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# A Histological, Histochemical and Ultrastructural Study on the Fundic Region of the Stomach of Nile Catfish (*Clarias gariepinus*)

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## Abstract:

The present work was carried out on 20 specimens of both sexes of Nile catfish in order to observe the morphological and histological as well as the fine structure of fundic gland region of the stomach. The present study demonstrated the presence of folded mucosa in the fundic region of the stomach and its surface epithelium was lined by simple columnar mucosecretory cells. The lamina propria contained simple tubular branched glands. The fundic glands were made up of oxyntico-peptic cells. The glandular cells were positive to PAS and negative to Alcian blue and showed strong positive activity for acid phosphatase. The electron microscopic examination revealed that the oxyntico-peptic cells contained a dense tubulovesicular system that may participate in hydrochloric acid production, in addition to the extensive presence of mitochondria and rough endoplasmic reticulum. The Golgi complex is involved in the formation of secretory or zymogen granules. Oval to round- shaped enteroendocrine cells were scattered among the glandular and superficial columnar cells, which stained positive to Grimelius stain. The glands were surrounded by collagenous fibers and smooth muscle fibers

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