

Research project and supervisor team

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Short introduction & description of research project	Cataract renders tens of millions blind. The only method currently employed to treat cataract is surgery. However, secondary visual loss occurs in millions of patients due to a wound-healing response that results in a condition known as posterior capsule opacification (PCO). This can take the form of fibrotic PCO (cell growth, EMT, matrix deposition, matrix contraction) and regenerative PCO (aberrant fibre cell differentiation). Identification and development of therapeutic treatments is important to improve long-term patient outcomes following surgery. The current project will investigate the vascular endothelial growth factor (VEGF) signalling axis in PCO formation. The project will employ human cell and tissue culture models to provide a comprehensive assessment of VEGF signaling in lens cells and how it relates to both fibrotic and regenerative PCO; The findings of the project will determine suitability as a therapeutic target to better manage PCO.
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