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MESENCHYMAL STEM CELLS DERIVED SECRETOMES IN WOUND HEALING AND SKIN REJUVENATION STATE OF THE ART

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Currently available treatments for chronic wounds are inadequate. A clearly effective therapy does not exist, and treatment is often supportive. This is largely because the cellular and molecular processes underlying failure of wound repair are still poorly understood. With an increase in comorbidities, such as diabetes and vascular disease, as well as an aging population, the incidence of these intractable wounds is expected to rise. As such, chronic wounds, which are already costly, are rapidly growing as a tremendous burden to the health-care system. Mesenchymal Stem cells derived secretomes have garnered much interest as a therapy for chronic wounds due to their inherent ability to differentiate into multiple lineages and promote regeneration. Herein, we discuss the types of mesenchymal stem cells derived secretomes used for chronic wound therapy, as well as the proposed means by which they do so. In particular, we highlight mesenchymal stem cells (including adipose-derived stem cells), endothelial progenitor cells, and fetal stem cells. We include the results of recent in vivo studies in human clinical trials. Stem cells derived secretomes promise improved therapies for healing chronic wounds and skin rejuvenation, but further studies that are well designed with standardized protocols are necessary for fruition.

Biography

Indah Julianto graduated "as a general practitioner in 1998, as a Dermatovenereologist from Airlangga University, Surabaya, Indonesia in 1989 and as a Doctor from Airlangga University, Surabaya, Indonesia in 2000". After graduation, she worked as professor in Sebelas Maret University, Indonesia. Her current research explores about wound healing. She is also passionate about Stem Cell. She wrote three papers, which have been published in International and National Congress of Dermatology.

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