

Publication

A study of the alimentary canal of the brachyopterygian fish *Polypterus senegalus* with electron microscopy and immunohistochemistry

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The gastro-intestinal tract of *Polypterus senegalus* was investigated by means of electron microscopy and immunohistochemistry. Cilia-bearing cells can be observed over the whole length of the intestine. All enterocytes along the intestinal tract are characterized by apical pinocytotic vesicles. However, a typical intestinal region, which in other fish is characterized by large supranuclear vacuoles, is lacking. By means of electron microscopy, four types of endocrine cells and three types of nerve cell processes can be identified. By means of immunohistochemistry, endocrine cells with immunoreactivity for bombesin-, enkephalin-, G/CCK-, 5-HT-, somatostatin- and substance P-antisera can be found. Nerve cell processes show immunoreactivity for bombesin-, enkephalin-, 5-HT-, substance P- and VIP-antisera. The number of immunoreactive endocrine cells, nerve cells and nerve cell processes is different for each part of the gut.

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