

Published studies in humans and mice reveal how a superior vitamin B3 may play an important role in helping us enjoy longer, healthier lives

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This vitamin, called NR, is exciting researchers as they discover more about its power to give us a more youthful metabolism

IRVINE, Calif., Oct. 10, 2016 (GLOBE NEWSWIRE) -- ChromaDex Corp. (NASDAQ:CDXC), an innovator of proprietary health, wellness and nutritional ingredients that creates science-based solutions for dietary supplement, food and beverage, skin care, sports nutrition, and pharmaceutical products, announced today that results from three studies, including its first human clinical trial, have been collectively published in the prestigious journal, **Nature Communications**.

The team of researchers headed by Charles Brenner, PhD, the Roy J. Carver Chair of Biochemistry at the University of Iowa Carver College of Medicine, demonstrated that NIAGEN[®] nicotinamide riboside (NR) increases production of a metabolite responsible for cellular energy production called NAD⁺ in mice and humans. These findings may give us a clue as to how we might help ourselves enjoy longer and healthier lives.

NAD⁺ activates cellular metabolism and energy production within the “powerhouses of the cell”, the mitochondria. Our mitochondria are constantly working to convert calories from food into the energy necessary to power all bodily systems, as well as help us stay healthy enough to ward off illness. This is why NAD⁺ needs to continuously be replenished in the body. The challenge is that both NAD⁺ levels and mitochondrial function decline as we age. This reduction in NAD⁺ is believed by scientists to be linked to a wide variety of age-related conditions.

NR boosts NAD⁺ production and utilization better than other forms of vitamin B₃

The benefits of NR remained unknown for years after its initial identification in the 1940's because scientists did not realize there was a way for it to boost NAD+ levels in humans. In 2004, then a faculty member at Dartmouth, Brenner discovered the enzymes in humans that enable NR to increase NAD+ and identified it as a vitamin. This discovery also suggested that NR had the ability to boost NAD+ in a safe and more efficient way than can be achieved with its B₃ cousins, niacin or nicotinamide, giving the body extra energy to focus on its critical needs. Despite more than 75 years of human use of niacin and more than a decade of preclinical work on NR, a quantitative head-to-head-to-head comparison of the three NAD+ precursor vitamins had never been conducted to validate this hypothesis.

In this latest published research, Brenner and his team – along with collaborators at Queens University Belfast and ChromaDex – demonstrated that NR is not only effective at safely increasing NAD+ metabolism in people but also showed that NR produces a greater increase in liver NAD+ as well as in longevity-promoting sirtuin activities than the other B₃ vitamins in mice. “We obtained convincing evidence that oral supplementation of NR boosts NAD+ and enhances the body's utilization of NAD+ to a greater degree than the familiar forms of vitamin B₃. NR is the most efficient NAD+ precursor,” Brenner shared.

Further hypotheses were validated in his study of 12 healthy men and women who were given three doses of NR: 100 mg, 300 mg and 1000 mg. The results indicated that 24 hours after taking any single dose of NR, blood NAD+ was safely elevated.

According to ChromaDex's Founder and CEO, Frank Jaksch, “These results are highly significant because the degree of NAD+ boosting with reported health benefits in mice has been translated in people with an orally supplemented NR. This validates NR as the most efficient NAD+ precursor, and one that does not cause flushing or inhibit the activity of sirtuins.”

Asked about his thoughts on the research results, Jaksch commented, “Dr. Brenner is the world's leading expert on NAD+ metabolism, which is why we felt he needed to lead this research and serve on our Scientific Advisory Board. His innovative work is what started the tremendous interest in NR and NAD+ precursors. This is yet another valuable contribution from Dr. Brenner's lab which pushes the NR and NAD+ fields of study forward. We expect to see additional published findings from his group in the near future.”

Unexpected findings that excite the experts

A distinct strength of the Brenner group is the development of targeted quantitative metabolomic technologies – the simultaneous measurement of the effects of NR, exercise or other interventions on metabolism. In the first of his three studies Brenner was surprised to find that a low level metabolite called NAAD increased 45-fold as human NAD+ rose in response to NR. This increase signaled that NAAD could be a biomarker of increased NAD+ formation.

His second study confirmed this hypothesis while also demonstrating that NAAD is formed from NR. Following NAAD showed that even tissues such as the heart that keep tight control over the total amount of NAD+ have an increase in NAD+ metabolism when NR is supplemented. "NAAD is a reliable biomarker of increased NAD+ metabolism," explains Brenner. "The more NAD+ produced, the more we see the NAAD biomarker."

By following an additional metabolite that is produced when the sirtuin longevity proteins utilize NAD+, Brenner demonstrated that NR has great advantages over niacin and nicotinamide in activating these proteins in the body. This finding is significant, as many scientists believe sirtuin activation plays an important role in living longer and healthier throughout our lifetime.

What this means in terms of our health and energy

Though larger increases in NAD+ metabolism were observed at higher doses, the study was significant in showing that lower doses were also effective. Daily NR supplementation – now widely available – safely helps to replenish NAD+ levels. "Maintaining a more youthful metabolism could mean higher resting metabolic rate, resistance to weight gain, and the ability to maintain muscle mass and resist tissue damage over time," adds Brenner. Results from **9 additional collaborative human trials** currently underway should provide additional insights as to the critical role NAD+ plays in people. For additional information about NIAGEN[®], visit www.Chromadex.com.

About ChromaDex:

ChromaDex leverages its complementary business units to discover, acquire, develop and commercialize patented and proprietary ingredient technologies that address the dietary supplement, food, beverage, skin care and pharmaceutical markets. In addition to our ingredient technologies unit, we also have business units focused on natural product fine chemicals (known as "phytochemicals"), chemistry and analytical testing services, and product regulatory and safety consulting (known as Spherix Consulting). As a result of our relationships with leading universities and research institutions, we are able to discover and license early stage, IP-backed ingredient technologies. We then utilize our in-house chemistry, regulatory and safety consulting business units to develop commercially viable ingredients. Our ingredient portfolio is backed with clinical and scientific research, as well as extensive IP protection. Our portfolio of patented ingredient technologies includes **NIAGEN[®]** nicotinamide riboside; **pTeroPure[®]** pterostilbene; **PUREENERGY[®]**, a caffeine-pTeroPure[®] co-crystal; **IMMULINA[™]**, a spirulina extract; and **AnthOrigin[™]**, anthocyanins derived from a domestically-produced, water-extracted purple corn. To learn more about ChromaDex, please visit www.ChromaDex.com.

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

results of the NIAGEN[®] studies and their significance. 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 January 2, 2016, 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. ChromaDex provided research materials and a portion of the grant funding as a collaborator for the study. ChromaDex's Founder and CEO, Frank Jaksch is a named author on the study. Charles Brenner serves on the scientific advisory board at ChromaDex. He is also co-founder and Chief Scientific Adviser of **ProHealthspan**.

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