

Research leads to advanced trials of new cancer treatment

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Research by a Hebrew University of Jerusalem professor has led to the development of a product that has been shown in clinical trials to be successful in halting the growth of various types of cancer cells.

The research, conducted by Prof. Avraham Hochberg of the Silberman Institute of Life Sciences at the university, has won for him first prize among faculty members for this year's Kaye Innovations Awards, which was presented on June 9 during the annual Hebrew University Board of Governors meeting.

Prof. Hochberg was successful in isolating the H19 gene in humans and determining that it is significantly expressed in over 33 different forms of [cancer](#), including superficial bladder carcinoma and pancreatic, ovarian and metastatic liver cancer, while laying dormant and non-expressed in non-cancerous cells.

Research has also demonstrated that the H19 gene plays a significant role in the tumor development process by enabling tumor cells to survive under stress conditions, such as low serum and low oxygen levels, that are typical conditions of the environment in which [cancerous cells](#) develop. This survival supports the growth of the tumor and the development of metastases.

The research and understanding of the origin of cancer and metastases has progressed significantly in recent years. In light of scientific breakthroughs in cancer research, and the role of the H19 gene in such

processes, it is believed that an anti-cancer drug based on suppressing the expression of the H19 gene has the potential to provide benefits that are competitive with existing treatment methods.

Prof. Hochberg's research was patented by Yissum Research Development Company of the Hebrew University. In 2005 Yissum established BioCancell Inc., to which it licensed the technology. The company is now traded in the Tel Aviv stock exchange (TASE). BioCancell's leading product, BC-819, has demonstrated efficacy in clinical trials (now in an advanced stage) in Israel and the US for the treatment of human bladder, pancreatic and ovarian cancers.

The Kaye Innovation Awards have been given annually since 1994. Isaac Kaye of England, a prominent industrialist in the pharmaceutical industry, established the awards to encourage faculty, staff and students of the Hebrew University to develop innovative methods and inventions with good commercial potential which will benefit the university and society.

Source: Hebrew University

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