Effect of diet with goat milk fat source of linoleic acid on weight gain, parameters biochemical and histopathology aspects of wistar rats

Raphaela A. V. Rodrigues¹, Juliana K. B. Soares², Hugo E. M. Garcia³, Claudenice R. Nascimento⁴, Maria V. M. J. Medeiros⁵, Marco A. D. Bomfim⁶, Maria C. Medeiros⁷, Rita C. R. E. Queiroga¹

¹Programa de Pós-Graduação em Ciências da Nutrição, Universidade Federal da Paraíba, João Pessoa/PB-Brasil; ²Universidade Federal de Campina Grande, Cuité/PB-Brasil; ³Departamento de Morfologia, Universidade Federal da Paraíba, João Pessoa/PB-Brasil; ⁴Escola Técnica de Saúde, Universidade Federal da Paraíba, João Pessoa/PB-Brasil; ⁵Departamento de Fisiologia e Patologia, Universidade Federal da Paraíba, João Pessoa/PB-Brasil; ⁶EMBRAPA Caprinos e Ovinos, Sobral/CE-Brasil; ⁷Departamento de Nutrição, Universidade Federal de Pernambuco, Recife/PE-Brasil

With the increasing incidence of chronic diseases such as cardiovascular disease, obesity, diabetes and hypertension, nutrition has standing in the treatment and prevention of them. Thus, healthy eating habits such as consumed of milk, especially goat milk, have been widely exploited by researchers in order to add value of functional foods to them, such as raising the level of CLA. This study aimed to evaluate the effects of the goat milk fat with high content of CLA on lipid profile, body weight and intestine and liver histopathological aspects of rats. Were used 36 Wistar rats divided into three groups (n=12), who received for 10 weeks a diet formulated using soybean oil (CON), coconut oil (CO) or goat milk fat with high contents of CLA as lipid source. No difference was found in the weights of animals of the three groups, but the means values of the CLA group were the largest from the second to the fifth week of the experiment. Feed intake at the end of the experimental period did not differ between the three groups. The serum lipid profile, the CLA group showed increased levels of HDL and reduced levels of TG and TG/HDL, but increased total cholesterol. Glucose of LC-CLA group showed no difference from the control group. Were proposed an growth promoting factor action and the protector of the cardiovascular function of goat milk fat with high content CLA, but still is need further studies to clarify these effects.