An Ultrastructural Study on the Leydig and Sertoli Cells in the Immature Lesser Mouse Deer (Tragulus javanicus)

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Summary

Leydig and Sertoli cells of the immature lesser mouse deer testes, obtained in East Malaysia, were observed using light and transmission electron microscopy (TEM). The testes were fixed in 5% glutaraldehyde, post-fixed in 1% OsO_4, dehydrated in ethanol, and embedded in Araldite M. Serial semi-thin sections were cut, stained with toluidine blue and observed using light microscopy. Serial ultra-thin sections were cut, stained with uranyl acetate and lead citrate, and examined using TEM. As a result, ultrastructurally, two types of underdeveloped filament bundles were infrequently recognized in Leydig cells, but not in other testicular cells. One type was the underdeveloped bundles of actin filaments (approximately 5 nm in diameter), which were found in the nucleus of Leydig cells. The other type was the underdeveloped bundles of intermediate filaments (approximately 10 nm in diameter), which were found in the cytoplasm of Leydig cells. A multivesicular nuclear body (MNB) – specifically present in the Sertoli cell nucleus of ruminant testes – was infrequently observed. The MNB is situated in the vicinity of nuclear membrane, still in an underdeveloped stage.

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