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ULTRASTRUCTURE OF OOGENESIS IN PARAMURICEA CLAVATA (ANTHOZOA, OCTOCORALLIA)

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Reproductive biology of Octocorallia is poorly known even for common species. Mediterranean gorgons *Paramuricea clavata* is dioecious (gonochoric) species. Female germ cells are located and developed in mesenteries and evidently have endodermal origin. We investigated reproductive system of female individuals of *P. clavata* from NW of Mediterranean by using of TEM. At all stages of development the oocytes encircled by a layer of follicular cells that usually have dark phagosomes, up to 1 µm in diameter, located in the basal part of the cells. Fibrous mesoglea occurs between the follicular cells and the developing oocytes. It increases its thickness from 1 up to 4-5 µm during oogenesis. Close to oocyte surface between the collagen-like fibrils the fine granular material occurs. The cytoplasm of young oocytes close to mesogleal layer has numerous invaginations of the plasma membrane, forming endocytic vesicles. Later oocyte surface is strongly bent and generates twisted outgrowths that increase surface contact with mesoglea. Electron-dense phagosomes appear in cytoplasm as a result of endocytic vesicles and lysosomes fusion. Later phagosomes are modified and lose their dark content. Numerous Golgi complexes secrete 1 µm spherical bodies, vitellogenous granules, which show complex dynamic of maturation processes. The entire period of oocyte development the nucleus is active and its envelope is elaborated into numerous pores due to it has dots-in-line structure. At the final stage of oogenesis the oocytes are released and their surface acquires a complex set of convoluted surface outgrowths.