The use of opioids to manage chronic neuropathic pain is not universally effective for the millions of individuals who take them and can often lead to abuse. Currently there is not a method to predict the effectiveness of opioid treatment in humans before it is administered. Previous studies show that the dopamine pathway is associated with rat opioid responsiveness.

Hypothesis

Rodents that benefit from morphine treatment have different dopamine metabolic profiles than rodents that do not benefit from treatment.

Methods and Results

Phase 1

Thermal Threshold

Blood Draw

Sciatric Nerve Injury

Pre-ligated vs Ligated Nerve

Thermal thresholds remain lower on injured side = PAIN

Phase 2

SQ Morphine 2mg/kg

Opioid Non-Responder

Blood Draw

Phase 3

Untargeted Metabolomics for Dopamine

Wanna Learn More?

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