Immunohistochemical Study on the Distribution and Relative Frequency of Endocrine Cells in the Stomach of the Malayan Pangolin, Manis javanica

C. Nisa [1]*, N. Kitamura [2] , M. Sasaki [2] , S. Agungpriyono [1] , C. Choliq [3] , T. Budipitojo [4] , J. Yamada [2] and K. Sigit [1]

Addresses of authors: [1]Department of Veterinary Anatomy, Faculty of Veterinary Medicine, Bogor Agricultural University, Bogor 16680, Indonesia; [2]Department of Basic Veterinary Science, Obihiro University of Agriculture and Veterinary Medicine, Obihiro 080, Japan; [3]Department of Veterinary Clinic, Faculty of Veterinary Medicine, Bogor Agricultural University, Bogor 16680, Indonesiax; [4]Department of Veterinary Anatomy, Faculty of Veterinary Medicine, Gajah Mada University, Jogyakarta 55281, Indonesia; *Corresponding author: Tel.: +62 251 421 865; fax: +62 251 629 464; e-mail: chnisa@ipb.ac.id, chnisa@yahoo.com

Summary

The distribution and relative frequency of six kinds of endocrine cells in the stomach of the Malayan pangolin, Manis javanica were studied immunohistochemically using the avidin–biotin–peroxidase complex method. The stomach of the pangolin has three regions of mucous gland, one oxyntic gland and one pyloric gland. Cells immunoreactive for chromogranin, serotonin, somatostatin, BPP and glucagon were detected in all of the gastric glands, while gastrin-immunoreactive cells were found in the entire gastric gland except for the oxyntic gland. The distribution pattern of endocrine cells in the mucous gland and pyloric gland was mainly from the middle to apical portions of the glands. The endocrine cells were rare or not detected in the basal portion of all of the mucous glands and pyloric gland, but they were also found in the basal portion of the oxyntic gland. The distribution pattern of the endocrine cells in the mucous and pyloric glands suggested that this position facilitates a quick response to the luminal ingesta. The wide distribution of gastrin-immunoreactive cells in all of the mucous glands and pyloric gland was the most remarkable finding. This distribution suggests a major function of gastrin-immunoreactive cells for the digestive process in the Malayan pangolin stomach.

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