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Nota di contenuto	Dental Evolution -- Tooth development -- Dental Pulp is a Connective Tissue -- Dental Pulp Stem Cells (DPSC) -- Isolation methods of DPSC -- Characterization of DPSC -- Reprogramming of DPSC to induced pluripotent stem cells (iPSC) -- Immunomodulatory effects of DPSC -- Dental Pulp is a Complex Adaptive System.
Sommario/riassunto	Stem cell technology is moving forward at a tremendous rate. Recent discoveries have surprised even the most expert researchers. While every piece of new data broadens the current knowledge and contributes to this moving forward, the new data also serve as paradigm shifters of fundamental knowledge of cell biology. While the question 'What is a Stem Cell' may now seem to basic to even discuss, there are still some discrepancies, however, between groups in terms of their functional roles. Teeth develop from the ectoderm of the first branchial arch and the ectomesenchyme of the neural crest. Deciduous teeth start to form between the sixth and eighth weeks, and permanent teeth begin to form in the twentieth weeks. Several studies have demonstrated that the pulp from both adult teeth and deciduous teeth contains dental pulp stem cells. Several factors have made them very attractive as a model system for many researchers; they are multipotent, ethically and non-controversially available in large numbers, immuno-compatible, developmentally primitive, easy to isolate and have high expansion potential in vitro. However, many

controversies still exist in the field. There are several unanswered questions in the biology of dental pulp and odontoblasts. This new volume in the SpringerBriefs in Stem Cells series presents an evaluation of stem cells from human dental pulp as a reliable stem cell source for cell-based therapy to stimulate tissue regeneration.

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