



Title	POSTNATAL DEVELOPMENT OF VARIOUS CELLS IN THE MOUSE LYMPH NODES
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3) In the multiparous cases, the elastic fibers increased in the media and the adventitia. In the adventitia, moreover, the transverse fibers became more numerous than the longitudinal ones, and an elastic substance appeared around the fibers.

4) In the multiparous cases, the longitudinal smooth muscle bundles showed a tendency to become larger in size in the adventitia, but the quantity didn't increase conspicuously.

5) The size and the quantity of the longitudinal muscle bundles, and the intimal thickening showed a regional difference; that is, the findings were observed more intensely in the large venous trunks than in the small rami.

6) In comparing the uterine veins with other veins of the body, the author concluded the intimal thickening of the uterine veins depends on the function of the uterus.

### **POSTNATAL DEVELOPMENT OF VARIOUS CELLS IN THE MOUSE LYMPH NODES**

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(Summary of Masters thesis written under direction of Dr. N. KUDO)

As a laboratory animal in immunological biology, the mouse is the most popular one. But, unfortunately, there is only a small amount of anatomical data on the lymphatic system of this animal. For this reason, the author has tried to find the aging and regional differences in the appearance of various cells in the mouse lymph nodes.

Submandibular, mesenteric and subiliac lymph nodes of 110 mice, from neonatal to 10 weeks old, were used for the study.

Large pyroninophilic cells and mast cells were found in the lymph nodes of the neonatal mice, and these cells increased in number with maturation. No plasma cells were seen in the lymph nodes of new born mice. At the end of the first week, plasma cells began to appear in lymph nodes. They increased rapidly after the end of the third week. The regional differences of these cells in the lymph nodes of mice were clear. Large pyroninophilic cells predominated in mesenteric lymph nodes. On the other hand, plasma cells and mast cells were found predominantly in submandibular lymph nodes, but scarcely in mesenteric lymph nodes. Finally, the PAS positive cells were very rare in young mice, the

cells were found in some lymph nodes of nine-week-old mice only.

According to the difference in structural maturation, the lymph nodes were classified to embryonic, immature and mature types by the author. All lymph nodes of the mouse matured on the fourth week after its birth.

These findings led us to believe that the differential level of mice lymph nodes was lower than other mammals in both histogenetic and phylogenetic features.

**THE THIN LAYER ELECTROPHORETIC METHOD  
USING POLYACRYLAMIDE GEL AS  
A SUPPORTING MEDIUM**

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(Summary of Masters thesis written under direction of Dr. T. HAGA)

The modified technique described in this report was designed to befit a simple and rapid run of electrophoretic analysis using polyacrylamide gel as a supporting medium.

In order to get the high resolution power of horizontal thin layer gel electrophoresis, several experimental conditions such as thickness and concentration of gel, buffer system, electric current, and staining procedure were determined. And a standard method was established.

By the application of this method, guinea pig serum was separated into 24 recognizable bands in most cases.

Of the above recognizable bands, several bands were identified by using several staining methods and a combination of polyacrylamide and agar gel electrophoretic methods.