# EFFECT OF NUCLEOTIDES ON SOME NUTRITIONAL PARAMETERS OF MICE

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Nucleotides are the basic building blocks of life. Nucleotides are conditionally essential nutrients. Other than the role in genetics and protein synthesis, nucleotides also play a major role in almost all biological processes. Therefore dietary nucleotides have become increasingly popular as feed additives in recent years due to their numerous health benefits. NuPro® is a commercial animal feed additive rich in nucleotides derived from the yeast strain *Saccharamyces cerviesiae*. The aim of this study was to determine the effect of addition of Nupro®, on some nutritional and biochemical parameters of mice. Thirty-two, female, sixteen to twenty-week-old, Balb/C mice were assigned randomly into eight groups of four. All mice were fed with broiler starter ration *ad libitum* for a period of one month. Nupro® was added to the diet of four groups of on a completely randomized basis, at a concentration of 4%, which served as the test diet. The other four groups were fed with the control diet which contained 4% processed Soya. Body weights were recorded throughout the experimental period. Serum biochemical parameters including total cholesterol, HDL cholesterol, total protein, albumin levels and antioxidant activities were determined using diagnostic kits. A differential count of white blood cells was also performed. NuPro® supplementation significantly decreased the total serum cholesterol level of test group mice ($P < 0.05$). Both serum HDL level and total cholesterol/HDL ratio were not significantly affected by NuPro® supplementation. Total serum protein and serum albumin

concentrations of mice were not significantly affected by NuPro® supplementation. An improvement of the bodyweight gain was observed in test group mice but with no statistically significant difference. Addition of NuPro® significantly increased the lymphocyte count of test group mice while the counts for other white blood cell types remained unaffected. It was concluded that inclusion of dietary nucleotides (NuPro®) to the feed of mice had a positive influence on some biochemical and immunological indices of blood and seems to be a suitable functional feed additive from production and animal health point of view.