

# TRANSCOMM

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## KEYWORDS

Dental pulp derived stem cells  
Regenerative/reparative  
medicine  
Allogenic stem cell transplant  
Mesenchymal stem cells  
Adipocytes  
Chondrocytes  
Neurons

## Medically Approved Regenerative Treatments Using Dental Stem Cells



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Teeth, which happen to be the most natural and noninvasive source of stem cells owing to their convenience and affordability to collect hold promise for a range of difficult to treat medical indications. The regenerative capacity of dental pulp derived stem cells has been a topic of utmost interest to clinicians and researchers alike in the field of regenerative medicine. The story of dental stem cells dates back to 2003, when

Dr. Songtao Shi, a pedodontist discovered baby tooth stem cells in the deciduous teeth of his six year old daughter and named the cells as stem cells from the human exfoliated deciduous teeth (SHED). Dental Pulp Stem Cells or DPSCs as they are commonly referred to, are found within the "cell rich zone" of the dental pulp. Their multipotent nature can be attributed to their origin from the neural crest. Owing to their multipotent nature, these DPSCs can effectively differentiate into many cell types which include adipocytes, neurons, chondrocytes and mesenchymal stem cells under specific stimuli. Since they can be found in both adults and children alike, their use in regenerative and patient specific treatment of certain ailments has been gaining rapid momentum. One of the major advantages of DPSCs over umbilical cord/blood stem cells is that the dental stem cells are derived from the deciduous and permanent teeth (wisdom/corrective) and can be collected later after birth unlike their umbilical cord counterparts. Collection of teeth for dental pulp and isolation of stem cells from the pulp can be carried out without raising any ethical red flags as the procedure is very simple/non-invasive without any associated mortality or morbidity. Recent advances in the field of dental stem cell clinical research have made it possible to employ them in reparative and regenerative roles. This newsletter is an effort to bring to the reader's attention some of major advancements in the "close to reality of DPSCs in clinics". We hope the reader while appreciating the significance of DPSCs would strongly consider storing their loved ones' about to fall milk teeth derived stem cells even if the loved ones Cord/blood were banked as the medically approved applications are different for different sources.

*Anand Soorneedi*



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