



BEDFORD, TX. - July 27, 2023 - Opsin Biotherapeutics, Inc., a joint venture between DesignPlex Biomedical and Nanoscope Technologies, has been awarded a Phase 1 Small Business Innovation Research (SBIR) grant from the National Institute Of Neurological Disorders And Stroke (NINDS) of the National Institutes of Health (NIH).

The Phase 1 Grant, amounting to \$327,864, is for "Optogenetic Pain Modulator for non-opioid chronic pain management" with Darryl Narcisse, M.D., serving as Principal Investigator.

It will be utilized to advance the study and development of a non-viral, gene delivery system for optogenetic neuromodulation of the spine, providing a groundbreaking solution for severe chronic pain management without the need for opioids.

The therapy works by turning pain-blocking neurons in the spine into photoreceptors – like in your eyes – so they can be activated with a simple LED light. The light sensitive proteins are delivered to the neurons using functionalized gold nanorods and low power laser light with a promotor so they are only activated in those neurons that can block pain. Traditional care is electrical stimulation, which affects all neurons – those that block pain and those that transmit pain; Opsin's therapy is specific to only work on those neurons that block pain. The potentially transformative therapy would be an alternative to electrical spinal cord stimulation, offering relief to millions of people suffering from chronic pain with limited or no recourse to other treatment options.

During the next six months, the company will focus on finalizing the surgical approach and regulatory pathway to ensure the successful implementation of its pioneering therapy.

"This is a completely disruptive therapy," said CEO Bob Benkowski. "We are encouraged the NIH recognizes the potential of optogenetics to revolutionize spinal cord stimulation and the field of pain management."

Opsin Biotherapeutics, Inc. is headquartered in Bedford, TX, and conducts additional research and development work in Arlington and Fort Worth, Texas.

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About Opsin Biotherapeutics, Inc.:

Opsin Biotherapeutics is a pioneering joint venture between DesignPlex Biomedical and Nanoscope Technologies. The company is devoted to developing innovative optogenetic therapies for chronic pain management, with the ultimate aim of revolutionizing the field of pain relief.