Carniking® L-Carnitine Provides Positive Impact on Performance and Recovery of Working Dogs, Study Shows

Basel, Switzerland, 18 April 2017 – New Lonza-sponsored research conducted at Four Rivers Kennel LLC, in Walker, MO (USA), demonstrates the positive impact L-Carnitine, as Carniking®, can play in the performance and recovery of working dogs. Published in the Journal of Nutritional Science, “Utilization of dietary L-Carnitine for fuel efficiency, as an antioxidant, and for muscle recovery in Labrador Retrievers” details the beneficial effects of Carniking® L-Carnitine on lean mass and activity during exercise. Additionally, the new research indicates the positive impact Carniking® L-Carnitine can play in the prevention of muscle damage and the reduction of oxidative stress during strenuous exercise in working dogs.

“The positive results clearly demonstrated that Carniking® L-Carnitine helps recovery after exercise in active dogs and has significant effects on muscle mass,” said Dr. Craig Coon, CEO and co-owner for Four Rivers Kennel LLC. “These effects provide the first evidence of Carniking® L-Carnitine’s specific positive impact on working dogs. This finding is promising as the increase in lean mass, recovery and activity can provide better quality of life and function for working animals and house pets, for example.”

At the conclusion of the study, a total of 96 Labrador Retrievers, analyzed within two experiments, were given 250 mg of Carniking® L-Carnitine once daily, for up to 14 weeks. Carniking® L-Carnitine with exercise showed significantly improved activity, body composition, and recovery biomarkers. The dogs that were supplemented with Carniking® L-Carnitine were significantly more active than the control group during sprint (p=0.052) and endurance (p=0.0001) runs as measured via accelerometer collars.

Additionally, they gained 0.74 kg in total body weight upon conclusion of the study, while the control group lost 0.12 kg (p=0.0006). The increase in body weight was driven by an increase in lean mass. L-Carnitine supplemented dogs gained 0.68 kg lean mass versus the control group, which lost 0.41 kg lean mass in average (p<0.0001) although they had a comparable caloric intake.

Additionally, the L-Carnitine group had a significantly lower creatine kinase level, a marker of muscle damage (p=0.003). Plasma myoglobin was also significantly lower in the L-Carnitine group versus control, at both 1 hour after run (p=0.0157) and 24 hours post-run (p=0.0189). Oxidative stress was also improved, as evidenced by a significant decrease in Thiobarbituric acid reactive substances (TBARS), and a significant increase in Total Antioxidant Capacity (TAC) (p=0.0013 and p=0.0496, respectively).

To conclude, Labrador Retrievers that were supplemented Carniking® L-Carnitine showed improved exercise performance, as well as higher lean mass, improved muscle recovery, and less oxidative stress during strenuous exercise.

“Carniking® L-Carnitine at relatively low levels had a significant impact on muscle performance and recovery in working dogs, with similar effects in both genders. However, it is interesting to see that they are more pronounced in female dogs,” said Aouatef Bellamine, Ph.D., Sr. Scientific Manager – Nutrition, at Lonza. “This data is promising for senior pets, in particular, where muscle performance health continues to be an unmet need.”

Carniking® L-Carnitine is a special grade of L-Carnitine manufactured by Lonza. It can be used in the manufacture of dog foods and treats (wet and dry) and can be added to complete feeds, base mixes or premixes due to its excellent flowability. It is also pellet and extruder stable. More information can be found at www.carniking.com.

About Lonza

Lonza is one of the world’s leading and most-trusted suppliers to the pharmaceutical, biotech and specialty ingredients markets. It harnesses science and technology to create products that support safer and healthier living and that enhance the overall quality of life.
Not only is Lonza a custom manufacturer and developer, the company also offers services and products ranging from active pharmaceutical ingredients to drinking water sanitizers, from nutritional and personal care ingredients to agricultural products, and from industrial preservatives to microbial control solutions that combat dangerous viruses, bacteria and other pathogens.

Founded in 1897 in the Swiss Alps, Lonza today is a well-respected global company with approximately 40 major manufacturing and R&D facilities and more than 10,000 full-time employees worldwide. The company generated sales of CHF 4.13 billion in 2016 and is organized into two market-focused segments: Pharma&Biotech and Specialty Ingredients. Further information can be found at www.lonza.com.

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