

APPENDIX-I

STATISTICAL ANALYSIS

In order to evaluate the effect of food restriction (undernutrition) on pharmacokinetics of NET in rabbits, 'matched pair' design was employed, in view of the difficulties involved in 'self-pairing' design. For all experimental manipulations, pairs were considered as basic units.

All the parameters derived from control animals followed normal distribution as adjudged by 'W' statistic for small samples (Shapiro and Wilk, 1965). This indicated that there is no necessity of using non-parametric test for group comparison.

The main objective of a paired experiment is to increase the precision of measurement so as to segregate the variations between pair totals. The success of a paired experiment can be verified by comparing the variances in mean differences as obtained by pairing to that obtained if the experiment has been conducted with two independent groups (Snedecor and Cochran, 1968). It was found that, to achieve the same variance of mean differences as in the present experiment (with 6 pairs of animals), the sample size would have to be 7 for MCR, 10 for K_{10} , 11 for $t_{1/2} (\beta)$, 24 for $t_{1/2} (\alpha)$ and 36 for body weight. The differences obtained in pharmacokinetic parameters of NET between control and undernourished rabbits were also tested

for statistical significance using straight 't' test. Similar results were obtained for all the parameters tested, except for MCR, wherein log transformation had to be used before subjecting it to straight 't' test, due to the heteroscedasticity and interference effects observed in the MCR data.

Since, it is not correct to analyse the samples as if they were independent when the pairing has been effective, the differences in the means of the two groups have been analysed by using paired 't' test.

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