

## Stem Cells of the Dental Pulp

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### Abstract

Dental Pulp Stem Cells (DPSCs) can be found within the cell rich zone of dental pulp. These stem cells, under specific stimuli, differentiate into many cell types which have wide therapeutic applications.

The dental stem cells are derived from both deciduous and permanent teeth. The viable dental stem cells are very simple to collect, without any mortality and morbidity.

Dental pulp stem cells can be obtained from the patient's vital pulp with the help of stem cell markers, which help in the identification of stem cells.

It has been observed that SHED (stem cells from the human exfoliated deciduous teeth) has the potential to differentiate into functional vascular endothelial cells by a process that resembles that of vasculogenesis.

By placing the dental pulp stem cells on biodegradable scaffolds, tooth-like tissues have been generated. Although dental tissues are regenerated, the success rate for the correct arrangement of a natural tooth is only 15-20%.

Stem cells play a vital role in treating various lives threatening diseases. As conclusion, the identification of several types of epithelial and mesenchymal stem cells in the tooth is a significant achievement. But still, the control of morphogenesis and cytodifferentiation is a challenge that necessitates a thorough understanding of the cellular and the molecular events which are involved in the development, repair and the regeneration of teeth. Until the stem cells in the dental pulp are completely explored, they still remain a mystery inside the tooth.

**Key Words:** Pulp, Stem cell, Tooth, Regeneration.

### Poster Presentation

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