

Abstract for Studies of the Morphology of Lymphangi leiomyomatosis cells, their expression of melanocyte receptors for known mitogenic factors, and their expression of MART-1.

Jason Wilson

Lymphangi leiomyomatosis (LAM) is an extremely rare disease of unknown etiology that predominantly affects women of childbearing age. LAM cells contain melanosome-like organelles and also express the melanocyte-specific marker HMB-45. We hypothesized that LAM cells would also contain MART-1 and Mel-5, markers specific to melanocytes that are currently being exploited in the treatment of melanoma. These markers, as well as receptors for known melanocyte growth factors, were immunocytochemically assayed in LAM tissue obtained from patient biopsies. This qualitatively demonstrated that LAM cells expressed MART-1 and Mel-5 in all samples, and c-Kit and estrogen in at least one sample each. The presence of melanocyte-specific markers was then more quantitatively validated by FACS-analysis of LAM cells grown in culture. Furthermore we hypothesized that the ultrastructural morphology of LAM cells would more closely resemble melanocytes than smooth muscle cells. Numerous LAM cells were found that contained electron dense melanosome-like organelles. However no LAM cells were observed that exhibited dense bodies, a cardinal feature of other leiomyomas.