

Therapeutic applications of dental pulp stem cells in veterinary medicine

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Stem cells treatment has been a considerable research interest over the last decade. Several stem cell types have been studied as the possible candidates to restore the structure and function of damaged tissues and organs. The dental pulp stem cells (DPSCs) have shown potential for their use as an alternative resource in regenerative medicine. DPSCs have mesenchymal stem cell-like (MSC) qualities, including the capacity for self-renewal and multi-lineage differentiation potential. In this study, we demonstrate the potential applications of DPSCs as a tool to repair damaged tissues and organs. Diseases related to chronic inflammation such as ischemic heart diseases, osteoarthritis, tendonitis, ocular injury and chronic wounds have been investigated through experimental and clinical trial design to clarify the use of DPSCs treatments. Transplantation of DPSCs provided a good option in terms of tissue regeneration and remodelling. This study suggested that DPSCs might provide a new perspective for translational medicine. However, important points in DPSCs biology, such as homing and immune-regulation require further study of underlying mechanisms to support the application of DPSCs in the future.

Biography

Petchdee has completed her PhD from University of Glasgow at 2009. She later worked as a lecturer at faculty of veterinary medicine, Kasetsart University. She has published more than 10 papers in reputed journals and has been an editorial board member of many reputed journals.

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