MEDICAL COLLEGE OF WISCONSIN
Office of TECHNOLOGY DEVELOPMENT
Patents to Patients®

# Gene Therapy to Treat Neuropathic Pain at the Source

Exclusive Licensing Opportunity

MCW 2095

## Problem Description

Chronic pain is a critical national health problem for which opioid treatment has numerous risks, including misuse, overdose, and addiction, highlighting the need for new analgesic targets and strategies.

## Problem Solved

MCW researchers have designed peptide aptamers (iPAs) that inhibit a specific ion channel involved in generating pain states.

Multiple copies of these iPAs can be expressed from AAV vectors for direct delivery to specific anatomical sites to **treat neuropathic pain at its source.**

## Application

Direct delivery of a gene therapy vector to relieve neuropathic pain which is an unmet medical need suffered by millions.

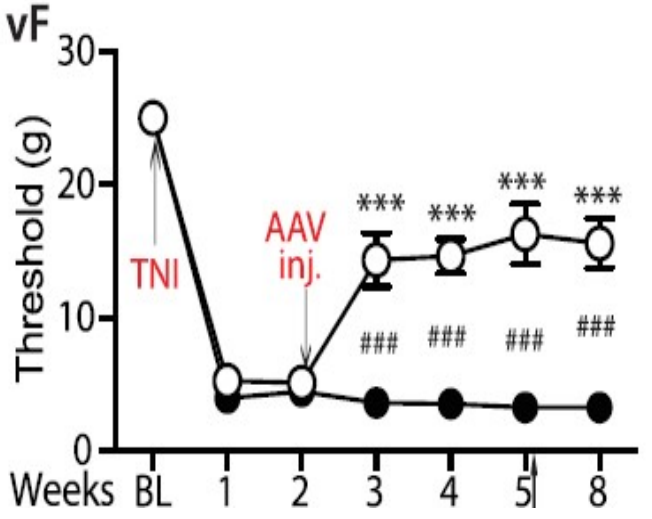


**Figure:** Treatment of established neuropathic pain by dorsal root ganglia by AAV. Tibial nerve injury model of neuropathic pain. Intraganglionic injection of AAV expressing peptide aptamer or controls. Sensitivity assayed with von Frey test. Higher threshold = lower pain sensitivity. N=7

## Key Advantages

- **Site-specific delivery avoids systemic administration and reduces vector cost.**
- **Acts at the source of the pain.**

**Stage of Development:**
In vivo testing

**Intellectual Property Status:**
PCT Application filed
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## Inventors


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