Niagen. BIOSCIENCE

NEWS RELEASE

Nicotinamide riboside (NR) plays a critical role in the most efficient path to cellular energy production

2016-10-24

Researchers' findings disprove the idea that there's a shortcut to NAD production

IRVINE, Calif., Oct. 24, 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 an additional study recently published in the prestigious journal, **Nature Communications**, explains why NAD+ precursors (boosters) NR and nicotinamide mononucleotide (NMN) demonstrate similar metabolic benefits in mammals. The study conducted by a team including leading NAD+ researcher, Dr. Charles Brenner, found that effective supplementation with NMN depends on conversion to NR.

NAD+ is a cellular co-enzyme critical for energy production and mitochondrial health. Because NAD+ declines in aging, strategies for NAD+ repletion with B_3 vitamins have become popular in order to maintain a youthful metabolism. Recent work **also published in Nature Communications** and led by Brenner, unequivocally demonstrated that NR is not only the most efficient and effective B_3 at upregulating NAD+, but it is also the most effective activator of longevity-promoting sirtuin proteins.

NR is converted to NAD+ in a two-step process initiated by NRK1, a gene discovered by Brenner. Because the product of NRK1 is NMN, Brenner noted that, "Some people believed that NMN would be better at boosting NAD+ levels because NMN comes after NR in the pathway." Their theory was that NMN could diffuse or be transported into tissues such as the liver and be directly converted to NAD+. "But that theory doesn't take into account how compounds get into cells," Brenner explained.

To test the theory, researchers knocked out NRK1 in mice. This enabled them to determine that NMN is converted

to NR before entry into liver cells and cannot be converted to NAD+ without the presence of NRK1.

These results explain why NR and NMN have similar benefits in protecting against metabolic disease, neurodegenerative disorders and physiological decline in mammals. Brenner stated, “Anything NMN does, NR is going to be able to do because NMN must become NR to get into cells.”

Asked about his thoughts on the research, ChromaDex’s Founder and CEO, Frank Jaksch, commented, “The body of scientific evidence confirming the importance of NAD+ in promoting healthy aging is overwhelming. With this established, we have seen the conversation shift from ‘How important is NAD+’ to ‘How do we most efficiently and effectively boost NAD+?’ NR continues to prove itself the leader over and over again.”

NR is superior to other forms of vitamin B_3 in supporting healthy aging
When it comes to promoting longevity and healthy aging, researchers aim to boost NAD+ and sirtuin activities. Brenner noted that “Neither NMN, niacin, nor nicotinamide are more efficient than NR at boosting NAD+,” and that “Mega-doses of nicotinamide and ribose are not equivalent to NR because high doses of nicotinamide inhibit sirtuin activities.”

About NR
A decade’s worth of pre-clinical research as well as **recently published human clinical trials** have shown that supplementing with NR effectively boosts NAD+ levels. Daily NR supplementation – now widely available as NIAGEN® – safely helps to replenish NAD+ levels. Results from eight **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 NAD+
NAD+ activates cellular metabolism and energy production within the cell’s “power stations,” the mitochondria. Our mitochondria are constantly working to convert the food we eat into the energy necessary to power all bodily systems as well as help us stay healthy enough to ward off illness. The challenge is that both NAD+ levels and mitochondrial functions decline as we age. This reduction in NAD+ is believed by scientists to be linked to a wide variety of age-related conditions.

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; **PURENERGY®**, 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. Charles Brenner serves on the scientific advisory board at ChromaDex. He is also co-founder and Chief Scientific Adviser of **ProHealthspan**.

ChromaDex Public Relations Contact:
Breah Ostendorf, Director of Marketing
949-537-4103
breaho@chromadex.com

ChromaDex Investor Relations Contact:
Andrew Johnson, Director of Investor Relations
949-419-0288
andrewj@chromadex.com