

# 11<sup>TH</sup> EUROPEAN NUTRITION AND DIETETICS CONFERENCE

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### **Can rose hip containing seeds and high amount of GOPO shorten the recovery phase after strenuous exercise: A comparative study in animals and humans**

**Statement of the Problem:** Strenuous exercise results in muscle pain and stiffness. This can reduce training capacity, success during competition and quality of life, especially if optimal daily performance is mandatory as in bicycling (Tour de France) or in team sports (hockey and soccer) where tournaments can go for days. Non-steroidal anti-inflammatory drugs (NSAID's) reduces muscle symptoms. However, gastro intestinal "side effects" occur. This research aims to clarify if powdered rose hip, subspecies LiTo, containing galactolipid GOPO and seeds alleviates muscle pain and stiffness observed after exercise.

**Methodology & Theoretical Orientation:** Randomized, placebo controlled studies were conducted on 76 horses (trotters) and on 44 greyhounds treated 0.1 – 0.3 g powder/kg body weigh daily, for three months. The staff around the animals evaluated muscle pain and stiffness on questionnaires and animal competition speed. Healthy, human, middle age, modestly trained volunteers in randomized, double-blind placebo-controlled design and 18 younger trained volunteers (cross-fit), in open trial, were given the same treatment, in lower dose, for at least 3 months.

**Findings:** In horses and greyhounds rose-hip treatment reduced muscle pain and stiffness when evaluated vs. placebo the day after competition ( $p < 0.048$ ). Active treatment improved the speed of animals to some extent. In modestly trained human volunteers active treatment resulted in a significant decline in reported muscle stiffness and pain ( $p < 0.045$ ) and in an increase in the quality of life ( $p < 0.040$ ). The younger group of intensively trained cross-fitters reported a significant decline in pain and stiffness the day after strenuous exercise ( $p < 0.020$ ) and in an improvement of quality of life ( $p < 0.035$ ).

**Conclusion & Significance:** The data suggest that the present rose hip food supplement alleviate pain and stiffness caused by exercise in animals and humans. The present remedy might reduce NSAID abuse in sportsmen and in ordinary people who want to improve their physical performance.

### **Biography**

Kaj Winther was earlier deeply involved in cardiovascular research and medicine with special reference to thrombosis and haemostasis and worked for a period at the Harvard Medical School, Boston, on the topic "Circadian Variation in Myocardial Infraction". Later in his career, he more and more focused on development and clinical testing of herbal remedies and different versions of new foods. His interest in food and herbal remedies is also based on the fact that much prescription medicine including the non-steroidal anti-inflammatory drugs (NSAID's) are blamed for serious side effects. As many of our top athletes and more and more of the average population trying to get into a "better shape" is abusing NSAID's, more attention should be drawn to develop new "pain-killers" without serious side effects.

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