

TMP Media Release – Lecture, Dr Benjamin Reubinoff, Director of Hadassah Human Embryonic Stem Cell Research Center, Israel - 01/27/05

The promise and the business of human embryonic stem cell research.

Will stem cell research offer new pathways to treatment?

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Santa Barbara, Calif. – The University of California, Santa Barbara’s Technology Management Program and the department of Molecular, Cellular & Developmental Biology (MCDB) have cooperated to present a leading international stem cell researcher. Dr. Benjamin Reubinoff, Director of the Hadassah Human Embryonic Stem Cell Research Center, Israel. Reubinoff addressed UCSB faculty and invited guests on January 27th at The Engineering Science Building with the topic “The Promise of Human Embryonic Stem Cell Research”.

He leads a team from Israel's Hadassah University Hospital in Jerusalem which has used stem cells to treat rats with symptoms of Parkinson's Disease. Joel Rothman and Kenneth Kosik, Professor's attached to MCDB led the q & a which followed the lecture.

Stem cells are capable of changing to form different cells with a wide variety of functions throughout the body. This experiment indicated that the stem cells developed into the nerve cells which had previously been lost through Parkinson's. This was the first time human stem cells had proved an effective treatment in animals. The rats' behavior changed after their treatment. The progressive decline associated with Parkinson's Disease is caused by a loss of brain cells which produce a chemical called dopamine. When post-mortem examinations were carried out on the rats, it was found that the stem cells had developed into dopamine-producing cells. Reubinoff, who led the study, said “We believe that these observations are encouraging, and set the stage for future development that may eventually allow the use of embryonic stem cells for the treatment of Parkinson's disease in humans.”

However, he said “further studies would be needed before the treatment could be given to humans because the safety of the treatment could not yet be assured.”

US companies using existing stem cell lines include BioTransplant, Aastrom Biosciences (Nasdaq:ASTM), StemCells Inc. (Nasdaq:STEM), OrganoGenesis (AMEX:ORG) and Nexell Therapeutics (Nasdaq:NEXL).

Hadasit Medical Research Services and Development promotes and markets the intellectual property generated by the Hadassah Medical Organization. Israeli start-up Embryonic Stem Cell International (ESI) was founded in July 2001, just before the official NIH policy directive on stem cell research. ESI developed out of research by Dr. Reubinoff, and three colleagues from Australia, the Netherlands and Singapore. The researchers developed a technique to develop embryonic stem cells from surplus embryos, “in order not to waste them”. ESI’s discovery earned it a \$10 million investment, at a \$20 million company value, from Life Science Investments of Singapore and ES Cell Australia Pty Ltd. ESI’s first market is a treatment for Parkinson’s disease, and the company is trying to develop stem cells for the pancreas and heart. ESI has signed a development agreement with Quark Biotech (QBI) to use QBI’s proprietary technology platform to discover new genes such as growth and cell differentiation factors derived from embryonic stem cells.

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Content partially derived from BBC and Biolsrael information sources.

Dr. Benjamin E. Reubinoff;

Topic - “The Promise of Human Embryonic Stem Cell Research”