

ChromaDex Shares Promising Findings from Clinical Study Demonstrating Oral Supplementation with Nicotinamide Riboside (NR) Increased Nicotinamide Adenine Dinucleotide (NAD⁺) Levels in the Brain and Positively Impacted Neurodegenerative Biomarkers

Results from this study on healthy subjects support previous research demonstrating that NR supplementation may impact neurodegenerative biomarkers commonly associated with aging

LOS ANGELES – ChromaDex Corp. (NASDAQ:CDXC), a global bioscience company dedicated to healthy aging, announced promising new findings based on a previously published clinical trial of company's proprietary Niagen[®] ingredient (patented nicotinamide riboside or NR), which was supported by the ChromaDex External Research Program (CERP[™]). The new study, published in the peer-reviewed journal *Aging Cell*, was led by Dr. Christopher R. Martens, Department of Kinesiology & Applied Physiology, University of Delaware, USA, in collaboration with scientists from the National Institute on Aging (NIA). The study investigated whether NR would positively augment nicotinamide adenine dinucleotide (NAD⁺) levels and impact markers of neurodegenerative disease and insulin signaling in neuron-derived extracellular vesicles (NEVs) found in blood plasma. NEVs are nano-sized particles that are released by neurons in the central nervous system, including the brain, and circulate in blood plasma. They can contain RNA, DNA, and/or proteins that provide information relating to the metabolism of their tissue of origin, and serve as signaling molecules between various cells, tissues, or organs. Some scientists are investigating extracellular vesicles as biomarkers of disease development and progression. The present study demonstrated that oral supplementation with NR significantly increased NAD⁺ levels in NEVs and attenuated neurodegenerative biomarkers including A β 42, a biomarker for Alzheimer's disease (AD).

"We believe biomarkers of brain health are continuing to develop and will be of great importance as humans live longer, especially as age is the number one risk factor for most conditions seen in older adults," said Rob Fried, CEO of ChromaDex. "Further, this study builds upon a previous breakthrough clinical study we recently announced, which we believe demonstrated the promising effects of NR supplementation on Parkinson's disease (PD) patients and will pave the way for future brain-related research."

The brain is particularly vulnerable to alterations in NAD⁺ levels during aging due to the high energetic demand of neurons. Restoring brain NAD⁺ concentration using NR has shown strong efficacy in improving key features of neurodegenerative disorders in animal models, and augmenting brain-based NAD⁺ metabolism has emerged as a potential strategy for neurological disorders.

“These preliminary results in a small group of subjects provide some insight into how NR may impact NAD⁺ metabolism in the brain and affect important biomarkers of neurodegenerative disease. We are currently following up on these preliminary findings with a follow-up clinical trial of oral NR supplementation in older adults with mild cognitive impairment, a prodromal form of Alzheimer’s disease (NCT03482167),” said Dr. Christopher R. Martens, one of the senior authors on the paper.

The new study analyzed plasma samples from 22 healthy middle aged and older adults who completed a randomized, double-blind, placebo-controlled clinical study of oral supplementation with 1000 mg of NR per day for six weeks. The original study, which was published in 2018 in the journal *Nature Communications*, reported an increase in blood-cellular NAD⁺ concentration and improved cardiovascular parameters following NR supplementation (Martens et al., 2018). In the present study, the investigators measured NEV levels of NAD⁺ as well as markers associated with Alzheimer’s disease (A β 42, p-Tau-181, and total Tau) and inflammation. Given the role of NAD⁺ boosting in insulin-mediated glucose disposal, phosphoproteins involved in insulin signaling were also measured. Results demonstrated:

- NR supplementation significantly increased NAD⁺ in NEVs, suggesting an increase in neuronal NAD⁺ levels.
- In those with an increase in NAD⁺, NR supplementation also decreased NEV levels of A β 42, and biomarkers pJNK and pERK1/2, which are involved in insulin resistance and neuroinflammatory pathways.
- The changes in A β 42 did not correlate with changes in NAD⁺, suggesting that NR may be inducing unique effects that are independent of NAD⁺ changes.

These findings support the ability of oral NR supplementation to augment NAD⁺ levels in the brain and other neuronal tissue and modify biomarkers related to neurodegenerative pathology in humans. Further, the results suggest NEVs may serve as a blood-based method for monitoring the physiologic response to NR in the brain.

Such results are promising and will set the foundation for further research evaluating NR supplementation in neurodegenerative disorders.

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 results of the study are promising, whether it demonstrates NR supplementation may impact neurodegenerative biomarkers, or whether this study builds upon a previous clinical study that demonstrated the promising effects of NR supplementation on Parkinson's disease patients and will pave the way for future brain-related research. 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.

View source version on businesswire.com:

<https://www.businesswire.com/news/home/20221227005048/en/>

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

1-917-929-7600

tshumaker@lifesciadvisors.com