



NEWS RELEASE

Coya Therapeutics Announces Peer-Reviewed Publication of its First- in-Class Regulatory T cell derived Exosomes and Their Therapeutic Potential in Neurodegeneration and Inflammation-Related Diseases

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- Regulatory T cell (Treg)-derived exosome data have been published in the peer-reviewed journal *Frontiers of Immunology*
- Characterization of Treg-derived exosomes show Treg cells-conserved functional moieties and demonstrate potent immunomodulatory function on pro-inflammatory myeloid cells and T cell proliferation, while also showing anti-inflammatory function in multiple in vivo pre-clinical disease models
- Treg-derived exosomes maintain Treg cell characteristics and high suppressive functionality which makes them an optimal therapeutic given that exosomes are end-stage differentiated and cannot be converted to a dysfunctional state by a pro-inflammatory environment
- Treg-derived exosomes demonstrate superior ability in suppressing inflammation when compared to mesenchymal-derived exosomes
- Ex vivo automated and scalable manufacturing process generates highly reproducible and large amounts of Treg-derived exosomes that can be leveraged for clinical utility

HOUSTON, June 23, 2022 (GLOBE NEWSWIRE) — **Coya Therapeutics, Inc.** (Coya), a clinical-stage biotechnology company developing multiple first-in-class and best-in-class approaches that enhance regulatory T cells (Tregs)

function in vivo, including allogeneic Treg-derived exosome therapeutics and novel biologics, today announced the publication of the therapeutic potential of its leading Treg-derived exosome platform in *Frontiers of Immunology* entitled “Extracellular Vesicles Derived From Ex Vivo Expanded Regulatory T cells Modulate In Vitro and In Vivo Inflammation” which can be found

here: <https://www.frontiersin.org/articles/10.3389/fimmu.2022.875825/full>

Exosomes are nanosized extracellular vesicles containing numerous functional moieties that are used in intercellular communication to modulate and execute cellular function. Coya has developed an automated manufacturing process involving ex vivo expansion of Tregs which produce not only a highly suppressive Treg cell product, but also large amounts of therapeutically viable and phenotypically reproducible Treg-derived exosomes. These isolated and purified Treg-derived exosomes show Treg-conserved characteristics and demonstrate the ability to suppress in vitro activated immune cells, specifically suppressing pro-inflammatory myeloid cells and inhibiting T cell proliferation. When administered into preclinical mouse models of disease, the Treg-derived exosomes demonstrated systemic and neurological anti-inflammatory function in an inflammatory mouse model of disease. Results of the preclinical studies show slowing disease progression, increasing survival, and modulating inflammation in the spinal cord in exosome-treated animals compared to controls, in a mouse model of amyotrophic lateral sclerosis (ALS). Together, these data provide preclinical evidence supporting the exciting therapeutic potential of expanded Treg-derived exosomes to treat inflammation in human disease.

Howard Berman, Ph.D., CEO of Coya Therapeutics stated, “Treg-derived exosomes represent the next generation of immunomodulatory therapeutics to treat inflammatory-related disorders. Our data demonstrate the potency, stability, and efficacy of Treg-derived exosomes in multiple preclinical in-vitro and in-vivo models, as well as its significant immunomodulatory effects over the industry standard, mesenchymal-derived exosomes. We are excited to continue development of these products in multiple disease conditions.”

“We have developed efficient technology to consistently manufacture highly reproducible Treg-derived exosomes, which in combination with these promising preclinical data and the advancement of our IND-enabling studies will constitute the foundation of our development programs for the treatment of neurologic and autoimmune disorders of high unmet need,” added Adrian Hepner, M.D, Ph.D., President and CMO of Coya Therapeutics.

About Coya Therapeutics, Inc.

Headquartered in Houston, TX, Coya Therapeutics, Inc. (Coya) is a clinical-stage biotechnology company developing first-in-class and best-in-class approaches utilizing Treg modifying therapeutics to target systemic and neuro inflammation. Coya has pioneered the ability to produce “Super Tregs” from a patient’s own dysfunctional Tregs. “Super Tregs” confer their properties through reproducible upregulated proteins in the expanded/post cryopreserved condition that allow for an off-the-shelf like approach for serial infusion. Coya is also developing first-

in-class exosome therapies derived from "Super Tregs" for allogeneic applications, as well as a novel biologic that works to upregulate Treg function in vivo. Coya is focused on the advancement of disease modifying approaches to address the significant unmet medical needs of patients with ALS, Frontal Temporal Dementia (FTD), Systemic Lupus Erythematosus, Scleroderma, Hepatic Inflammation and Fibrosis, and other autoimmune diseases. For more information, please visit www.coyatherapeutics.com.

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