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CULTURE OF SMOOTH MUSCLE CELLS FROM GUINEA PIG MESENTERIC LYMPHATIC VESSELS

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ABSTRACT

The in vitro culture of lymphatic smooth muscle cells (SMCs) is a crucial step in studying their function and involvement in disease. Yet there is no efficient approach available so far because of the difficulties posed by the small size of most lymphatic vessels. We present a simple yet efficient method for isolating and culturing SMCs of collecting lymphatic vessels from guinea pig mesenteric tissue. In our approach, thin lymphatic vessels were digested twice from adventitia to media to release SMCs, which were then cultured by traditional methods. The lymphatic SMCs we cultured did not exhibit contact inhibition and demonstrated typical SMCs characteristics under light microscope, electron microscope and by immunohistochemical studies. This method is applicable to the culturing of lymphatic SMCs from other organs and provides useful materials for physiological and pathological lymphatic studies.