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Singapore's 65LAB awards $1.69 M to A*STAR-led project targeting cause of vision loss in glaucoma and NAION

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Development of a potential first-in-class therapy for optic neuropathies, a major cause of irreversible vision loss



65LAB has awarded $1.69 million (approx. S$2.2 million) to an A*STAR-led research team developing a potential first-in-class therapy for optic neuropathies, including glaucoma and Non-arteritic Anterior Ischaemic Optic Neuropathy (NAION).

The project is co-led by Professor Ashok Venkitaraman, from the A*STAR Institute of Molecular and Cell Biology (A*STAR IMCB), as well as the Cancer Science Institute of Singapore (CSI) and Department of Medicine at the National University of Singapore (NUS), together with Dr Zachary Gates, Senior Scientist at A*STAR IMCB and the A*STAR Institute of Sustainability for Chemicals, Energy and Environment (A*STAR ISCE).

The funding will accelerate the optimisation and preclinical evaluation of novel compounds designed to protect retinal ganglion cells (RGCs) from degeneration. The programme builds on prior collaborative research involving A*STAR and NUS and aims to advance promising scientific discoveries towards therapeutic development and potential commercialisation. This highlights the role of partnerships in advancing innovations from Singapore's public research base towards real-world healthcare and economic impact.

This marks 65LAB’s first award to a project from A*STAR, following three earlier awards to Duke-NUS Medical School and NUS.

Glaucoma is the leading cause of irreversible blindness worldwide and is projected to affect an estimated 111.8 million people aged 40 to 80 by 2040, with Asia bearing a disproportionate share of the global burden.

NAION, another optic neuropathy that can cause sudden and permanent vision loss, similarly involves damage to RGCs. There is currently no approved treatment specifically for this condition.

Prof Ashok and Dr Zachary at A*STAR have identified novel, selective inhibitors with the potential to directly protect retinal neurons from degeneration, creating a new therapeutic approach for diseases where existing treatments do not address this

underlying mechanism.