

THE MINERAL PHASE OF THE CALCAREOUS CORPUSCLES OF THE PLATYHELMINTH *MESOCESTOIDES CORTI* (CESTODA)

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The platyhelminth parasite *Mesocestoides corti* forms, like other cestodes, mineral concretions called calcareous corpuscles. They were proposed to form intracellularly and their function remains poorly understood. The ultrastructure of mature corpuscles appears to be formed by concentric lamellae to which granular material is associated. The chemical composition has been partially characterized; calcium carbonate is the principal component although magnesium and phosphate are also present. The mineral phase is associated with an organic matrix, which mainly contains polysaccharides, lipids and proteins. With the aim of studying the calcareous corpuscles biology, in this work we reviewed the mineral composition of the calcareous corpuscles isolated from *M. corti* by X-ray diffraction and Fourier transform infrared spectrometry (FTIR). X-ray diffraction pattern showed that the main mineral component is a hydrated form of calcium carbonate, monohydrocalcite, which was confirmed by infrared spectrometry. Monohydrocalcite is a rare mineral unusually found in biominerals. This result raises the interest of understanding the function of calcareous corpuscles and the mechanisms involved in biomineralization in these organisms.

Keywords: Hydrated calcite; Calcareous corpuscles; Cestodes; Biomineralization