

Brennan post-operative pain model

Phenotype Expertise is pleased to propose from now a model of post-operative pain (Brennan model) developed in rats. Based on various publications, monitoring the weight distribution of the animal on its hind paws is commonly used to study analgesic effects of new compounds.

Thus, two groups of 8 rats each have been used for the pilot study that we performed. Baseline measure of weight bearing using Static Weight Bearing apparatus (Bioseb, France) indicates an equal distribution of the weight on each hind paw (left/right ratio). Following the incisional procedure of Brennan model, both groups develop post-operative pain as shown with the clear decrease of the left/right ratio (incision is performed on the left hind paw). After intraperitoneal injection of 10 μ M of the metabotropic Glutamate receptor 1 (mGluR1) antagonist (A-841720; Zhu et al. 2008 *Europ J of Pharma*), analgesic effect of the compound can be monitored with a complete reversion during the three hours after injection (left/right ratio returns to the baseline value; ** $p < 0,01$ compared to vehicle injected group). This effect progressively decreases with a return to the value before injection.

