NEWS RELEASE

Coya Therapeutics Announces Publication of Preclinical Study Demonstrating Combination Immunomodulatory Effects of COYA 303 in a Well-Established Model of Peripheral and CNS Inflammation

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Study results showed complementary immunomodulatory effects of COYA 303, a combination of proprietary low-dose IL-2 (LD-IL2) and a GLP-1 Receptor Agonist (GLP-1RA), compared to either LD-IL2 or GLP-1RA as monotherapy

GLP-1RA attenuated myeloid expansion and inflammatory transcriptional responses, whereas LD-IL2 increased Treg numbers and transcripts associated with Treg stability and suppressive function

Coya believes findings support further evaluation of COYA 303 and combination approaches in addressing Alzheimer's disease and other complex neurodegenerative indications

Coya will continue to pursue non-dilutive avenues and potential partnerships to advance the COYA 303 program

HOUSTON--(BUSINESS WIRE)-- **Coya Therapeutics, Inc.** (NASDAQ: COYA) ("Coya" or the "Company"), a clinical-stage biotechnology company developing biologics intended to enhance Treg function, today announced the publication of preclinical results for COYA 303 in the International Journal of Molecular Sciences. The article was published as part of the Special Issue, "The Roles of Glucagon-Like Peptide-1 (GLP-1) Receptor Agonists in Health and Disease," which highlights the expanding therapeutic applications of GLP-1 receptor agonists across diverse disease settings, including their emerging immunomodulatory effects.

COYA 303 is a combination of proprietary low-dose IL-2 (LD-IL2) and a GLP-1 receptor agonist (GLP-1RA), and was evaluated in a subacute low-dose lipopolysaccharide (LPS) mouse model. The LPS mouse model recapitulates key features relevant to neurodegenerative diseases, including increased pro-inflammatory signaling and myeloid activation, leading to immune dysregulation, providing a validated setting for testing potential therapeutic interventions. The study evaluated whether simultaneously attenuating inflammatory myeloid activity and reinforcing Treg-mediated immune regulation could produce broader immunomodulatory effects than either approach alone.

“We are encouraged by these preclinical findings, which we believe demonstrate the therapeutic potential of immunomodulatory combinations for the treatment of serious neurodegenerative diseases characterized by sustained inflammation,” said Fred Grossman, DO, FAPA, President and Chief Medical Officer of Coya. “These results continue to reinforce our belief that complex neurodegenerative diseases like amyotrophic lateral sclerosis (ALS), frontotemporal dementia (FTD), and Alzheimer’s disease (AD) are best addressed through a combination approach and suggest that further evaluation of this approach in chronic, disease-relevant models are needed to better understand its potential.”

Summary of Study Results

Study animals treated with the GLP-1RA and LD-IL2 combination showed statistically significant and clear directional effects across peripheral immune cell populations and cortical and hippocampal tissues. Peripherally, the combination treatment produced significant reductions in pro-inflammatory myeloid interleukin 6 (IL-6) and tumor necrosis factor (TNF) transcript expression, while increasing arginase-1 (ARG1) expression. The combination also enhanced Treg-associated IL-2 receptor alpha (IL-2Ra, also known as CD25), transforming growth factor beta 1 (TGF-b1), and cytotoxic T-lymphocyte-associated protein 4 (CTLA-4) immunomodulatory transcript expression, relative to monotherapies. In the cortical and hippocampal brain regions, the combination significantly reduced pro-inflammatory IL-6 and interleukin 1 beta (IL-1b) expression while increasing CD163 (cluster of differentiation 163) and CD206 (cluster of differentiation 206) transcript expression, markers of M2 macrophages, which are anti-inflammatory cells involved in tissue repair and remodeling. Monotherapy treatments produced limited changes across these endpoints.

Importantly, GLP-1RA and LD-IL2 treatment was initiated 24 hours after the first LPS administration, demonstrating treatment-associated effects after inflammatory induction had begun.

In summary, GLP-1RA and LD-IL2 combination treatment produced complementary modulation of immune cell populations and myeloid- and Treg-associated transcripts across peripheral immune cells and CNS tissues. The transcriptional response observed with this combination treatment supports further evaluation and highlights the

mechanistic potential of multi-targeted approaches as potential treatments for inflammation-driven neurodegenerative diseases.

The full paper can be found **here**.

The study was conducted by Dr. Stanley Appel, Dr. Aaron Thome and other researchers at Houston Methodist Neurological Institute and was funded by Coya through a sponsored research agreement with Houston Methodist Hospital Research Institute.

About COYA 303

COYA 303 is an investigational proprietary biologic combination of low-dose IL-2 and a glucagon-like-peptide-1 receptor agonist (GLP-1RA) designed for subcutaneous administration. In preclinical studies, COYA 303 has demonstrated a dual immunomodulatory mechanism of action targeting regulatory T cells (Tregs) and pro-inflammatory myeloid cells.

About Coya Therapeutics, Inc.

Headquartered in Houston, TX, Coya Therapeutics, Inc. (Nasdaq: COYA) is a clinical-stage biotechnology company developing proprietary treatments focused on the biology and potential therapeutic advantages of regulatory T cells ("Tregs") to target systemic inflammation and neuroinflammation. Dysfunctional Tregs underlie numerous conditions, including neurodegenerative, metabolic, and autoimmune diseases. This cellular dysfunction may lead to sustained inflammation and oxidative stress resulting in lack of homeostasis of the immune system.

Coya's investigational product candidate pipeline leverages multiple therapeutic modalities aimed at restoring the anti-inflammatory and immunomodulatory functions of Tregs. Coya's therapeutic platforms include Treg-enhancing biologics, Treg-derived exosomes, and autologous Treg cell therapy.

For more information about Coya, please visit **www.coyatherapeutics.com**

Forward-Looking Statements

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Statements in this press release that are not statements of historical fact are forward-looking statements. Such forward-looking statements include, without limitation, statements regarding: expectations of Coya Therapeutics, Inc. (the "Company") regarding the potential benefits, effectiveness and safety of its product candidates; the Company's ability to advance its product candidates through the preclinical and clinical

development processes; the Company's plans and ability to advance COYA 303, including its ability to secure non-dilutive funding or a partnership; the Company's expectations regarding the timing and availability of additional preclinical or clinical data; and the potential therapeutic benefits and economic value of the Company's product candidates. These forward-looking statements are based on the beliefs of the management of the Company as well as assumptions made by and information currently available to the Company. Such statements reflect the current views of the Company with respect to future events and are subject to known and unknown risks and uncertainties. In light of these risks and uncertainties, the events or circumstances referred to in the forward-looking statements may not occur. These and other factors that may cause the Company's actual results to differ from current expectations are discussed in the Company's filings with the Securities and Exchange Commission (the "SEC"), including the section titled "Risk Factors" in the Company's Annual Report on Form 10-K for the year ended December 31, 2025. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date this press release is given. Except as required by law, the Company undertakes no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise.

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