

## PRESS RELEASE

Ellex Medical Lasers Ltd (ASX:ELX)

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Topic: Ellex Announces New Retina Regeneration Therapy to be Presented at the AAO



**Adelaide, 1 November 2007** – Ellex Medical Lasers Limited (ASX:ELX), a global leader in the design and manufacture of ophthalmic laser and ultrasound systems, announced today that the initial results of treating patients with Retina Regeneration Therapy (Ellex 2RT™) will be presented by Peter Hamilton MD, FRCOph at the annual meeting of the American Academy of Ophthalmology, which takes place November 10-13, in New Orleans. Dr. Hamilton conducted the first patient treatments recently in London under the direction of Professor John Marshall, Ph.D., FRCPath. Professor Marshall, an Ellex board director, is currently Frost Professor of Ophthalmology at the Rayne Institute and Head of the Academic Department of Ophthalmology at King's College, University of London.

Ellex 2RT is a new non-thermal laser treatment that relies on nanosecond pulses of laser energy to stimulate the retinal pigment epithelium (RPE) to preserve vision. Laboratory research conducted under Professor Marshall over the past few years has demonstrated that the Ellex 2RT method causes the RPE to migrate and release matrix metalloproteinase (MMP's), which are the enzymes that clean up Bruch's membrane. Further laboratory experiments to measure the ability of Bruch's membrane to transport water and chemicals have shown the entire transport mechanism of the retina has been rejuvenated. Dr. Hamilton treated the initial series of patients in London following two years of laboratory research funded by Ellex and conducted under the direction of Professor Marshall at St. Thomas' Hospital in London, UK and Royal Adelaide Hospital in Adelaide, Australia.

"Dr. Hamilton's presentation of Ellex 2RT patient data at the AAO marks a milestone for Ellex and Professor Marshall's collaborative research program," commented Peter Falzon, Ellex CEO. "We are pleased to be working with Professor Marshall and Dr. Hamilton, long-time leaders in the field of ophthalmology, to advance the science and technology that is enabling Ellex 2RT to emerge as a potential new therapy of interest for early AMD and diabetic patients. More research is needed and at Ellex we look forward to investigating and reporting the benefits of 2RT therapy over time."

"Ellex 2RT is a candidate therapy for retinal diseases that are caused by a compromised Bruch's membrane resulting in reduced energy supply to, and waste removal from, the photoreceptors," commented Professor Marshall. "The diseases that can potentially be treated include early AMD, diabetic retinopathy and other retinal diseases. With Ellex 2RT, there is the potential to treat retinal diseases earlier, before irreversible physical changes occur and before patients experience significant vision loss."

The Ellex 2RT prototype laser systems were developed specifically for Ellex 2RT laboratory and clinical trials by the Ellex advanced research team in Adelaide, Australia. Although there are many types of lasers used in ophthalmology, Ellex 2RT therapy parameters are unique and can only be performed with an Ellex 2RT laser system. Ellex has international patents pending for the Ellex 2RT technology and method.

## **ABOUT ELLEX 2RT RESEARCH**

Ellex 2RT research is funded in part by an A\$1.9 million, two-year Commercial Ready Grant awarded to Ellex by the Australian Government to support the development of a new and innovative laser therapy for the treatment of Age-Related Macular Degeneration (AMD) and other retinal diseases. The grant was applied for in order to expand laboratory and clinical research in Australia based on proof-of-principle laboratory work conducted at St. Thomas' Hospital in London under the direction of Professor Marshall. Ellex 2RT clinical trials will next commence in Australia, followed by multiple centers internationally over the next 12 months. These trials will provide data necessary to develop a commercial product based on the current prototype 2RT laser systems. The company estimates it will take six months to one year to design and release a product for sale once a decision is made to commercialize Ellex 2RT.

## **ABOUT AMD**

AMD causes central visual loss and is the leading cause of blindness for people over the age of 60. The U.S. National Eye Institute estimates that there are 1.8 million people with AMD in the United States and that this prevalence will grow to 3 million by 2020. When AMD occurs it is categorized into dry or wet forms.

The dry form is associated with changes in Bruch's membrane that lead to atrophic cell death of the central retina or macula, which is required for fine vision used for activities such as reading, driving or recognizing faces. The wet form is caused by growth of abnormal blood vessels under the macula, also known as choroidal neovascularization (CNV) or ocular angiogenesis. These vessels are of poor quality and tend to leak fluid and blood and cause scar tissue that destroys the central retina. This results in a deterioration of sight over time.

## **ABOUT DIABETIC RETINOPATHY**

Diabetic retinopathy is the leading cause of blindness in American and European adults. It is caused by changes in the blood vessels of the retina. The U.S. Food and Drug Administration estimates that there are 17 million people with diabetes in the United States. During the first two decades of the disease, more than 60 percent of diabetes patients will develop retinopathy.

Blood vessels damaged from diabetic retinopathy can cause vision loss in two ways. First, fragile, abnormal blood vessels can develop and leak blood into the center of the eye, blurring vision. This is proliferative retinopathy and is the most advanced stage of the disease. Second, fluid can leak into the center of the macula, the part of the eye where sharp, straight-ahead vision occurs. The fluid makes the macula swell, blurring vision. This condition is called macular edema. It can occur at any stage of diabetic retinopathy, although it is more likely to occur as the disease progresses. About half of the people with proliferative retinopathy also have macular edema.

## **ABOUT ELLEX**

Ellex Medical Lasers Limited (ASX:ELX) designs, manufactures and markets a complete line of lasers and diagnostic ultrasound systems used by ophthalmologists to diagnose and treat eye diseases. With more than 12,000 systems delivered to the market, Ellex has evolved since 1985 from a manufacturing company of primarily OEM products, to direct marketing of its own branded products through subsidiaries in the United States, Japan and Australia, and a network of distribution partners in more than 100 countries. In December 2006 Ellex acquired Innovative Imaging, a leading provider of diagnostic ultrasound devices for ophthalmology, initiating the expansion of its product line beyond lasers. Ellex maintains a strong emphasis on intellectual property and research into new and better treatments to manage and treat the leading causes of blindness.

For additional information about Ellex and its products, please visit [www.ellex.com](http://www.ellex.com).

**For further information, please contact:**

Peter Falzon, CEO

Ellex Medical Lasers Limited

82 Gilbert Street, Adelaide, SA, 5000

W +61 8 8104 5200 | M +1 415 377 2390

[pfalzon@ellex.com](mailto:pfalzon@ellex.com)

Kevin McGuinness, COO

Ellex Medical Lasers Limited

82 Gilbert Street, Adelaide, SA, 5000

W +61 8 8104 5200 | M +61 409 673 610

[kmcguinness@ellex.com](mailto:kmcguinness@ellex.com)