

## 7 Summary

### **Till, Torsten (2006): Effects of a lecithin feed supplementation on different blood parameters and the coat quality of dogs.**

For 30 days, a lecithin supplementation was added to the normal diet to 30 adult dogs of different breeds (17 male, 13 female, mean age: 6 years, mean body weight: 27.7 kg). The dosage ranged from 2.5 to 10.0 g/day. Of the 30 dogs 17 dogs had skin problems as a dull coat, hair loss and pruritus (group: with findings), the other 13 dogs did not have such problems (group: no findings).

Before and after the lecithin supplementations, we measured selected blood parameters in a dry-slied chemistry analyzer in order to monitor the metabolism, especially of the liver: alkaline phosphatase (AP), alanin aminotransferase (ALT), gamma glutamyl-transferase (GGT), bilirubin, total protein, albumin, and globulin. Furthermore, owners and veterinarian documented their observations on coat quality.

In the group of dogs with findings the activity of AP was increased before and after the lecithin supplementation as compared with the dogs without findings. This difference just missed the threshold of statistical significance (without findings: 220.6 U/ml, with findings: 271.2 U/l,  $p = 0.06$ ).

Before the supplementation, the ALT did not differ between dogs with and without findings. After the supplementation, the ALT activity of dogs with findings was statistically significantly increased (without findings: 26.5 U/l, with findings: 82.2 U/l,  $p < 0.01$ ) as the activity of GGT as well (without findings: 3.2 U/l, with findings: 17.1 U/l,  $p < 0.05$ ).

Concerning bilirubin, total protein, albumin, and globulin, there were no constant statistical correlations neither for the points of measurements nor both groups of dogs with or without findings. There were no correlations between the quantity of lecithin and the clinical findings or the blood parameters, respectively.

Improvement of coat quality was seen in 69.2% of healthy dogs, but only in 29.4% of dogs with findings.

A lecithin supplementation of food can be recommended in dogs with healthy skin for improvement of coat quality. In dogs with problems of skin or coat, a lecithin supplementation provides no medical or cosmetic benefit. Because of its low efficiency and with respect to the changes of blood parameters an additional lecithin application is not advisable.