

New Pilot Study Indicates Niagen® May Reduce Inflammatory Cytokines in Stage D Heart Failure Patients

Niagen® (patented nicotinamide riboside) may reduce production of inflammatory cytokines in pilot study of Stage D heart failure patients

LOS ANGELES – ChromaDex Corp. (NASDAQ:CDXC) today announced the 11th published human trial on its patented NAD-boosting nutrient Niagen®, further highlighting its potential to support cardiovascular health in humans. A NIH funded study by Cardiology Division and Mitochondria & Metabolism Center at the University of Washington, published in *The Journal of Clinical Investigation*, found that Niagen supplementation reduced signs of inflammation, specifically inflammatory cytokines *in vivo*, in a small group of end-stage heart failure patients. A second arm of the study, conducted *ex vivo*, found improved mitochondrial respiration and reduced inflammatory factor expressions in peripheral blood mononuclear cells (PBMCs) isolated from human subjects and treated with nicotinamide riboside.

“We found that increasing NAD levels with nicotinamide riboside suppressed inflammatory activation in end-stage heart failure patients,” says study co-first author Dennis Ding-Hwa Wang, M.D., Ph.D. “By increasing the mitochondrial health of PBMCs, proinflammatory cytokine production was reduced. These findings further support an important role NR may have in a variety of cardiovascular-related health declines.”

In this most recent study, conducted through the ChromaDex External Research Program (CERP™), patients with the most significant forms of heart failure (Stage D) were supplemented with NR to evaluate for improvements in inflammation. Their blood was analyzed for levels of pro-inflammatory signaling molecules, including IL-6, as well as the respiration rate of PBMCs in both *in vivo* and *ex vivo* models. PBMCs have been implicated in the inflammatory response that leads to the decompensation and worsening of heart failure. Mitochondrial health of PBMCs, as evidenced by the respiration rate, could be the culprit and reporter of the inflammatory process.

The pilot study found that both the respiratory rate of PBMCs, as well as levels of pro-inflammatory cytokine gene expressions, were all improved following daily NR supplementation for 5-9 days. In particular, expression of the NLRP3 inflammasome and cytokine IL-6 were reduced in these patients following NR supplementation.

“These new findings build upon a growing body of evidence identifying how Niagen may support cardiovascular health,” says Dr. Andrew Shao, ChromaDex Senior Vice President of Global Scientific & Regulatory Affairs. “We look forward to seeing the results from additional ongoing clinical research to further our understanding of Niagen’s impact on cardiovascular health.”

A previous trial on ChromaDex's nicotinamide riboside (NR, or Niagen) published in *Nature Communications* in 2018 found that it reduced systolic blood pressure in pre-hypertensive patients relative to a placebo. While NR seems to have diverse benefits on cardiovascular health, further research is required to establish whether NR could play a role in preventing or slowing the progression of heart disease.

ChromaDex, the exclusive licensee of Dr. Charles Brenner's patented NR, has since invested over \$35 million in investigating, manufacturing and offering NR in the form of Niagen and has secured more than 20 patents. ChromaDex has demonstrated the safety and efficacy of Niagen in eleven published human trials (and over 20 additional ongoing studies further evaluating its safety and efficacy) and has achieved government regulatory acceptance in the United States, Canada, the European Union, and Australia.

For additional information on ChromaDex, visit www.chromadex.com.

About ChromaDex:

ChromaDex Corp. is a science-based integrated nutraceutical company devoted to improving the way people age. ChromaDex scientists partner with leading universities and research institutions worldwide to discover, develop and create solutions to deliver the full potential of NAD and its impact on human health. Its flagship ingredient, NIAGEN[®] nicotinamide riboside, sold directly to consumers as TRU NIAGEN[®], is backed with clinical and scientific research, as well as extensive IP protection. TRU NIAGEN[®] is helping the world AGE BETTER[®]. 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 Niagen may support cardiovascular health in humans or prevent or slow the progression of heart disease. 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. 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, 2019 as amended, 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/20200818005196/en/>

ChromaDex Media Contact:

Alex Worsham, Senior Director of Global Corporate Communications

310-388-6706 ext. 689

alexw@chromadex.com

ChromaDex Investor Relations Contact:

Brianna Gerber, Vice President of FP&A and Investor Relations

949-419-0288 ext. 127

briannag@chromadex.com