

### *In vitro* Reconstruction of Hair Bulb by Self-aggregated DP-like Tissues

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The hair follicle is small, but complex and a dynamic organ. In humans, it plays an important role from the esthetic aspect of social life. In hair follicles, epithelial-mesenchymal interaction (EMI) has been known to mediate important functions such as the development and maintenance of hair follicle, growth of hair, activation of hair cycle. But, its mechanism has not been elucidated yet. In our study, by utilizing culture-expanded dermal papilla (DP) cells which have lost already aggregative activity, cell-aggregated spheroidal DP-like tissues were produced by a special culture condition *in vitro*, and hair follicle inductive capacity pertinent to the aggregative activity was evaluated. We were confirmed by light microscope that the reconstructed DP-like tissues generated by such procedure had the size and shape similar to actual DP. The reconstruct DP-like aggregates could be made by self-aggregation method *in vitro* with human hair follicular dermal papilla cell. The reconstructed DP-like tissues expressed type IV collagen, laminin and versican. The reconstructed DP-like tissues had inducing activity of hair bulb structure similar to intact DP.