

# **STEM CELLS IN DENTISTRY: ARE THE PATIENTS' EXPECTATIONS MEET?**

Martin Pendola, MS, DDS<sup>1</sup> and Subrata Saha, PhD<sup>2</sup>

1. School of Graduate Studies

2. Department of Orthopaedic Surgery & Rehabilitation Medicine  
SUNY Downstate Medical Center

Stem Cells, the pluri-potential cells that produce the cells to form our whole organisms starting from a single egg after conception, are currently considered as a new horizon and hope to fight several complex and dramatic diseases today. The possibility for these cells to renew and re-growth tissues to replace the damaged ones is currently a reality for several pathologies and many others are being tested.

Recently, stem cells research has been addressed towards dentistry, since deciduous teeth and wisdom teeth have been proven to be reservoirs of stem cells, with the great advantage of easy harvesting, compared with other sources such as bone marrow, umbilical cord (only one chance in patient's life), to mention some.

In the market, several companies offer the service of harvesting and storage of stem cells derived from dental tissues for the patients. The dentist has the chance to harvest the tissue during a routine procedure, usually required for the patient, and it is later sent to the storage facility.

While the simplicity of the process is appealing to professionals and patients, one question remains: What is the curative potential of these particular stem cells? Do they have the potential to generate any kind of cells or, as adult stem cells, they can repopulate and regenerate the tissue where they grow?. And more importantly, are the patients aware of these limitations, or are stem cells perceived just as a fully customizable cure for any catastrophic disease?