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Yisum Introduces Novel Polymer-Clay Composites as Sorbents of Organic Pollutants for Water Treatment

Mekorot, Israel's national water company, provides business development and professional support

Technology to be presented at WATEC, the Water Technologies, Renewable Energy and Environmental Control Exhibition and Conference

Jerusalem, Israel, October 21, 2013 -Water pollution due to organic contaminants is a serious environmental concern because of the toxic and carcinogenic nature of pollutants. Organic contaminants are highly prevalent in the production process of various industries such as the food, agricultural, coal, tar, plastics, leather, paint, pharmaceutical and steel industries. Among the various water treatment methods, adsorption is considered one of the best due to its low cost, universal nature and ease of operation. In particular, clay minerals receive a great deal of attention due to their large specific surface area on the one hand, and low cost and toxicity on the other. However, the removal efficiency of organic molecules by these minerals is highly affected by various parameters and by the type of contaminant to be removed.

Now, Yisum Research Development Company of the Hebrew University of Jerusalem Ltd., the technology transfer arm of the University, introduces novel sorbents for pollutant binding based on clay minerals which are modified with polymers in order to maximize pollutant binding to the clay. Polymers with chemical compatibility with the pollutant are selected creating sorbents which are customized for a given pollutant. The novel polymer-clay composites have a higher pollutant removal capacity in comparison to activated carbon (the most common sorbent). The technology will be presented at the WATEC Conference, to be held in Tel Aviv, Israel on October 22-24, 2013.

The novel polymers were developed by Dr. Yael Mishaël and students, from The Robert H. Smith Faculty of Agriculture, Food and Environment at the Hebrew University, as part of research funded by the Kamin program of the Office of the Chief Scientist. In addition, Mekorot, Israel's national water company accompanied the project with business development and professional support led by its WaTech[®] division. Yisum is now searching for potential partners for further development and commercialization of the product.

"Water pollution by organic contaminants is a global concern. In developing countries, 70% of the industrial waste is dumped untreated into waters where they pollute the usable water supply. Even in high income countries, organic contamination is expected to increase due to the projected rise in fertilizer use for food production and in wastewater effluents," **said Yaacov Michlin, CEO of Yisum**. "It is therefore extremely important to develop cheap, efficient and safe methods for water treatment that will ensure a clean water supply to the world at large. The invention of Dr. Mishael is a very significant step in this direction, in particular because the novel polymer-clay composites can be tailored for the efficient removal of specific pollutants."

About Yisum

Yisum 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 Yisum currently generate \$2 Billion in annual sales. Ranked among the top technology transfer companies in the world, Yisum has registered over 8,100 patents covering 2,300 inventions; has licensed out 700 technologies and has spun out 80 companies. Yisum'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.yisum.co.il

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