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Glial cell derived neurotrophic factor promotes dental pulp stem cell migration**Nan Xiao**

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Preserving the vitality of the teeth is critical in maintaining the function and esthetics during dental treatment. Dental pulp stem cells (DPSCs) are mesenchymal cells that are demonstrated to possess stem cell properties, such as self-renewal, proliferation and pluripotency. DPSCs can be obtained through non-invasive procedure from the dental pulp and become potential resources for tissue regeneration. Neurotrophic factors are known to promote survival and growth of neurons. In the present study, we examined the expression of the glial cell derived neurotrophic factors (GDNF) family ligands and receptors, and characterized the intracellular localization of them in DPSCs. GDNF family ligands increased the migration of the DPSCs. In addition, we found the AKT and MAPK pathways are downstream of GDNF in regulating the DPSC wound healing and migration. Our results indicate that neurotrophic factors play a role in dental pulp regeneration and may be potential novel therapies for post pulpotomy treatment in adult teeth.

Biography

Nan Xiao is an Assistant Professor of the Department of Biomedical Sciences, Arthur A. Dugoni School of Dentistry, University of Pacific. She is a member of the American Dental Education Association (ADEA) and International Association of Dental Research (IADR). She serves as editor for multiple scientific journal. She also works intensively to promote the dental academic career pathways for dental students. Her academic interest include research in application dental pulp stem cells mediated tissue regeneration and integration the pedagogic innovations in dental education.

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