



Media Statement

August 10, 2018

Silk weaves its magic as a potential material for repairing the human eye

Scientists are exploring whether proteins found in silk can be used to grow and transplant new eye tissue.

Professor Damien Harkin, from the Queensland University of Technology and Director of Ocular Cell Therapies at the Queensland Eye Institute, is leading a team of researchers who are using a protein extracted from silk as a scaffold on which to grow retinal tissue.

Silk, the strong natural fibre produced by silkworms and spiders, has been used for centuries in medicine – particular in sutures.

But Professor Harkin believes its potential as a biomedical material could be far greater.

“A novel aspect of our work has been to explore the use of proteins found in silk as materials on which to grow and transplant new eye tissue, with the view to replacing the damaged tissue that eventually leads to permanent loss of sight in age-related macular degeneration patients (AMD),” he said.

“The ultimate goal of our research is to develop an effective, affordable and accessible treatment for patients afflicted with AMD and our research may eventually help maintain and restore vision for people living with late-stage disease.”

Professor Harkin will expand on his research next Thursday, August 16, in delivering the Lions Eye Institute's 2018 Miocevich Lecture – *The Silk Road: A 10-year journey, evaluating the potential use of silk proteins for repairing the human eye.*

The Miocevich Lecture is given in honour of Brad and Carolyn Miocevich, who provide financial support for senior clinical and research fellows in the Ocular Tissue Engineering Laboratory research team, led by Dr Fred Chen.

Their support has also funded a research position, the Miocevich Retinal Fellow, who is tasked with investigating causes, new diagnostic tools and novel treatment of degenerative diseases of the retina.

Dr Chen and Dr Sam McLenachan are also collaborating with Professor Harkin's research team in exploring the potential use of fibroin for treating AMD.

For more information about the 2018 Miocevich Lecture, visit

<https://www.lei.org.au/about/news/the-silk-road-2018-miocevich-lecture/>

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