

**THE PATTERN OF FIBRILLIN DEPOSITION CORRELATES WITH  
MICROFIBRIL-ASSOCIATED GLYCOPROTEIN 1 (MAGP-1) EXPRESSION  
IN CULTURED BLOOD AND LYMPHATIC ENDOTHELIAL CELLS**

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*ABSTRACT*

*Fibrillins constitute the major structural components of 10-12nm microfibrils of the extracellular matrix of several elastic and non elastic tissues and of initial lymphatic vessel anchoring filaments. Microfibril-Associated Glycoprotein-1 (MAGP-1) binds fibrillin to tropoelastin during elastogenesis. We recently reported that cultured blood endothelial cells deposit fibrillin in a honeycomb pattern, whereas lymphatic endothelial cells form an irregular web. The aim of this immunohistochemical study was to verify whether the deposition pattern of fibrillin is related to the expression of MAGP-1 in confluent and post-confluent cultures of bovine aortic (AEC), pulmonary artery (PAEC) and lymphatic endothelial cells (LEC). In AEC and PAEC, MAGP-1 and fibrillin co-localized and their deposition increased with time in culture. In AEC, both proteins formed a honeycomb pattern. In LEC, MAGP-1 deposition was still negligible when fibrillin formed an irregular web covering the entire surface. PAEC, which in vivo are exposed to physiological conditions intermediate between AEC and LEC, had an intermediate pattern of deposition of fibrillin and MAGP-1. Assuming that early elastogenesis is an intrinsic functional need for the aorta but not for the thoracic duct, we propose that delayed appearance of MAGP-1 in LEC may correlate with their irregular fibrillin deposition. Different fibrillin scaffolds could in turn account for the specificity of elastic fibers in compliance with the specific functional requirements of the tissue.*