



FOR IMMEDIATE RELEASE

## **Yisum Licenses to Melodea a Breakthrough Technology for Manufacturing Micro Crystalline Cellulose Composite Foams from Renewable Resources**

***- Holmen, a Swedish forest industry group, invests in Melodea –***

Jerusalem, Israel, March 14, 2013 - Yisum Research Development Company of the Hebrew University of Jerusalem Ltd., the technology transfer arm of the Hebrew University, has signed a licensing agreement with Melodea Ltd. for the further development and commercialization of a novel method for producing Micro-Crystalline Cellulose (MCC) from paper mill waste. The MCCs are then processed into micro-structured foams, which can replace fossil fuel-based foams in a vast variety of applications. The novel technology was developed by Professor Oded Shoseyov and Dr. Shaul Lapidot from the Robert H. Smith Faculty of Agriculture, Food and Environment, the Hebrew University of Jerusalem and co-founders of Melodea together with Mr. Tord Gustafsson a Swedish composite material expert.

In parallel, Holmen, a leading manufacturer in the forest based sector, has entered into an investment and sub-licensing agreement with Melodea, by which Holmen has become one of the major shareholders in Melodea.

MCC is produced by processing wood pulp, and is considered the new, environmentally-friendly and sustainable option for a variety of materials, including plastic and metal. MCC is transparent, strong, cost-effective, and safer than non-organic alternatives. During the process of paper production, around 30% of the total fibers initially produced are washed as sludge. In Europe alone, eleven million tons of waste is produced annually. The scientists found that fibers from paper mill sludge are a perfect source for MCC production, and have also developed a method of processing MCC into micro-structured foams. These MCC foams are highly porous and light weight. The new MCC based foams display technical performance which matches current high end synthetic foams. Application of these 100% bio-based foams, as core material in sandwich composites as well as in other fields, is currently being developed.

Yaacov Michlin, CEO of Yisum, said "We are very pleased with this agreement which brings together truly innovative technology from academia, a group of Israeli entrepreneurs and an important industry player. This is a leading

combination, which we believe has the potential to bring new green products to market."

"The Melodea team brings breakthrough technology and outstanding entrepreneurial drive; a combination we find compelling. We expect their products to have global impact in a large market," says Sven Wird, Holmen Group's Chief Technology Officer.

"We are proud to have Holmen join us and consider their investment as a vote of confidence in Melodea's technology," said Prof Oded Shoseyov, co-founder and board member. "Holmen has a proven experience of over 400 years in building a profitable industry and brings an outstanding added value to Melodea," said Prof Oded Shoseyov, co-founder and board member of Melodea. "Micro-Crystalline Cellulose is one of the most promising materials currently being developed. The variety of applications for MCC is vast, and could potentially make non-organic plastics a distant memory. Our team not only developed a way to produce MCC in a cost-effective manner from waste products of the paper industry, but has also invented a method for processing this promising material into foam, which is used in the composite industry as a core material in sandwich panels to achieve high strength, weight reduction, energy dissipation, and insulation."

### **About Holmen**

Holmen is a forest industry group that manufactures printing paper, paperboard and sawn timber and runs forestry and energy production operations. The company's extensive forest holdings and its high proportion of energy production are strategically important resources for its future growth. Holmen is listed on the Nasdaq OMX Nordic Exchange.

### **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 7,700 patents covering 2,200 inventions; has licensed out 580 technologies and has spun out 74 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 Melodea**

MELODEA is a dynamic R&D company pioneering the development of MCC from renewable resources for industrial applications. The company is backed by decades of experience in cellulose research, bio-micro technology coupled with decades of experience in composite materials. This gives Melodea unique

capabilities in developing and serving the markets with high performance bio based solutions. The company is devoted to introduce renewable solutions to the industrial world market. For further information please visit [www.melodea.eu](http://www.melodea.eu)

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