CREATe Therapeutics announces in vivo proof-of-concept results of their small molecule-controlled gene therapy platform

CREATe Therapeutics announces in vivo proof-of-concept results of their small molecule-controlled gene therapy platform, encouraging further development

LEIDEN, NETHERLANDS, March 6, 2025 /EINPresswire.com/ -- CREATe Therapeutics (CREATe Tx), a company focused on developing a small molecule-controlled gene therapy platform, has announced successful preclinical results for its proprietary designer G-protein-coupled receptor (GPCR). Utilizing the protocol designed by CREATe Tx researchers and published in Nature Scientific Reports, the study demonstrates the receptor's dose-dependent efficacy in an in vivo model when activated by an orally administered actuator. It provides evidence of both safety and efficacy of their groundbreaking approach, as the receptors induce a physiological response only upon activation by their specific ligand.

> "This achievement lays a solid foundation to accelerate our R&D efforts, moving us closer to a new class of CNS therapeutics that can transform treatment for a wide range of debilitating diseases."
>
> *Tamás Kitka, PhD, Co-Founder and Managing Director of CREATe Tx*

These findings underscore the potential of CREATe Tx's platform to deliver precise neuromodulation, opening new therapeutic possibilities for currently untreatable neurological disorders. With a wide range of applications including treatment-resistant focal epilepsy, which affects over 50 million people worldwide, this innovation marks a significant step toward developing transformative treatments for debilitating neurological conditions.

Merging the advantages of CNS pharmacotherapy and gene therapy to achieve unparalleled specificity and tunability

Traditional CNS drugs can be adjusted in dosage but affect a wide range of neurons, often leading to safety and effectiveness issues. On the other hand, gene therapies are highly precise but lack adjustability and are limited to treating only a few congenital disorders. CREATe Tx's

platform bridges this gap by enabling precise, adjustable control over specific neuronal networks.

This technology uses designer receptors that respond only to a specific drug molecule while remaining inactive to natural neurotransmitters. This allows for targeted pharmacotherapy, where the tunable effect can be directed at specific neurons based on their location and neurochemical properties. By offering greater precision and flexibility, this approach improves both safety and therapeutic potential for neurological treatments.

CREATe Tx propels innovation to develop a novel class of CNS therapeutics

This milestone further validates the strength of CREATe Tx's small molecule-controlled gene therapy platform, demonstrating its ability to design and optimize proprietary receptors from any GPCR. By enabling precise neuromodulation, the platform establishes a versatile toolkit for targeted CNS therapeutics. While initially focused on treatment-resistant focal epilepsy, CREATe Tx's technology holds promise for a much broader range of central nervous system (CNS) disorders. Potential applications extend to conditions linked to specific neuronal populations, including, but not limited to neuropathic pain, cataplexy, Parkinson's disease and Tourette's syndrome.

"I'm pleased to see strong evidence that our flexible, high-throughput platform is successfully generating new receptors with the expected properties, proven in vivo. This achievement lays a solid foundation to accelerate our R&D efforts, moving us closer to a new class of CNS therapeutics that can transform treatment for a wide range of debilitating diseases," said Tamás Kitka, PhD, Co-Founder and Managing Director of CREATe Tx.

To drive the development of this groundbreaking technology, CREATe Tx is actively engaging with strategic partners and seeking new investors.

About CREATe Therapeutics

CREATe Tx, a spin-off of VRG Therapeutics, is an innovative R&D company pioneering the development of small-molecule-controlled gene therapy through its advanced genetic neuromodulation platform. Focused on translating breakthrough science into clinical applications, CREATe Tx collaborates with leading clinical and academic experts across the U.S. and EU to drive rapid preclinical development and ensure clinical efficacy. With a mission to address diseases affecting precisely defined patient populations with serious unmet medical needs, CREATe Tx is dedicated to integrating its transformative technology into existing therapeutic frameworks, aiming to revolutionize treatment paradigms for neurological disorders.

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