



**For immediate release**

## **Yissum Licenses Stem Cell Technologies for Spinal Therapy to TheraCell, Inc.**

Jerusalem, Israel, July 14, 2009 –Yissum Research Development Company of the Hebrew University of Jerusalem Ltd., the technology transfer arm of the University, today announced that it has licensed a novel package of stem cell related technologies to TheraCell, Inc. (California, USA), which will further develop and commercialize the technology for advanced regenerative medicine procedures such as spinal fusion. The technology was invented by a team headed by Professor Dan Gazit from the Faculty of Dental Medicine at the Hebrew University of Jerusalem.

The licensed technology includes an innovative, biologically compatible, oxygenated gel that improves bone regeneration and fusion of bone grafts. The novel technology will be used in conjunction with TheraCell's proprietary scaffold technology for enhancing the efficiency of spinal fusion procedures. The combined product is recognized as a medical device, enabling an expedited regulatory pathway.

"The novel technology invented by Prof. Gazit and his team is another example of the innovative and creative research at the Hebrew University of Jerusalem," said Yehuda Yarmut, Deputy CEO of Yissum. "The ability to ensure adequate oxygen levels for cells can help not only with bone healing and bone stem cells, but also holds great promise for other stem cells, as well as for the survival of engineered tissue and organ grafts."

Spinal fusion is a surgical technique used to immobilize two or more vertebrae, usually in order to eliminate the pain caused by abnormal motion of the vertebrae. The procedure relies on a graft of bone tissue in conjunction with the body's natural ability to grow new bone tissue. The current treatment requires the harvest of substantial amounts of autologous bone, while the oxygenated gel will significantly reduce the required bone harvest, accelerate and improve fusion success rate.

Professor Gazit's invention includes a special scaffold with a particularly high oxygen-carrying capacity, which aims to increase fusion rates by increasing local oxygenation at the surgical site. Scaffolds derived from this technology will act to improve oxygenation and encourage the activity of stem cells and bone-forming cells, or osteoblasts. In preclinical experiments in rodents, accelerated spinal fusion and bone fracture healing were observed, as well as improved stem cell survival.

Rich Grant, President and CEO, TheraCell commented, "We are tremendously excited about this unique enabling technology and the opportunity it represents. The

U.S. spine market is over \$6 billion annually with over 500,000 spine fusion surgeries being performed each year in the U.S. alone. With this technology we expect to be able to deliver products that are highly attractive to patients, health care providers and insurance payors, because they will significantly improve outcomes of these costly spine fusion procedures and reduce hospitalization periods, thus significantly lowering the cost of treatment.”

In addition, the licensing agreement includes novel and efficient methods for purifying and manipulating stem cells derived from patients. These methods for deriving autologous stem cells, also invented by Prof. Gazit's team, will be further developed and used by TheraCell in combination with a future, injectable or transplantable version of the scaffold that will enable an injectable therapy for spine disorders. Furthermore, TheraCell aims to develop a revolutionary point-of-care device for isolating and processing stem cells based on the Gazit's inventions. This "portable lab" will facilitate broad use of the injectable or transplantable, stem cell containing oxygenated gel.

### **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 \$1.2 Billion in annual sales. Ranked among the top technology transfer companies in the world, Yissum has registered 6,100 patents covering 1,750 inventions; has licensed out 480 technologies and has spun-off 65 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).

### **About Theracell**

TheraCell is a biomedical products company founded in 2008. Theracell is developing advanced technologies for biological and stem cell therapies in the field of regenerative medicine. The company was founded by a group of leading doctors and research scientists. The company is currently developing an advanced oxygenated scaffold for biological cell therapy in spine surgery.

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