

## **NEWS RELEASE**

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## Chemi Nutra's Proprietary Phosphatidic Acid (PA) Shown To Increase Strength And Lean Muscle Mass

**White Bear Lake, MN** – A newly published study in the Journal of the International Society of Sports Nutrition (JISSN) proves that the consumption of a proprietary form of phosphatidic acid (Mediator® Phosphatidic Acid), combined with resistance exercise, appears to have a positive benefit on strength improvement and muscle mass development in young subjects.

This randomized, placebo-controlled, double-blind study was led by Prof. Jay Hoffman, University of Central Florida, Orlando, FL, along with co-workers. The study involved 16 men, aged 19-27, who all performed the same 4-day per week, split routine resistance training program for 8 weeks. Both subject groups were provided a daily 36 gram amino acid and collagen protein blend, and one group was given Mediator® PA (750 mg PA active) while the other group was given a placebo, on a daily basis.

Body composition was determined using whole body dual energy x-ray absorptiometry (Lunar Corp. DEXA), which provided values of total body fat and non-bone lean tissue. In addition, skeletal muscle architecture was assessed in subjects' self-reported dominant leg using B-mode ultrasound imaging (GE LogIQ P5). Here, vastus lateralis muscle thickness and pennation angle were measured during each test period. Dietary records were maintained by subjects throughout the study period, to include between meal and late evening snacks.

Results showed the Mediator® PA group had a 12.7% increase in squat strength vs. a 9.3% increase in squat strength for the placebo group, which was a 37% strength increase difference for the PA subjects. The Mediator® PA group had a 5.1% increase in bench press strength vs. a 3.3% increase in bench press strength for the placebo group, which was a 55% strength increase difference for the PA group. Finally, the Mediator® PA group had a 2.6% increase in lean muscle mass vs. a 0.1% increase in the placebo group, which was an impressive 26X lean muscle increase difference in the PA group.

The science supporting PA relates to signaling by the mechanism known as the mammalian target of rapamycin (mTOR), which scientists believe is necessary for mechanical load-induced growth of skeletal muscle (muscular hypertrophy) and consequent strength gain. Many published studies indicate that the lipid messenger PA plays a critical role in this mechanical activation of mTOR signaling, and thus mTOR is currently a hot button of research.

Scott Hagerman, president of Chemi Nutra said, "We are very excited about this study, to our knowledge, the first clinical trial to investigate oral administration of PA on exercise performance outcomes. And are we are of course extremely pleased that our Mediator® PA provided such dramatic benefit on strength, and especially, on lean muscle development. In addition, we recently filed two patents on PA and its physiologic benefits, and we are very eager to begin commercial launch of our Mediator® 50P Phosphatidic Acid (PA) specialty ingredient in the coming months. We already have a number of sports nutrition companies who are very excited to use it in their new product formulations."

Please visit <a href="http://www.jissn.com/content/pdf/1550-2783-9-47.pdf">http://www.jissn.com/content/pdf/1550-2783-9-47.pdf</a> to access the original scientific publication by the Journal of the International Society of Sports Nutrition (JISSN).

Chemi Nutra is the US business unit of parent company Chemi S.p.A., a privately held pharmaceutical and nutraceutical company based in Milan, Italy. Chemi, with cGMP certified manufacturing facilities in Italy and Brazil, is best known in the US nutritional arena for its introduction of phosphatidylserine (PS), the popular dietary supplement which has been granted two qualified health claims by the FDA, and is used to enhance learning, memory, and concentration, exercise performance, and youthful wellbeing, and to reduce stress.