

## Clinical translation of stem cells: Current concepts

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The American Academy of Pediatric Dentistry “recognizes the emerging field of regenerative medicine and encourages dentists to follow future evidence-based literature in order to educate parents about the collection, storage, viability, and use of dental stem cells with respect to autologous regenerative therapies.” (2008) This perspective-presentation will provide an overview on the current concepts of stem cell clinical applications with specific emphasis on mesenchymal dental stem cells as they relate to tissue repair and regeneration. The objectives of the presentation are threefold. First, to review the research to date in the field of dental stem cells in clinical applications. Second, to provide an overview of the types of stem cells that can be isolated from the dental and gingival tissues and compare with other sources of mesenchymal stem cells. Third, to discuss the issues focusing on the clinical translation of stem cells in the field of regenerative medicine and dentistry. The presentation will conclude by highlighting the challenging yet promising potential of stem cell therapies and regenerative medicine/dentistry in offering the possibility of repairing tissues damaged from disease including certain cancers and hence improving patient outcomes.

### Biography

Zikra Alkhalayal has completed her undergraduate dental training from the Royal London, England, postgraduate training in Pediatric Dentistry from University of Illinois, Chicago, USA and was the first Saudi to Obtain the American Board of Pediatric Dentistry. Currently, Consultant Pediatric Dentist and Joint Appointee/Scientist, Stem Cell and Regeneration Program in King Faisal Specialist Hospital & Research Centre, Riyadh, Saudi Arabia. She was recently a Visiting Research Fellow, King's College, London, UK and Visiting Research Associate, Harvard School of Dental Medicine, USA. Her current interests are in the development of Special Care Dentistry for the medically compromised, procedural sedation, quality of care and the translational aspects of stem cell and regeneration.

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