

## **Examining a Common Role for Pericytes during Angiogenesis and Lymphangiogenesis**

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Brief overview of the research and Project objectives:

The formation of blood vessels from pre-existing vessels, termed angiogenesis, and/or the growth of new lymphatic vessels, referred to as lymphangiogenesis, are common denominators for multiple pathological conditions, including tumor growth and cancer metastasis. In order to develop therapies aimed at manipulating angiogenesis and/or lymphangiogenesis we must better understand the overlapping mechanisms involved in both processes. During angiogenesis, capillary sprouting involves endothelial cells and peri-endothelial cells, referred to as pericytes. However, little is known regarding the role or source of pericytes during the initial capillary sprouting events associated with lymphangiogenesis. The objective of this project will be to test the hypothesis that pericytes are involved in the growth of lymphatic vessels. Results from this work would potentially for the first time implicate pericytes in lymphangiogenesis and highlight the overlap of cellular players involved in both angiogenesis and lymphangiogenesis. Such findings would offer new perspectives for the use of pericytes as therapeutic targets. At the completion of this work, students will gain experience with animal studies, immunohistochemistry, and microscopy.