SUMMARY AND CONCLUSION

The present study was conducted on 120 male rabbits to probe the effect of dexamethasone and loratadine administration in the dose of 0.09mg/100 gm of rabbit's body weight/day orally in the syrup form for two weeks on the structure of the mesenteric lymph nodes and the bone marrow lymphocytes in 3 different ages.

The animals were classified into 3 different age groups; namely, group I (young age of 4 weeks), group II (adult age of 9 months), and group III (old age of 3 years). Each group was formed of 40 male rabbits and subdivided into other 3 subgroups.

- ***Subgroup A*** was the control subgroup formed of 10 rabbits that were administered distilled water.
- ***Subgroup B*** was the dexamethasone subgroup formed of 15 rabbits that were administered dexamethasone.
- ***Subgroup C*** was the loratadine subgroup formed of 15 rabbits that were administered loratadine.

Histological sections were stained with H & E to study the general structure of the mesenteric lymph nodes and to measure the size of the lymphoid follicles and their germinal centers which are indicators of the activity of lymph node and their lymphocyte proliferation.

Also bone marrow smears were stained with Giemsa stain to determine the percentage of transformed lymphocytes in the bone marrow which were considered as an indicator of the degree of lymphocyte proliferation.

The results of the present study revealed the following:

1- The dexamethasone reduced the size of lymphoid follicles and their germinal centers to a highly significant degree ($P < 0.005$) and decreased the percentage of transformed lymphocytes in the bone marrow to a highly significant degree when compared with the control subgroup of the same age at the different age groups.

2- The loratadine did not affect the size of lymphoid follicles or their germinal centers, and did not decrease the percentage of transformed lmphocytes in the bone marrow when compared with the control subgroup of the same age at the different age groups.

3- There was a highly significant difference ($P < 0.005$) between the different age groups in the control, dexamethasone and loratadine subgroups due to the effect of aging and not due to the administered drugs.

The present study may provide an evidence that it is better to use loratadine in treatment of chronic allergic diseases because it has no effect on the immune system. In contrast, dexamethasone caused a highly significant depression to the immune system when used for long periods at the different age groups.