

# THE EFFECT OF GARLIC (*ALLIUM SATIVUM*) ON LIPID PROFILE IN RABBITS

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**ABSTRACT**—This study was conducted to investigate the cholesterol-lowering property of garlic (*Allium Sativum*) in whole blood of egg yolk induced hypercholesterolemia in rabbits. Forty rabbits of both sexes of  $13.1 \pm 28.4$  weeks of age with average body weights of  $1251.9 \pm 512.2$ g were used for the experiment. The animals were divided into eight groups comprising control and seven experimental groups with 5 rabbits per group. The animals were acclimatized with grower's mash for one week after which the control group was fed with grower's mash and the seven experimental groups were fed with grower's mash supplemented with 10% egg yolk, 20% egg yolk, 2% garlic, 4% garlic, 10% egg yolk + 2% garlic, 20% egg yolk + 2% garlic, and 20% egg yolk + 4% garlic respectively for five weeks. Animals were phlebotomized through prominent ear veins and blood samples (2 ml) were collected from rabbits in each group before and after the treatment (diet administration) to assay for total cholesterol (TC), HDL-cholesterol and triglycerides (TG) using the CardioChek<sup>®</sup> analyzer; the LDL-cholesterol was determined using Friedewald formula. The TC analysis shows that there was no significant difference between the control and the treatment groups ( $P > 0.05$ ). The HDL-Cholesterol analysis indicates no significant difference between the control and the treatment groups ( $P > 0.05$ ) except the group that received 10% egg yolk + 2% garlic supplementation ( $P < 0.05$ ). The LDL-Cholesterol analysis show significant differences exist between the control and all other treatment groups ( $P < 0.05$ ) except the group that received 2% garlic supplement, where a decrease ( $P > 0.05$ ) was observed. The results of TG analysis show no significant difference between the control and the treatment groups that received 10% egg yolk, 2% garlic or 10% egg yolk + 2% garlic supplementations ( $P > 0.05$ ). However, there was significant increase ( $P < 0.05$ ) in the TGs of the treatment groups that received 20% egg yolk, 4% garlic, 20% egg yolk + 2% garlic or 20% egg yolk + 4% garlic compared to the TG of the control group. While egg yolk supplementation did not induce hypercholesterolemia; it was observed that garlic powder supplementation did not demonstrate significant hypocholesterolemic effect on the lipid profile of rabbits.

**Keywords:** Garlic (*Allium sativum*); Cholesterol; Grower's mash;