



RESEARCH2REALITY

Shining a light on research & innovation.

Using 'Genetic Trickery' to Fight Degenerative Diseases

An interview with Janet Rossant, President & Scientific Director, Gairdner Foundation
Chief of Research Emeritus, SickKids

I've been interested for many, many years in the fundamental question of how we all get here from a single cell: a fertilized egg. Cells divide, specialize, make all the tissues of our body, and lo and behold, we have a human being.

So we work on the first cell division that the embryo undertakes. And one of the first things they do is make cells that make placenta and cells that make the embryo. The cells that make the embryo are what we call pluripotent cells, and they are the cells from which you can get pluripotent stem cells. Hence, embryos to stem cells, and stem cells to treatments for degenerative diseases.

Along the way we've gone off into other things and studied brain development, heart development, blood vessels. We keep coming back to that tiny little embryo, and that's what we're still doing today.

What impact has your research made?

The most exciting experiments we ever did was where we took embryonic stem cells and said, well, if we can grow these cells in a petri dish forever and ever, what if we took them and asked, can we make a mouse out of stem cells?

And so that's what we did.

TODAY'S RESEARCH. TOMORROW'S REALITY.

