

Breast Milk Contains Stem Cells

Written by [Laurel Haring](#) Saturday, February 23 2008 13:55

An article at the Science Alert Network recently reported some pretty earth-shattering news about human breast milk: it contains stem cells. After you've caught your breath, read on to find out the ramifications of this amazing discovery. Dr. Mark Cregan, a molecular biologist at The University of Western Australia, has discovered that breast milk contains stem cells. He presented his research last month at the International Conference of the Society for Research on Human Milk and Lactation in Perth. (Read Catherine Madden's Science Alert Network [here](#) .)

What's the Big Deal?

The big deal here is that breast milk can be a source of ethically acceptable source of stem cells for use in research. Imagine what this will mean to scientists the world over who are striving to find treatments and cures for spinal cord injuries, diabetes, and Parkinson's disease and have, until now, faced decisions fraught with ethical pitfalls. Stem cells harvested from breast milk can put an end to those debates and leave everyone happy. No mean feat!

Breast Milk Is More Than Just Nutrition

"Breast is best" is the mantra of breastfeeding proponents around the world, and rightly so. However, formula manufacturers contend that while breast is best, their products provide nutrition that is about as close as you can get to breast milk. And parents who don't know the whole story about breast milk believe that nutrition is all that breast milk provides. But there's a whole lot more to breast milk than meets the eye.

Dr. Cregan believes that, in addition to providing nutrition, breast milk also passes along key markers that guide a baby as it grows to adulthood. He and the rest of the "breast-is-best" coalition are excited that his discovery could be the start of new revelations about breast milk.

A few years ago researchers discovered that breastfed babies have higher IQs. Antibodies and other agents in breast milk also help keep these babies healthier than babies who are fed formula. Dr. Cregan says that researchers also believe that the protective effects of breastfeeding continue beyond infancy and childhood, extending all the way to adulthood.

The Science Behind the Discovery

The article's author, Catherine Madden, writes that, "It was Dr. Cregan's interest in infant health that led him to investigate the complex cellular components of human milk."

He observed the vast complexity of cells and suspected that their precursors just might be there, too.

His team found cells that tested positive for the stem cell marker, nestin, and that some of the stem cells had the potential to differentiate into multiple cell types. This is what makes stem cells so important to researchers: these cells have the potential to develop into many different kinds of human tissue.

The Next Steps

Now that Dr. Cregan and his team have proven that these cells have the physical characteristics of stem cells, the next step, “is to see if they behave like stem cells.”

Madden concludes her article by stating that immune cells found in breast milk that are able to survive the baby’s digestive process “could provide a pathway to developing targets to beat certain viruses or bacteria.”

Grow-Your-Own Breast Implants

On a related note, the Human Nature page at Slate reports that scientists have grown customized breast implants from stem cells. So far, nearly 40 women have undergone this procedure, with no serious ill effects. (Read the whole article [here](#) .)

[Perhaps in the future the stem cells used to grow these implants will be harvested from breast milk. –Ed.]

About the Author

Laurel Haring is a writer. She lives with her family in Wilmington, Delaware, and posts semi-regularly to her blog, [Let Me Say This About That](#).

<http://www.typeamom.net/breast-milk-contains-stem-cells.html>