

## *Stem Cells from Baby Teeth*

*In 2000 the researchers at the National Institute of Health (NIH) discovered stem cells in adult teeth; this sparked the interest of the Sontaosa Shi, who was part of the research team. He decided to test baby teeth to see if they also had stem cells. At the time his daughter lost a baby tooth so he brought it to the lab, extracted the pulp and incubated it in a pitre dish. To his amazement, stem cells grew.*

*Stem cells are cells that are not mature and that are not specialized and can grow into different types of tissue, such as heart, muscle, nerves or blood components. The two characteristics that distinguish stem cells from normal cells are that they can differentiate into other types of tissue and they divide and multiply very rapidly for long periods of time.*

*The baby tooth stem cells meet these requirements and qualify as true stem cells. Some of the research has shown baby tooth stem cells can grow much faster than the adult tooth stem cell. Researchers now think that baby stem cells are more immature than adult cells and have the potential to develop into a variety of different tissues and particularly seem to develop into nerve tissue more readily than other types of stem cells. Dr. Shi's team has dubbed these cells "SHED" which stands for Stem cells from Human Exfoliated Deciduous Teeth.*

*This discovery has spurred the interest of researchers throughout the world involving baby tooth stem cells. One researcher, Dr. Christopher Nosrat, with the University of Michigan, states these cells may play an important role in treating Parkinson's disease. Other stem cell experiments have failed in treatment of this disease, but Dr. Nosrat says he feels that the baby tooth stem cells are much more robust and besides the potential*

*of growing new nerve tissue, they also have been found to release chemicals that help the remaining nerves survive.*

*Scientists have indicated that baby tooth stem cells may soon be banked like umbilical cord stem cells, saving these stem cells for treatment of ailments or diseases that may appear later in life. There is an advantage to using ones own stem cells; there is much less chance of rejection and tooth stem cells could possibly offer an advantage over embryonic stem cells in treating diseases because they are less likely to develop into tumors.*

*It should be noted even though there are no treatments using umbilical cord stem cells, many people are banking there children's umbilical cord stem cells in hope that one day scientist will find ways to use them in treating diseases that may affect the child later in life.*

*There are several commercial entities who offer banking of baby teeth already even though there are no know treatments using them. Someday we may be paying the toothfairy and banking our children's baby teeth.*

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