



Professor Noemi Lois

## NEW VISION IN RESEARCH

Our research teams are at the forefront of discovery, leading to the creation of new therapies for some of society's most debilitating illnesses, such as diabetes.

Diabetic complications that affect blood vessels are frightening for patients. They can lead to increased risk of heart disease, kidney failure, blindness and amputation. The research group led by **Dr Reinhold Medina** is working to understand the biology that underpins these complications.

The research group focuses on cell therapy, the leading-edge of regenerative medicine. We are investigating vascular regeneration and therapeutic angiogenesis – the formation of new blood vessels – with support from organisations such as Novo Nordisk.

The results of this research will have extensive clinical implications, establishing the foundation of vascular stem cell strategies which will also tackle such problems as heart attacks and strokes.

A team led by **Professor Tim Curtis** is pioneering the way in research into diabetic retinopathy, a condition that results from diabetes damaging blood vessels at the back of the eye. This global challenge affects more than 90m people worldwide and is one of the main causes of 'new' blindness in working-age adults in the UK.

Our researchers are developing gene therapy approaches which are capable of preventing or reversing diabetes-related blindness by improving blood flow and vascular repair in the retina.

**Professor Noemi Lois** is leading a research programme that also concentrates on diabetic retinopathy and its complications – diabetic macular oedema (DMO) and proliferative diabetic retinopathy (PDR).

For example, Professor Lois is leading two large clinical trials involving several centres throughout the UK. One will evaluate a new form of laser treatment for people with DMO; the other will test a potential new alternative for the surveillance of people with DMO and PDR.

Professor Lois says: "We are working hard to ensure the best possible outcomes for patients with diabetic retinopathy. What is being achieved here at the Wellcome-Wolfson Institute is world-leading."



Dr Reinhold Medina

**"We are delighted to support Dr Medina towards the study of a new therapeutic target for diabetic retinopathy, translating his science into new innovation to help diabetic patients receive better treatment and live a more rewarding life."**

**Miriam Frieden, Vice President, R&D Innovation Sourcing, Novo Nordisk**



Professor Tim Curtis