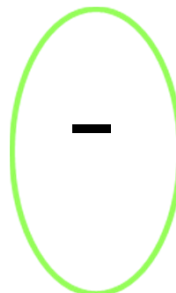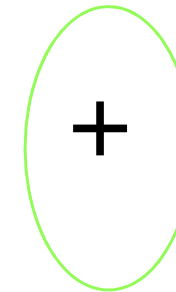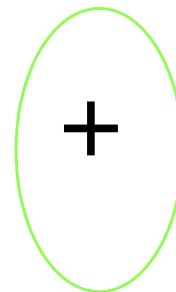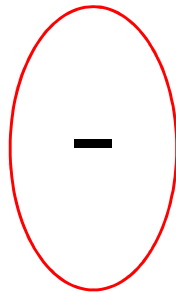Arthritis with pain relief expected not to interfere with model parameters

Parameters for animal welfare:
- ❑ Welfare score
- ❑ Pain relief
- ❑ Stress reduction

− + +

Parameters relevant for the model:
- ❑ Arthritis score
- ❑ Cytokines
- ❑ Histopatologi

− + −

Conclusions from previous study

❑ Data indicate that there is no immediate justification to withhold buprenorphine analgesia to rats subjected to the applied monoarthritis model, in the present setup

❑ More studies are needed, to further improve the wellbeing of the animals

❑ More studies needed to improve the actual model, in order to focus the inflammation to the joint and avoid infiltration into surrounding tissue

New study

To screen various analgesic drugs for their effect on inflammatory pain, to determine which regimen that would be the most suitable

To refine and optimize the rat model for monoarthitis, by increasing the success rate with induction and minimizing adverse effects on surrounding tissues, irrelevant to the arthritis

To implement the most relevant analgesic regimen established in the optimized arthritis model