

# **Development of an Innovative Method for Modulating Fibrosis by Human iPSC Cell-Derived Neural Crest Cells**

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With the advent of an aging society, the importance of prevention and treatment of various chronic diseases has been pointed out. Inflammation and fibrosis control are considered to be important as the underlying pathology common to chronic diseases. We focused on the wound healing mechanism during the embryonic period and investigated neural crest cells (NC) that have the ability to migrate during the embryonic period. In this study, we focused on neural crest cells derived from iPSCs to overcome disease phenotypes, and found that they secrete a secretome that acts in an inhibitory manner against inflammation and is useful in disease models. Since neural crest cells derived from living organisms have a relatively limited capacity, induced pluripotent stem cells (iPSCs) derived neural crest cells may be advantageous for cell therapy and may enhance regenerative functions. However, there are some barriers to clinical application, such as standardization of production methods, product quality control and standardization, and in vivo viability, when considering extrapolation as a regenerative medicine product, but the potential as a new cell source with interesting possibilities is promising.