

# Ellex 2RT Retinal Rejuvenation

**Ellex Retinal Rejuvenation Therapy (Ellex 2RT™) is a breakthrough laser therapy which has the potential to positively influence the lives of millions of people suffering from retinal disease. Utilizing nanosecond technology, Ellex 2RT™ is a non-thermal laser therapy that stimulates a natural, biological healing response in the eye to treat a range of degenerative retinal diseases. Ellex 2RT™ is currently undergoing clinical trial for the treatment of Age-Related Macular Degeneration (AMD) and Diabetic Retinopathy – two of the most common causes of blindness and vision impairment in the developed world.**

The effort to develop Ellex 2RT™ has been led by Prof. John Marshall since 2001 when he was appointed chairman of the Ellex Medical Advisory Board. Together with his research colleague, Dr. Ali Hussain, Prof. Marshall has spent many years researching the underlying causes of AMD. Initial laboratory studies conducted in the United Kingdom successfully demonstrated that Ellex 2RT™ can be used to influence the early cause of AMD by triggering a cell rejuvenation process, thereby partially reversing or slowing the degradation that could lead to late Dry or Wet AMD. Further laboratory studies have since established the therapeutic effect of Ellex 2RT™, with research conducted at St. Thomas' Hospital, London, demonstrating that Ellex 2RT™ influences the transport properties of the RPE and Bruch's membrane – key structures involved in the progression of AMD and Diabetic Retinopathy.

## **Ellex 2RT for AMD**

Initial clinical investigations have demonstrated that Ellex 2RT™ shows promise for the treatment of Early AMD. A prospective clinical trial underway at the Royal Victorian Eye and Ear Hospital (RVEEH), Australia, in collaboration with the Centre for Eye Research Australia (CERA) investigating the efficacy of Ellex 2RT™ for high-risk Early AMD patients has shown that the majority of patients experience an improvement in visual function and/or drusen reduction following treatment (see *"Retinal Functional Improvement with Nano-Laser Treatment in High Risk Early AMD, Guymer et al. ARVO 2011"*).

**"Initial results suggest that the application of Ellex 2RT to the affected eye eliminates drusen. By getting rid of the drusen from a patient's retina, we hope to reverse the degenerative processes caused by the disease."**

Robyn Guymer, MB, BS, PhD, FRANZCO

Head of Macular Research at the Centre for Eye Research Australia (CERA)

Unlike anti-VEGF treatment, which is only suitable for the end-stage of the disease, Ellex 2RT™ offers the potential to intervene much earlier and to slow or partially reverse the degenerative processes of the disease, thereby eliminating or delaying the risk of vision-threatening complications associated with AMD.

## **Ellex 2RT for Diabetic Retinopathy**

A pilot clinical trial undertaken at the Royal Adelaide Hospital, Australia, has shown Ellex 2RT™ to be as effective as thermal retinal photocoagulation for the treatment of Diabetic Retinopathy — but with the added benefit of sparing the photoreceptors, and therefore the retinal function, of thermal damage. In addition, Ellex 2RT™ is painless and quick to perform, offering considerable advantage to both doctor and patient.

**"Ellex 2RT has produced very similar reductions in macular edema as compared to conventional retinal photocoagulation, whilst using approximately 500 times less laser energy."**

Professor Robert Casson, MB, BS (Hons), DPhil, FRANZCO