Reviewer’s report

Title: Elevated expression of VEGFR-3 in lymphatic endothelial cells from lymphangiomas

Version: 2 Date: 25 October 2006

Reviewer: Sebastian F. Schoppmann

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General:

In the present work Susanne Norgall and authors aim to develop new insight in the widely unknown pathogenesis of lymphangiomas. They have therefore studied the mRNA and protein-expression of various blood- and lymphatic-endothelial-cell-surface proteins on primary isolated cell-lines from two lymphangiomas of childhood. They have further analysed the expression of some endothelial growth factors (blood and lymphatic) in various cell-lines. Additionally the authors provide information about the “lymphatic marker” expression pattern of commercially available myometrial microvascular endothelial cells.

Materials and methods applied are appropriate. The work is mainly descriptive even though providing some interesting but superficial new insight into the biology of lymphangiomas. Methods of LECs-isolation and culturing are well established nowadays even though the isolation of endothelial cells from lymphangioma tissue has not been described yet. The authors constitute Prox-1 as the most stable marker of LECs, but their presented data does not allow this assertion. The data presented about the involvement of VEGFR-3 and -2 is very interesting but might be worked out.

The manuscript is responsibly written but in my eyes too long and repetitively for the presented, mainly descriptive data. However, the work is scientifically sound and a more compact and enthralling discussion will make the work worth reading it.

- What is the role of heterogeneity in lymphangiomas?
- The major statement that VEGFR-3 and -2 contribute to the etiology of lymphangiomas is not proofed by the presented data.
- The discussion is too long and not always tangible.

- Ref. 9 is not cited correctly
- Fig. 6b is not readable

What next?: Accept after minor essential revisions

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No