

[News Front Page](#)[World](#)[UK](#)[England](#)[Northern Ireland](#)[Scotland](#)[Wales](#)[Business](#)[Politics](#)[Health](#)[Medical notes](#)[Education](#)[Science/Nature](#)[Technology](#)[Entertainment](#)[Have Your Say](#)[Country Profiles](#)[In Depth](#)[Programmes](#)

RELATED SITES

[BBC SPORT](#)[BBC WEATHER](#)[cBBC news](#)[BBC ON THIS DAY](#)

Last Updated: Wednesday, 23 April, 2003, 00:34 GMT 01:34 UK

[Email this to a friend](#)[Printable version](#)

Stem cells found in baby teeth

Scientists have found another source of stem cells for research - the pulp of a child's first set of teeth.



Child teeth could be a source of stem cells

The finding, by dental researchers in the US, could further fuel the debate over the need for such cells to be taken from human embryos.

Stem cells are the body's "master cells" - they have the potential to develop into a wide variety of different types of cells.

Many scientists hope that they will one day be able to use stem cells to replace vital tissues lost through disease or injury.

Currently, the undeveloped embryo offers stem cells in their purest form.

However, there is fierce ethical opposition to these experiments, and many scientists are looking for an alternative source.

“ The stem cells in the tooth are likely latent remnants of an early developmental process ”

Dr Songtao Shi, National Institute of Dental and Craniofacial Research

The latest research, published in the Proceedings of the National Academy of Sciences, involves cells extracted from the pulp of deciduous, or "baby" teeth, which normally fall out around the age of six or seven.

Daughter's teeth

Dr Songtao Shi, from the National Institute of Dental and Craniofacial Research, said that the cells they found had the ability to be manipulated in the laboratory to form bone, dentine (tooth) and even nerve cells.

It is the latter that is likely to be of most interest to researchers, as the hope is that neuronal stem cells will one day be able to help treat nerve damage.

The teeth in question were retrieved from Dr Shi's daughter Julia.

He said: "Once it was out, we sat and looked carefully at the

SEE ALSO:

[Stem cells 'target disease'](#)
20 Dec 02 | Sci/Tech

[Stem cell hope for heart patient](#)
21 Apr 03 | Health

[MEPs vote to ban stem cell research](#)
10 Apr 03 | Health

RELATED INTERNET LINKS:

[National Institute of Dental and Craniofacial Research](#)
[Proceedings of the National Academy of Sciences](#)

The BBC is not responsible for content of external internet sites

TOP HEALTH STORIES NOW

[Sars travel alert extended](#)
[NHS private income rising](#)
[Worm risk from dog stroking](#)
['I caught Sars on holiday'](#)

tooth."

Seeing some red-coloured tissue, he extracted it and went to examine it in the laboratory, and managed to extract living stem cells from it.

Umbilical supply

Further experiments on baby teeth retrieved from other children as nature took its course, revealed more cells which had the ability to grow in laboratory culture.

He said: "Doctors have successfully harvested stem cells from umbilical cord blood for years.

"Our finding is similar in some ways, in that the stem cells in the tooth are likely latent remnants of an early developmental process."

Professor Peter Andrews, a stem cell researcher from the University of Sheffield, said the finding was "plausible", probably the result of the same process which allowed certain stem cells to be extracted from bone marrow.

He said that the embryo remained the most practical current source of stem cells.

He said: "They are the best defined and characterised - and we know how they can be turned into lots of different things.

"They remain the cells about which we know the most."

 [Email this to a friend](#)

 [Printable version](#)

LINKS TO MORE HEALTH STORIES

[E-mail services](#) | [Desktop ticker](#) | [News on mobiles/PDAs](#) | [Headlines for your site](#)

 **MMIII**

[Back to top](#)

[News Front Page](#) | [World](#) | [UK](#) | [England](#) | [Northern Ireland](#) | [Scotland](#) | [Wales](#) | [Politics](#)
[Business](#) | [Entertainment](#) | [Science/Nature](#) | [Technology](#) | [Health](#) | [Education](#)
[Have Your Say](#) | [Country Profiles](#) | [In Depth](#) | [Programmes](#)

[BBCi Homepage >>](#) | [BBC Sport >>](#) | [BBC Weather >>](#) | [BBC World Service >>](#)

[Help](#) | [Feedback](#) | [News sources](#) | [Privacy](#)