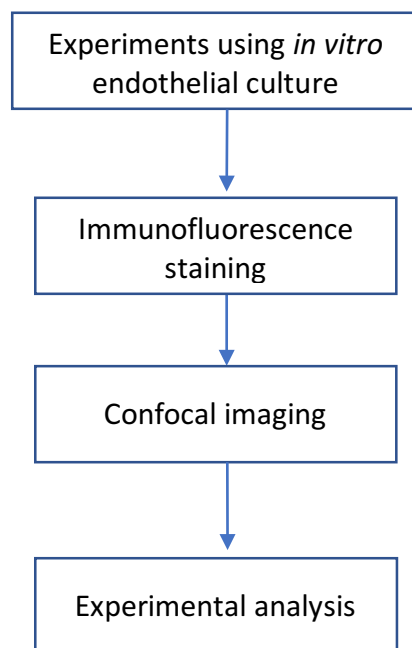


## Project in understanding mechanism regulating blood vessel leakage.

We are seeking an interested student for a project involving *in vitro* experimentation and image analysis. The biological question concerns the mechanisms whereby blood vessels leak and cause edema. The project involves analysis of the dynamics of activation of the protein VE-cadherin (VE-cadherin) which, is specifically expressed in endothelial cells and essential for maintenance of endothelial cell-cell junctions. Thereby vessels are protected from excess leakage. Endothelial cells will be stimulated with the ligands VEGFA and VEGFC to activate VE-cadherin followed by imaging protocols.

Experimentally the student would be trained in imaging protocols and other cell biology techniques. Depending on their interest they can also be involved with image analysis especially image segmentation using either Fiji (or Cell profiler).



**Suggested reading :** (1) Li, X. et.al., VEGFR2 pY949 signalling regulates adherens junction integrity and metastatic spread. *Nature Communications* **2016**, 7, 11017.

For further information and application, please contact Prof. Lena Claesson-Welsh ([lana.welsh@igp.uu.se](mailto:lana.welsh@igp.uu.se)) at the Dept. Immunology, Genetics and Pathology, Rudbeck Laboratory , Dag Hammarskjöldsv. 20, Uppsala.