

Management of acute pain related to surgical intervention, termed post-operative pain, continues to be a major healthcare challenge. Current post-operative analgesics are often either opioid based which may lead to addiction or other long-term issues in patients. Additionally, other anti-inflammatory drugs, such as NSAIDs, are often contraindicated in orthopedic and gastrointestinal procedures, and patients with hematological issues.

We propose the use of a large animal model of post-operative pain developed by D. Castel *et al*¹ which causes a hypersensitivity mechanical sensitivity response.

Post-operative pain is a complex biological response which has not yet been able to be modeled successfully *in silico* or *in vitro*, and the use of animals is required. There are several rodent models of post-operative pain, such as the rat planar incision model; however, the data from this model is highly variable. Additionally, the concentration and delivery of the Sponsor's test material would be too large of a volume to be used in a rodent. The swine is often used as a model of pain and healing as they heal similar to humans.

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