

# Sports Nutrition and Ortho Congress

December 08-09, 2016 | Philadelphia, USA

## A yeast fermentate prevents adverse effects of heat stress

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Temperature is one of the most challenging factors affecting human health. Road workers, military personnel and athletes are all at high risk of heat stroke during intense outdoor physical activity. Exposure to heat results in a multitude of pathological and physiological responses which should be properly managed to prevent serious injuries or even death. Different approaches have been proposed for mitigation of heat-induced adverse effects, among which are special diets, probiotics, etc. We examined the effect of the yeast fermentate EpiCor (EH) on the prevention of heat stress-induced adverse events in rats. We found that an increase in body temperature of animals, by exposure to heat stress conditions, resulted in significant morphological changes in the intestine. Treatment of rats with EH before heat stress prevented the traumatic effects of heat on the intestine. Changes in intestinal morphology of stressed rats pre-treated with PBS resulted in significant elevation of lipopolysaccharides (LPS) levels in the serum of these animals. Pre-treatment with EH was effective in prevention of LPS release into the blood of rats exposed to heat. Finally, the study showed that elevation of body temperatures resulted in a significant increase in the concentration of vesicles in the blood of control rats, indicating a pathological impact by heat on erythrocyte structure. Treatment of rats with EH completely protected their erythrocytes from this pathology. Overall, the results showed the protective effect of the yeast fermentate in preventing heat-induced adverse effects.

### Biography

Henri Alexandre Giblot Ducrey has graduated from the St. Ambrose University, Iowa, with a BSc in Biology. He is currently pursuing PhD from Auburn University, Alabama, in Anatomy, Physiology and Pharmacology Department. He is a Graduate Research Assistant and has been involved in several of research projects.

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