The application of human mesenchymal stem cell for Alzheimer’s disease

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Various groups have presented findings that human mesenchymal stem cells (MSCs) have both immunomodulatory and trophic properties. MSCs tend to act indirectly at sites of injury or damage through the secretion of paracrine factors \textit{in vitro} and \textit{in vivo}. For example, our studies have been done using a transgenic Alzheimer's disease mouse model where intraparenchymal injections of MSCs resulted in the reduction of amyloid plaque levels, anti-apoptosis, and activation of endogenous neural stem cell and also activate proteasome in neuron. In addition, efficient MSC delivery is also a significant issue for human study. By possessing a broad range of functions, MSCs hold great potential in being used as a novel treatment for various diseases including neurodegenerative disorders.

Biography

Jong Wook Chang Ph.D has his expertise in translational and clinical research of stem cells for neurological diseases including CNS and PNS. Especially, he has made effort to identify therapeutic soluble factors secreted from human mesenchymal stem cells (MSC) to understand therapeutic effect of MSC. When he was a director of MEDIPOST Co., Ltd, he was a leader of clinical trial of MSC therapeutics for Alzheimer’s disease. Now he is responsible for management of cGMP facility in Samsung Medical Center to produce clinical grade of MSC for clinical trials.

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