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‘Epigenetic characteristics, genetic profiles, and regenerative potential of periodontal progenitors’

Abstract: Periodontal tissues develop from neural crest progenitors through dental follicle intermediate progenitors into alveolar bone osteoblasts, cementoblasts, and periodontal ligament fibroblasts. Here we have used systems biology to assess the changes involves in periodontal lineage differentiation. These studies revealed a significantly increased level of ecm/adhesion proteins in the periodontal ligament fibroblast population, a high number of osteogenesis factors in alveolar bone osteoblasts, and generally lower levels of gene expression in the cementoblast population, especially in the cytokine group.

Our studies also identified a number of relative marker genes, including IL6, PITX2, THBS2, and GDNF for dental follicle progenitors, SFRP1 for periodontal ligament progenitors, ASPN and PTGDS for alveolar bone progenitors, and keratin 18, netrin 4, Jagged 1, and Dkk 1 for cementum progenitors.

Read more at www.schulich.uwo.ca/dentistry/research/seminar_series.html

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