

ChromaDex Shares Promising Findings from a Clinical Study Showcasing Combined Metabolic Activators (CMAs), Featuring Nicotinamide Riboside (NR), Improved Cognitive Functions in Alzheimer’s Disease (AD) Patients

This first-of-its-kind human clinical study in AD patients showcased CMA supplementation significantly improved cognitive function and associated biomarkers

LOS ANGELES – ChromaDex Corp. (NASDAQ:CDXC), a global bioscience company dedicated to healthy aging, announced promising findings from a first-of-its kind clinical study, as reported in the peer-reviewed journal *Translational Neurodegeneration* by a team of scientists led by Dr. Adil Mardinoglu, Professor of Systems Biology in the Science for Life Laboratory at the Royal Institute of Technology (KTH), Stockholm, Sweden and Centre for Host-Microbiome Interaction at the King’s College London, UK.

The clinical trial was part of the ChromaDex External Research Program (CERP™) and investigated a combined metabolic activator (CMA), or ingredient ‘cocktail’, featuring the company’s proprietary Niagen® ingredient (patented nicotinamide riboside or NR) in addition to L-carnitine tartrate, serine, and N-acetyl-L-cysteine (NAC) in 60 mild-to-moderate patients with Alzheimer’s disease (AD). Results demonstrated CMA supplementation significantly improved cognitive function by 29% (vs. only 14% in the Placebo group) and markers of liver and kidney health in AD patients compared to Placebo after 84 days of supplementation. This study marks a milestone as it is the first-ever peer-reviewed clinical study to investigate the effects of CMA supplementation in human AD patients.

The use of this CMA builds on previous successful clinical and preclinical studies, which demonstrated CMA effectiveness. In a preclinical study, AD and Parkinson’s disease (PD) rat models were used to demonstrate CMA supplementation resulted in improved brain and liver metabolism. Further, results revealed that hyperemia (blood flow), degeneration (loss of nerve structure or function) and necrosis (death of neurons) in brain neurons were improved by CMA administration in both AD and PD animal models (*Science Direct*). In two earlier human clinical trials, CMA supplementation improved liver health in patients with nonalcoholic fatty liver disease (NAFLD) and improved recovery time of patients with COVID-19 (*Molecular Systems Biology; Advanced Science*). In both clinical trials, the success of the CMA was partly attributed to its beneficial effect on mitochondrial health and function.

“AD is a neurodegenerative disease that affects more than 44 million people worldwide,” said Dr. Andrew Shao, ChromaDex Senior Vice President of Global Scientific & Regulatory Affairs. “The encouraging results of this study will pave the way for future human clinical trials investigating CMA as a potential therapeutic strategy for AD patients and we look forward to supporting this research.”

Several risk factors are associated with AD including age, poor lifestyle, genetic mutations, and metabolic dysfunction. Although the exact mechanism of the development of AD remains unknown, a large body of evidence suggests that dysfunctional mitochondria and brain energy metabolism may play key roles in its development. Because mitochondria are critical for cellular energy production, significant changes in mitochondrial function are linked to energy failure and brain cell death. In fact, research suggests optimal mitochondrial health not only helps support brain cell activity by providing cells with sufficient energy, but also protects them by mitigating oxidative stress (a disturbance in the balance between the production of reactive oxygen species, or free radicals, and antioxidant defenses) and damage. Therefore, Dr. Adil Mardinoglu's team sought to determine if supporting mitochondrial function may be an effective strategy in helping improve the symptoms observed in AD patients.

"The promising results showcased that activation of mitochondria with the administration of CMA led to improved cognitive functions in AD patients," Dr. Mardinoglu remarked. "Further research to determine if CMA improves metabolic abnormalities and cognitive functions in AD patients is warranted and we look forward to initiating a Phase 3 study in the near future."

About the study:

The study was a randomized, double-blinded, placebo-controlled human phase II study of 60 patients. Each CMA dose consisted of 1g NR, 3.73g L-carnitine tartrate, 12.35g serine, and 2.55g NAC. All patients received one dose per day during the first 28 days and received two doses per day until Day 84.

Result highlights:

- CMA safely and significantly improved cognitive function by 29% (vs. Placebo which improved only 14%) compared to baseline, according to the **Alzheimer's Disease Assessment Scale-Cognitive Subscale (ADAS-Cog)**, a standardized tool used to assess the severity of cognitive symptoms in AD patients.
- CMA appeared to have the greatest benefit on ADAS-Cog in those patients with more advanced AD.
- CMA significantly improved serum biomarkers related to AD, as well as markers of liver and kidney health, as seen through significant decreases in levels of ALT (marker of liver damage), and uric acid (marker of kidney function).

For additional information on the science supporting Niagen® visit www.chromadex.com.

About ChromaDex:

ChromaDex Corp. is a global bioscience company dedicated to healthy aging. The ChromaDex team, which includes world-renowned scientists, is pioneering research on

nicotinamide adenine dinucleotide (NAD+), levels of which decline with age. ChromaDex is the innovator behind NAD+ precursor nicotinamide riboside (NR), commercialized as the flagship ingredient Niagen®. Nicotinamide riboside and other NAD+ precursors are protected by ChromaDex's patent portfolio. ChromaDex maintains a website at www.chromadex.com to which ChromaDex regularly posts copies of its press releases as well as additional and financial information about the Company.

Forward-Looking Statements:

This release contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities and Exchange Act of 1934, as amended, including statements related to whether the clinical study results constitute promising findings for improved cognitive function in Alzheimer's disease patients, whether the previous studies on CMA demonstrated effectiveness and whether success was attributed to the beneficial effects of CMA on mitochondrial health and function, and whether the study will pave the way for future human clinical trials on CMA as a potential therapeutic strategy for AS patients. Statements that are not a description of historical facts constitute forward-looking statements and may often, but not always, be identified by the use of such words as "expects," "anticipates," "intends," "estimates," "plans," "potential," "possible," "probable," "believes," "seeks," "may," "will," "should," "could" or the negative of such terms or other similar expressions. Risks that contribute to the uncertain nature of these forward-looking statements include the impact of the COVID-19 pandemic on our business and the global economy; our history of operating losses and need to obtain additional financing; the growth and profitability of our product sales; our ability to maintain sales, marketing and distribution capabilities; changing consumer perceptions of our products; our reliance on a single or limited number of third-party suppliers; and the risks and uncertainties associated with our business and financial condition. More detailed information about ChromaDex and the risk factors that may affect the realization of forward-looking statements is set forth in ChromaDex's Annual Report on Form 10-K for the fiscal year ended December 31, 2021, ChromaDex's Quarterly Reports on Form 10-Q and other filings submitted by ChromaDex to the SEC, copies of which may be obtained from the SEC's website at www.sec.gov. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof, and actual results may differ materially from those suggested by these forward-looking statements. All forward-looking statements are qualified in their entirety by this cautionary statement and ChromaDex undertakes no obligation to revise or update this release to reflect events or circumstances after the date hereof.

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ChromaDex Media Contact:

Kendall Knysch, Director of Media Relations

310-388-6706 ext. 689

kendall.knysch@chromadex.com

ChromaDex Investor Relations Contact:

Tom Shumaker, LifeSci Advisors, Managing Director

917-929-7600

tshumaker@lifesciadvisors.com