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"Stem cells could be the greatest medical advance in history"

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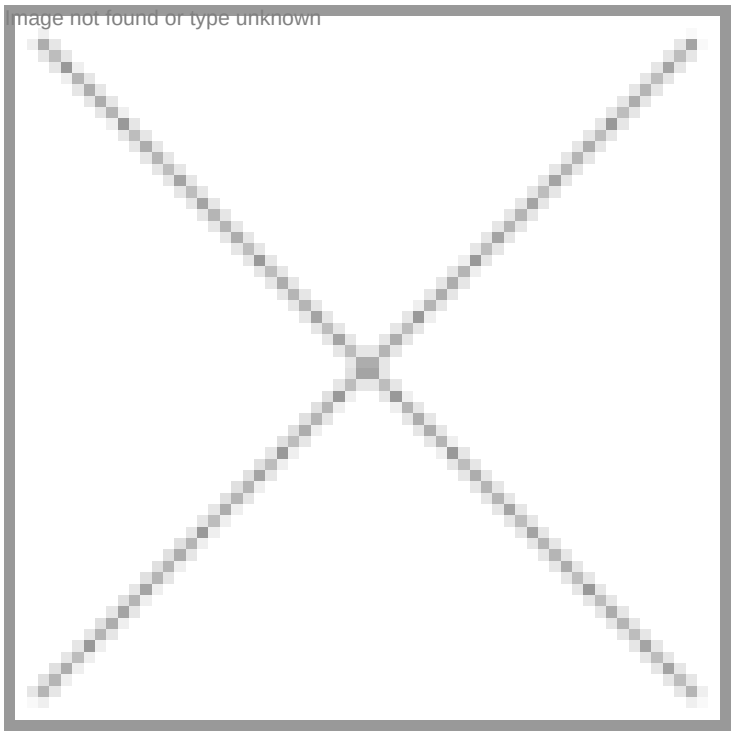

- Rachel Eiges, The Alexander Silberman Institute of Life Sciences, Israel

Comment on the potential application of stem cells.
I think they have great potential. Although I think we have a long way to go before we consider them for the use of clinical applications. I think we really have to develop much more efficient methods for their differentiation and working on testing their functions. The goal of stem cell therapy is to repair damaged tissue that cannot heal itself. Stem cells could be the greatest medical advance in history in the sense that most of our serious diseases can be cured.

Can you elaborate on your institution's research work?
The institute is affiliated to the Hebrew University of Jerusalem. It has several departments like biological chemistry, genetics, cell and animal biology, plant sciences, evolution systematics and ecology (ESE), neurobiology, microbial and molecular ecology and national and international research centres. I belong to the genetics department. The genetics department again has sections such as human genetics, animal genetics. Research at our institute includes areas such as genetic regulation and cellular differentiation in eukaryotes and interactions between chromosomes and the nuclear envelope, developmental, genetic and molecular analysis of complex characteristics in drosophila, in chicken and in mouse.

We have now settled down with certain methodologies. We have learnt how to morph the stem cells, how to manipulate them genetically and sort them and start working on them. They are a bit difficult to grow and difficult to do experiments with. We have been having problems in analyzing their functions and purifying them to specific cell types. So we are going slow. Actually we have been thinking of shifting from cell biology applications to basic research.

What do you think are the hurdles in the field of stem cell research?

Lately researchers have been thinking very applicably where funding is. There is a lot of money going into stem cells as there is a great demand for cell transplantation medicine. Stem cells have other applications too but since there is not much money involved here, people don't really appreciate the others uses of stem cells.

Namratha Jagtap