

Ruhanee Munyala 2010: Studies on Histology and Glycoconjugates Histochemistry in Salivary Gland of the Malayan pangolin (*Manis javanica*). Master of Science (Veterinary Anatomy), Major Field: Veterinary Anatomy, Department of Anatomy. Thesis Advisor: Professor Apinun Suprasert, Ph.D. 124 pages.

The histology and glycoconjugates histochemistry in salivary glands of the Malayan pangolin (*Manis javanica*) were investigated by means of histological and histochemical techniques. The staining procedures were performed by using Hematoxylin and Eosin (H&E), Alcian Blue (AB pH 2.5), Periodic acid - Schiff (PAS) and AB pH 2.5 - PAS. The lectins used were Concanavalin A (Con A), *Dolichos biflorus* agglutinin (DBA), *Ricinus communis* agglutinin - I (RCA - I), Soybean agglutinin (SBA), *Ulex europaeus* agglutinin - I (UEA - I), Wheat germ agglutinin (WGA) and Peanut agglutinin (PNA) in combination with enzyme neuraminidase digestion method.

In this study, salivary glands of Malayan pangolin (*Manis javanica*) showed tubuloacinar type. The secretory endpieces of sublingual salivary gland and parotid salivary gland were composed of mucous cells and serous cells, and parotid salivary gland found granular convoluted tubule (GCT), whereas mandibular salivary gland contained exclusively mucous cells. The analysis of the histochemical methods, most of secretory endpieces all three major salivary glands showed vicinal diol groups with acid and neutral glycoconjugates in mucous cells and serous cells. Lectin histochemistry revealed the presence of glycoconjugates containing mannose, N - acetylgalactosamine, Galactosyl ($\beta 1 \rightarrow 4$) N - acetylglucosamine, fucose, N - acetylglucosamine and Galactosyl ($\beta 1 \rightarrow 3$) N - acetylgalactosamine in serous cells and serous demilunes, while the mucous cells of all major salivary glands demonstrate the presence of mannose, N - acetylgalactosamine, Galactosyl ($\beta 1 \rightarrow 4$) N - acetylglucosamine, fucose and N - acetylglucosamine residues. Following digestion with neuraminidase and staining with AB pH2.5, disclosed the presence of sialic acid residues and neuraminidase digestion with lectins PNA staining, revealed the presence of terminal sialic acid linked to Galactosyl ($\beta 1 \rightarrow 3$) N - acetylgalactosamine in the secretory endpieces in all major salivary glands.

Student's signature

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