00471 Investigating the Role of the Elabela-aplnr Axis in Ocular Angiogenesis and Neo-angiogenic Ocular Pathologies

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Aims: Elabela (Ela) is a recently discovered endogeneous peptide agonist of the GPCR Apelin Receptor (Aplnr). The canonical agonist of Aplnr is Apelin, and Apelin-Aplnr signalling has been shown to be pro-angiogenic. Ela-Aplnr signalling has been implicated in vasculogenesis during development in both embryonic and placental vascular beds. Previous studies in the placenta suggest that Ela opposes Apelin during vascular sprouting. Ela expression is high in the mouse retina and deletion of Ela leads to gross ocular defects (i.e. atrophy) with variable penetrance. Hence, we are interested in defining the mechanisms of the Ela-Apelin-Aplnr signalling axis during retinal angiogenesis. We aim to define the role of Ela in both normal and pathologic ocular angiogenesis, and to understand the underlying mechanisms of Ela in regulating angiogenic sprouting. These studies will potentially lead to the development of Ela as a therapeutic target in neoangiogenic ocular pathologies.

Methodology: -

Result: -

Conclusion: -