



For immediate release

## Yissum Showcases Hebrew University's Breakthroughs in Advanced Materials Technologies

*Conference focusing on innovations in nanotechnology, sensors, coating materials, electronic and 3D printing, to take place on March 29 at Hebrew University Edmond J. Safra campus*

*During 2015, Yissum founded a record number of eight companies based on inventions of researchers from the Hebrew University's Center for Nanoscience and Nanotechnology*

Jerusalem, Israel, March 21, 2016 – Yissum Research Development Company of the Hebrew University of Jerusalem will showcase the Hebrew University's breakthroughs in the field of advanced materials and nanotechnologies in its *Technological Innovations in the Field of Advanced Materials* conference, to be held on March 29, at the Hebrew University Faculty of Science, Edmond J. Safra campus.

The past year marks a year of impressive achievements for Yissum in the commercialization of nanotechnology research performed at the Hebrew University. Eighty six patents applications were filed, 29 patents were approved and 16 licensing agreements were signed. Especially notable is the record number of eight new startup companies that were established during 2015, based on research performed by scientists at the Hebrew University's Center for Nanoscience and Nanotechnology. The companies are: **Nano AF**, developer of coating materials that prevent bacterial contamination; **Neteera Technologies**, developer of a remote sensing technology of various human biological indicators based on sweat ducts; **OphRx**, develops products based on a novel drug delivery technology platform for ocular uses; **Neoprol**, develops new formulations for anesthesia drugs; **Mercu-Removal**, develops novel processes for efficient mercury removal form gas streams; **TrioxNano**, develops nanoparticle-based targeted drug delivery system, **BioNanoSim**, manufactures nano-based delivery systems for the production of polymeric biodegradable nanoparticles; **Voyager Medical**, develops advanced self-absorbing surgical sutures.

One of the technologies that will be presented at the conference is an invention for the conversion of plastic waste into valuable industrial products. Current technologies for plastic oxidation and degradation are expensive, complicated and also generate large amounts of toxic by-products. Prof. Yoel Sasson and Dr. Uri Stoin from the Casali Institute of Applied Chemistry, at the Hebrew University of Jerusalem, invented a new and effective oxidation process for plastic waste degradation. The novel technology, which is applicable to a wide range of plastic polymers, is ecologically-friendly and is carried out under moderate conditions. Furthermore, the technology can be used either to fully oxidize the plastic polymers, yielding carbon dioxide and water, or to generate valuable industrial materials and fuels by opting for a partial oxidation of the plastic substance. These by-products, such as alkenes, alcohols and acids can then be separated in pure form for further use. Yissum has patented the technology and is now seeking a commercial partner for its further development.

Prof. Yossi Paltiel, Chair of the Applied Physics Department and part of the School of Computer Science and Engineering, at the Hebrew University of Jerusalem, will show a novel technology invented in collaboration with Prof. Shlomo Magdassi, from the Institute of Chemistry. He will present a method for inkjet printing of tunable and fixable hybrid nanocrystal/carbon nanotube sensors. Many sensors, emitters, transistors and logic devices use carbon nanotubes as their major electronic and optoelectronic building blocks. However, current carbon nanotube light sensors are opaque, not printable on flexible surfaces and their manufacture process is costly and inappropriate for large arrays. The new sensors are tunable at the UV-near infrared range by selecting the appropriate nanocrystals, and can be used with any commercial wet ink printer. The novel method enables fabrication of low-cost detectors that operate at room temperature, and can be printed onto large areas as well as on flexible substrates, such as buildings or cars, and used for a variety of purposes, such as monitoring dark conditions or detecting radiation. Yissum has patented the technology and is now seeking a commercial partner for its further development.

**Yaacov Michlin, CEO of Yissum, stated:** “2015 was an excellent year in terms of the business activities and commercialization of nanotechnologies originating from the Hebrew University. Especially notable is the acquisition of QLight Nanotech by Merck KGaA. QLight, which is based on Prof. Uri Banin’s research, develops products based on semiconductor nano-crystals for use in flat panel displays and efficient LED lighting. We are very proud that QLight’s staff remained at the Company’s site located at the Edmond J. Safra Campus of the Hebrew University, which now functions as Merck’s research center for quantum-materials for the display and lighting industry. This is an excellent example of Yissum’s vision, to translate academic innovation into novel products while creating employment opportunities in Jerusalem and Israel.”

“Outstanding research in the areas of nanotechnology and advanced materials is performed at the Hebrew University. In order to support the commercialization activities in the field, and following the investment opportunities we’ve already created in biotechnology through Integra Holdings,

and in agriculture through Agrinnovation, we now invest efforts to establish a new fund that will support promising nanotech and advanced materials projects,” **concluded Yaacov Michlin.**

### **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 9,325 patents covering 2,600 inventions; has licensed out 880 technologies and has spun out 110 companies including Mobileye, BriefCam, CollPlant and Qlight Nanotech. Yissum’s business partners span the globe and include companies such as Syngenta, Monsanto, Roche, 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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