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## **Yisum Introduces a Novel Method for Diagnosing Retinal Micro-Aneurysms to Prevent Diabetic Retinopathy**

**- Technology presented at [IATI-BioMed Israel 2013](#) -**

Jerusalem, Israel, June 10, 2013 - Yisum Research Development Company of the Hebrew University of Jerusalem Ltd., the technology transfer arm of the Hebrew University, introduces a novel method for detecting retinal micro-aneurysms that pose a high risk for leakage, an underlying cause of diabetic retinopathy. Diabetic retinopathy is a leading cause of blindness worldwide. The novel method will enable early diagnosis and treatment of the condition, potentially minimizing damage and saving vision. The technology was patented by Yisum, which is currently searching for an appropriate partner for the further development and commercialization of the invention. It was introduced at [IATI-BioMed Israel 2013](#), the 12<sup>th</sup> National Life Science and Technology Week, held in the David InterContinental Hotel, Tel Aviv, Israel on June 10-12, 2013.

Dr. Yaakov Nahmias and his team from the Center for Bioengineering at the Hebrew University of Jerusalem developed a computational method to identify microvascular regions with high risk of leakage based on fluid dynamics. The method will enable ophthalmologists to identify microaneurysms with a high risk of leakage using adaptive optics. The scientists found that high risk is correlated with increased level of a protein called Von Willebrand factor (vWF), which has been associated with early development of diabetic retinopathy (a common diabetic complications of the eye).

Retinal microaneurysms are dilations of small blood vessels in the retina, and an early feature of diabetic retinopathy, one of the leading causes of blindness worldwide. Retinal microaneurysms reduce vision because they eventually cause fluid leakage from blood vessels and retinal edema. Localized leakage can be detected and treated using laser ablation slowing the progression of diabetic blindness.

"Diabetic Retinopathy is a leading cause of blindness and disability in the Western world," said Yaacov Michlin, CEO of Yisum. "The novel method developed by Dr. Nahmias will allow experts to rapidly identify and treat those microaneurysms that pose a high-risk of leakage, minimizing edema and saving vision. Moreover, the scientists open the route for targeted therapy or clinical detection using vWF, which they show serves as a protein marker for risky regions in the retina. By enabling early detection of high-risk areas,

treatment of diabetic retinopathy can shift from a reactive treatment to a preventive one, not only preventing blindness but also saving millions of dollars in medical costs."

### **About Diabetic Retinopathy**

Diabetic retinopathy is one of the leading causes of blindness in the Western world, affecting over 4 million people in the US alone. The disease is responsible for 5% of the cases of blindness worldwide and up to 17% of the cases in the Western world. The earliest sign of diabetic retinopathy are microaneurysms, local expansions of capillaries that disturb the hemodynamic forces experienced by the capillary endothelial lining, leading to dysfunction, leakage and edema. Diabetic retinopathy is associated with medical costs of over \$1 billion per year. With the growing prevalence of diabetes, these numbers are expected to double within the next few years.

### **About Yissum**

Yissum Research Development Company of the Hebrew University of Jerusalem Ltd. was founded in 1964 to protect and commercialize the Hebrew University's intellectual property. Products based on Hebrew University technologies that have been commercialized by Yissum currently generate \$2 Billion in annual sales. Ranked among the top technology transfer companies in the world, Yissum has registered over 8,100 patents covering 2,300 inventions; has licensed out 700 technologies and has spun out 80 companies. Yissum's business partners span the globe and include companies such as Novartis, Microsoft, Johnson & Johnson, Merck, Intel, Teva and many more. For further information please visit [www.yissum.co.il](http://www.yissum.co.il)

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