

## Preliminary studies on blood plasma biochemical indices in chinchilla with reproduction disorders

### S u m m a r y

The present study was aimed to carry out morphological and histological evaluation of the ovaries and uteri, as well as to determine blood plasma biochemical profile, in female chinchilla culled due to their poor reproduction performance. The studies were carried out in 2003 and involved 44 standard chinchilla females, including 24 females culled due to poor fertility and 20 culled due to the stock replacement. The studies have revealed that infertility and fertility disorders in female chinchilla often result from pathological changes in the reproductive organs. The normal anatomopathological picture of the gonads did not always reflect their proper functioning, since fertility disorders may have various underlying causes. A longer period of infertility is a sign that the female should be culled from the stock. We have observed a significant drop in the activity of aspartate aminotransferase (ASP), alanine aminotransferase (ALT), and alkaline phosphatase (ALP) in the treatment group females, which might have been associated with vitamin deficiencies, also vitamin B<sub>6</sub>, and could have indirectly lead to infertility or reduced fertility of the females. The level of cholesterol in the infertile females or in those with impaired fertility was reduced in relation to the control (3.9 mmol/l vs. 5.4 mmol/l). Since cholesterol is the precursor to steroid hormones, we hypothesize that it has significantly contributed to the reproduction disorders of the studied chinchilla females.