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Erratum to: Adult Mesenchymal Stem Cells Explored in the Dental Field

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The paragraph under DFSCs: "However, DFSCs exhibit telomerase activity, a characteristic feature of ESCs [77, 78, 85]. Telomerase is an enzyme that adds DNA sequence TTAGGG to the 5′ end in the telomere regions of the chromosomes. Normally the telomere region in each chromosome is shortened with every replication cycle (mitosis). Due to the action of telomerase in some cells expressing it, including ESCs and cancer cells, this region is not significantly shortened during mitosis and aging of the chromosomes is hindered, which principally confers immortality to the cells. Whether this expression is an advantage or

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may pose a potential risk for malignant tumor formation similar to the situation in ESCs in tissue engineering still needs to be extensively investigated." has not been published in its correct context.

It belongs to the SCAP section of the chapter which in its correct version should read as follows: "Stem cells from the apical papilla (SCAP) were first described in 2008 [78].Compared to DPSCs and BMMSCs, SCAP showed similar osteo/dentinogenic with lower adipogenic differentiation potential. SCAP further expressed a higher proliferation rate and mineralization potential compared to DPSCs [2]. Similar to other stem cell populations, SCAP expressed STRO-1 and CD146, were positive for CD34 and negative for CD45 as well as showed multiple dentinogenic markers including ALP, bone sialophosphoprotein, osteocalcin [2], and the growth factors TGFbetaRI and FGFR1 [78]. Compared to DPSCs, SCAP express lower levels of DSP, matrix extracellular phosphoglycoprotein (MEPE), transforming growth factor b receptor II (TGFbRII), FGFR3, Flt-1 (VEGF receptor 1), Flg (FGFR1), and melanoma-associated glycoprotein (MUC18) [30]. Upon stimulation with a neurogenic medium, SCAP expressed neurogenic markers as nestin and neurofilament M [78]. However, SCAP exhibit telomerase activity, a characteristic feature of ESCs [77, 78, 85]. Telomerase is an enzyme that adds DNA sequence TTAGGG to the 5′ end in the telomere regions of the chromosomes. Normally the telomere region in each chromosome is shortened with every replication cycle (mitosis). Due to the action of telomerase in some cells expressing it, including ESCs and cancer cells, this region is not significantly shortened during mitosis and aging of the chromosomes is hindered, which principally confers immortality to the cells. Whether this expression is an advantage or may pose a potential risk for malignant tumor formation similar to the situation in ESCs in tissue engineering still needs to be extensively investigated."

In addition the reference number 53 should be placed after "Stem cells from human exfoliated deciduous teeth (SHEDs) were identified in freshly exfoliated deciduous teeth containing living pulp remnants by Miura and colleagues" in the text, reference number 8 should be placed after "In contrast, Cordeiro and coworkers showed that when SHEDs were seeded in poly-L-lactide acid (PLLA)-scaffolds and transplanted into the subcutaneous tissue of immunodeficient mice, they differentiated into odontoblast like cells and into blood vessels that anastomosed with the host vasculature forming a continuous vascular supply to the newly implanted construct" and reference number 72 should be placed after "A study by Seo and colleagues initially identified and characterized human PDL-derived stem cells from extracted teeth as periodontal ligament stem cells (PDLSCs)" in the text.