



Media Statement

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Friend or foe? How the immune system shifts from protector of eyesight to destroyer

The role of an overactive immune system in two diseases which cause blindness is the subject of the 2018 Ian Constable Lecture at The University of Western Australia.

Professor Andrew Dick, Director of University College London's Institute of Ophthalmology and Chair and Professor of Ophthalmology at the University of Bristol, is a leader in scientific research on inflammation in the eye.

His lecture - A Tale of Two Diseases: Regulating Immune Responses in the Retina – will focus on uveitis and age-related macular degeneration.

“The immune system does not only operate to protect the body against infection, cancer and tissue damage,” Professor Dick said. “It has evolved so that many cells – both of the immune system and non-immune cells in tissues – can generate immune responses that regulate and maintain normal cellular, tissue and organ function.

“Persistent, low-grade inflammation is a factor in many chronic, age-related disorders such as arthritis, diabetes and heart disease – but also many blinding non-infectious disorders.”

Uveitis describes general and non-specific inflammation in any part of the eye. It can affect all age groups but is a particular risk factor for children with juvenile arthritis.

Inflammation is also strongly suspected in the development of age-related macular degeneration (AMD) - the leading cause of blindness among older people.

Professor Dick said clinicians and researchers were concerned that complications from an overactive immune system and corresponding inflammation were often not detected early enough to prevent vision loss.

“Many patients can be asymptomatic until they actually start to lose vision,” he said. “They simply do not know they have this inflammation until complications occur.

“While there are treatments available for people with diseases like AMD, they are being treated late in the disease. We need to determine the triggers for disease from a very early stage to formulate effective prevention strategies.

“We also need to understand why, for example, the retina in many people continues to perform well late into old age. What is different about this group of individuals with healthy eyes compared to those with eye disease and what role does the immune system and inflammation play?”

Professor Dick said part of his research was exploring potential gene therapies and immune therapies for inflammatory eye diseases.

Presented by the Lions Eye Institute and the UWA Institute of Advanced Studies, the Ian Constable Lecture is held annually in honour of Professor Constable. In 1983, he established the Lions Eye Institute to provide high-quality clinical care to WA patients and focus on world-class scientific research into the prevention of eye disease.

The 2018 Ian Constable Lecture is on Wednesday, September 5. The lecture is free and open to the public but bookings are essential. Visit

<https://www.eventbrite.com.au/e/a-tale-of-two-diseases-regulating-immune-responses-in-the-retina-tickets-47249673044> for more information.

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Image: Professor Andrew Dick will present the 2018 Ian Constable Lecture at UWA on September 5