

Nutrition 21, LLC Presents New Study Linking Nitrosigine®'s Enhanced Absorption to the Inhibition of Arginase at the American Society for Nutrition's 2018 Annual Meeting

PURCHASE, NEW YORK – July 10, 2018 – Nutrition 21, LLC ("Nutrition 21") is proud to announce the presentation of new clinical study results demonstrating that Nitrosigine® (ASI; inositol-stabilized arginine) inhibits arginase levels, providing insight as to how Nitrosigine enhances arginine bioavailability. The results were presented at the American Society for Nutrition's annual meeting, June 9-12, 2018.

The poster, titled, "Arginase Inhibition by Inositol-Stabilized Arginine Silicate (ASI; Nitrosigine®); a Novel Mechanism by which ASI Enhances Arginine Bioavailability," presented new results from a clinical trial designed to determine if Nitrosigine enhances arginine levels through the inhibition of arginase, which is known to inhibit arginine levels and nitric oxide (NO) synthesis, compared to an equivalent arginine dose from arginine hydrochloride (ArgHCI). Results showed that Nitrosigine enhances arginine bioavailability through inhibition of arginase levels, whereas ArgHCl did not.

Arginine is a well-known amino acid used by the body for the synthesis of NO, which dilates blood vessels and increases blood flow, providing significant benefits to athletes and the general population. Several studies have shown that Nitrosigine clinically enhances levels of both arginine and NO in the blood, and is a more bioavailable form of arginine. Specifically, Nitrosigine was shown to increase arginine levels by >70% compared to ArgHCl and to significantly increase arginine levels for up to 6 hours, while ArgHCl only increased levels for 1 hour. These most recent results corroborate that Nitrosigine, even after just a single dose, inhibits the metabolic pathway that catabolizes arginine, thereby enhancing arginine bioavailability.

James Komorowski, MS, CNS, Chief Science Officer of Nutrition 21 commented, "With the discovery that Nitrosigine inhibits the enzyme responsible for the breakdown of arginine, we now better understand why Nitrosigine is significantly better absorbed and more bioavailable than arginine HCI. These new findings clearly demonstrate that Nitrosigine and arginine are not metabolized the same way."

Todd Spear, Executive Director of Sales of Nutrition 21, added, "Nitrosigine users have known for years that it is a highly effective NO booster. Now we know that part of the reason Nitrosigine is so effective is because it inhibits arginase. Arginine as an ingredient itself, or when converted from citrulline, is highly susceptible to being broken down by arginase, but Nitrosigine is different. If your pre-workout doesn't contain Nitrosigine, it really is missing an essential ingredient"

Consumer benefits shown to be directly linked to Nitrosigine supplementation include:

- Significantly enhances blood arginine levels for up to 6 hours[^]
- Boosts key factors for increasing blood flow[^]
- Provides a safe, bioavailable source of arginine and silicon
- Significantly improves mental acuity and processing speed by 33% within 15 minutes
- Increases energy quickly and safely
- Significantly increases silicon levels for up to 1.5 hours
- Increases muscle volume[^]
- Reduces muscle damage from exercise

[^]Results compared to baseline

About the American Society for Nutrition

The American Society for Nutrition (ASN) aims to develop and disseminate the knowledge of nutritional science through support of clinical research, educational initiatives, and conferences, and was created in 2005 through the merger of the American Institute for Nutrition, the American Society for Clinical Nutrition, and the Society for International Nutrition. ASN additionally publishes several peer-reviewed journals that are enhanced by commentary and review by leaders in the scientific community.

For more information on ASN, please visit: https://nutrition.org/

About Nitrosigine®

Nitrosigine is a patented complex of bonded arginine silicate with FDA New Dietary Ingredient (NDI) notification status and has been self-affirmed Generally Recognized As Safe (GRAS) at the level of 1,500 mg per day for use in nutritional bars and beverages. Nitrosigine is scientifically engineered to boost nitric oxide levels, which have been shown to be a key factor in generating greater blood flow and vasodilation in working muscles. The unique Nitrosigine complex bonds arginine and silicate – unlocking powerful synergistic effects that offer enhanced benefits. Nitrosigine is a safe, non-stimulant, effective ingredient that is easy to formulate into new and existing products for sports nutrition, men's health and cardiovascular health.

For more information, please visit: www.Nitrosigine.com

About Nutrition 21, LLC

Nutrition 21, a wholly owned subsidiary of JDS Therapeutics, is a leader in the nutritional supplement industry. With many years of biotechnology and pharmaceutical experience, the Company's scientific platform has created unique, patented products that are safe and clinically effective. Rigorous preclinical and clinical trials are a key part of its product development strategy to ensure product safety and consumer trust. Nutrition 21 currently holds over 100 domestic and international issued and pending patents for products. Many support unique claims associated with, among others, glucose metabolism, weight management, cognition, and sports nutrition.

The Company is a developer and marketer of efficacious, high-value, clinically substantiated ingredients for dietary supplements, medical foods and beverages. Nutrition 21's branded ingredients include: Velositol®, a dietary complex of amylopectin and chromium, which has been clinically shown to double the effects of whey protein and significantly increase muscle protein synthesis, the key to muscle growth; Chromax® chromium picolinate, with clinically substantiated benefits for glucose metabolism, weight management, and brain health; Nitrosigine® bonded arginine silicate, is clinically shown to significantly boost nitric oxide levels supporting mental acuity/focus and sports nutrition. Nitric oxide is a key factor in promoting the relaxation of smooth muscle in blood vessels, increasing blood flow to working muscles.

For more information, please visit: www.Nutrition21.com

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