



Increasing Brain Excitability For Recovery After Stroke

Tech ID: 27478 / UC Case 2009-515-0

SUMMARY

Researchers at UCLA have developed an effective treatment that promotes Central Nervous System (CNS) repair in damaged brains following stroke, trauma or neurodegenerative disease. This novel therapeutic approach has shown tremendous promise, and can significantly impact CNS injury treatment.

BACKGROUND

For the millions of patients who sustain injuries to the brain or spinal cord from stroke, trauma or neurodegenerative disease annually, treatment options are few, and recovery is often limited. In addition, sufferers of these Central Nervous System (CNS) injuries, particularly stroke patients, face permanent loss of both motor and behavioral function, resulting in a devastating impact to their quality of life. Loss of function due to brain or spinal cord injury has been shown to occur through two main mechanisms. First, injury can be caused by direct damage to neural circuits that control bodily functions, such as movement, sensation or language. In addition, partial damage to neural circuits adjacent to the primary injury site can similarly lead to a loss of function. Currently, most therapies in CNS injury and stroke are focused on treatment and prevention of cell death at the primary sight of injury, and have shown marginal success. At this time, no therapies have been developed to treat or stabilize partially damaged circuits found around the periphery of the primary insult.

INNOVATION

Researchers at UCLA have developed a novel and effective therapy that promotes function in partially damaged brain areas after CNS injury. In addition to functioning in therapy, this treatment has demonstrated strong potential to promote recovery after CNS injury, an unmet area that can profoundly impact patient care and improve the likelihood of restoring function to individuals suffering from CNS insults. Overall this therapy can alter the way CNS injuries, such as strokes, are approached and positively impact therapeutic outcomes for a countless number of patients.

APPLICATIONS

- ▶ Can be combined with currently used pharmacological treatments following the onset of neural injury, in order to improve therapeutic outcome.
- ▶ Can be used to prevent damage to neural circuits following CNS injuries or stroke.
- ▶ Can be used to promote recovery, and restore function to peri-infarct tissue in the brain following CNS injury or stroke.

ADVANTAGES

- ▶ This treatment represents the first pharmacological therapy to promote neural repair and recovery in stroke patients.
- ▶ This therapy is directed toward a later phase of stroke repair and recovery. Therefore, unlike currently used drugs, this agent can be administered at a much later time point, when patients are stable.

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	10,206,921	02/19/2019	2009-515

ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

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OTHER INFORMATION

KEYWORDS

Biomedical, therapeutic, stroke, neurodegenerative disease, CNS, pharmacological

CATEGORIZED AS

- ▶ Medical
 - ▶ Disease: Central Nervous System

RELATED CASES

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