

THE EFFECT OF *CHLORELLA VULGARIS* IFR-111 ON THE ORGANISM OF NEW ZEALAND WHITE RABBITS

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Summary. The aim of the experiment was to study the effect of *Chlorella vulgaris* IFR-111 strain on the organism of New Zealand White juvenile rabbits and pregnant females. A total of 20 rabbits were divided by stratified random method to four groups each of five animals. Rabbits were kept individually in cages at vivarium of Lithuanian Veterinary Academy and fed a standard diet manufactured by UAB „Kauno grūdai”. After 7 days adaptation, rabbits in Group 1 (control – three months old) were fed standard diet and drinking water *ad libitum*; Group 2 (experimental – three months old) fed standard diet and drinking water *ad libitum* supplemented with *Chlorella vulgaris* IFR-111 extract 25 ml daily for 4 weeks; Group 3 (control – pregnant females, 2 years old) were fed standard diet and drinking water *ad libitum*, and Group 4 experimental (pregnant females, 2 years old) fed standard diet and drinking water *ad libitum* supplemented with *Chlorella vulgaris* 50 ml daily for 4 weeks. *Chlorella vulgaris* IFR-111 concentration was $10,8 \times 10^9$ /L. Every week blood samples were collected from ear vein and level of glucose, triglycerids, cholesterol, proteins, erythrocytes, Hb and oxygen were determined. A-mode ultrasonography was used to determine eye's morphological indexes. At the end of experiment 6 rabbits (3 from Groups 1 and 2) were euthanised and the microflora of caecum, weigh of the liver, kidney and heart, histological parameters of kidney and liver were determined. Blood parameters were not significantly affected by *Chlorella vulgaris*. However, *Chlorella vulgaris* IFR-111 strain positively influenced physiological parameters, improved hemopoiesis and increased the total protein level in blood serum. In experimental Groups 2 and 4 significantly decrease of the level of total cholesterol compared to controls was registered ($P < 0.05$). The weight of hearts in juvenile rabbits was on 10.71% ($P < 0.05$), kidney on 1.03% ($P > 0.05$) lower and liver weight on 3.31% ($P < 0.05$) higher compared to controls. In young rabbits (Group 2) total amount of enterobacteria and *Lactobacillus spp.* strain in the caecal content significantly decreased compared to controls in Group 1 ($P > 0.05$). The juvenile rabbits in Group 2 had significantly lower axis of vitreous body length anterior chamber depth in front and the thickness of crystalline lens ($P < 0.05$) compared to controls. In Group 2, histological structure of liver and kidney were not affected by *Chlorella vulgaris*.

Keywords: rabbits, *Chlorella vulgaris* IFR-111, blood parameters, microflora, eye structure, histology.