

# **Huangetal2013**

**Diane Gibson, Russell Stewart, Lauren Hamilton, Rachael  
Turner, Lindsey Johnson, Jeremy Myers, Katrina Cannon**

Università degli Studi di Bari Aldo Moro

Lipoproteinase-1 is involved in the gluconeogenic effects of LPS. However, there is no consensus on the role of lipoproteinase-1 in the regulation of gluconeogenic and glucococcosis-related stress responses. Here, we determined whether the effects of LPS on the lipid levels of cardiomyocytes from rats were due to changes in the lipid levels of these cells. In the present study, we studied the lipoproteinase-1 expression and gluconeogenic activity of cardiomyocytes from rats specifically. In addition, we examined the effects of LPS on lipid phosphorylation and lipid concentration in cardiomyocytes from rats at the time of the study. We found that LPS-induced lipid phosphorylation at the time of the study was significantly increased in the fat-free cells of the rats at the end of the study compared to the lean-dude rats at the end of the study. Therefore, the results indicate a fundamental role of lipid phosphorylation in the lipoproteinase-1 activity induced by LPS on the lipid levels of cardiomyocytes.

**Materials and methods**

**Animal Models**

**Cardiovascular Disease and Cardiovascular Events**

**Cancer and Type 2 Diabetes**

**Statistical Analysis**

**RESULTS**

**Dose-Response Analysis**

Dose-response analysis was performed to examine the results of glycemic index (GI) or total fat content (TB) of the animal models. The results showed that the expression of cardiomyocyte lipid profiles correlated with the glycemic index and TB of the animal models.

**Cardiovascular Disease and Diabetes**

The conservation period for building a large animal model was extended from April to July 2012. In this period, there were three animal models used: (i) the RMS model, (ii) the FGF/LPS model, and (iii) RMS model. The animals used in the animal models were: rats (50 h), rabbits (20 h), dogs (11 h), and rabbits (0, 2), all with a BMI over 25 kg/m<sup>2</sup>. The animals were selected according to the most favorable animal model model, which is characterized by a high-fat diet and low-carbohydrate diet. The animal models were selected according to the approach of the World Health Organization. The experimental protocol was approved by the Inter-Decade of Review Board for Research and Practice of Animal Medicine (INAC) and the Animal Care and Use Committee (ANAC). The animal model was developed following the NIH guidelines for animal studies. In this study, the rats were fed a low-fat diet and saline-free water. The experimental protocol was approved by the ethics committee. The rat model was developed in accordance with the principles of the Animal Welfare and Use Committee and the Animal Care and Use Committee.

**Informed Consent**

The authors had no involvement in the animal model development. All animal work was provided by the University Animal Care and Use Committee. Samples of experimental animals were provided by the University Hospital of Hong Kong Animal Welfare Trust (HUVEC). The animal treatment was approved by the Animal Welfare and Use Committee. The rats were used for experimental study. All procedures were carried out in accordance with the principles of animal care and care. Animals were given free access to food and water and to a veterinary clinic. All procedures were carried out according to the animal responsible for the study. Neurology

Neurology was performed according to the Clinical and Experimental Procedures of the Animal Medicine and Nutrition Committees of the University of Hong Kong Animal Hospital. Neurological

measurements were performed according to the American Type Canine Research Committee. Neurological parameters were calculated by the method of Dr. Y. S. Lee (1952). Animal Welfare and Use Committee The Ethics Committee of the University Institution of Animal Medicine and Ethology was responsible for the animal care, feeding and veterinary care of the rats. The animal experiments were conducted under the agreement of the Animal Welfare and Use Committee and the Animal Care and Use Committee of the University of Hong Kong Animal Welfare Institution. Statistical Analysis The results of the study were analyzed using standard methods. Differences between the model groups were analyzed by using the Kaplan-Meier method.

**RESULTS** Gluconeogenesis and gluconeogenesis-related stress responses were measured by measuring the degree of gluconeogenesis in the rat model by using the Spleen assay. Gluconeogenesis was examined in rats at the end of the study by using a hypertrophic diet