

The study on the mechanism of formation of the skin utilizing a reconstituted skin model

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The mechanism of formation of skin was studied using a reconstituted skin model. The dermal model was made by culturing fibroblasts in three dimensional lattices of collagen (collagen gel culture). It was found in this model that cells recognize and bind collagen fibrils utilizing their cell surface protein, cellular fibronectin (cFN). Collagen fibrils induced the synthesis and phosphorylation of specific proteins in cells. To develop a technique to grow hair follicles in the skin model, dermal papilla cells were successfully immortalized by transfecting them with SV40 viruses. These cell lines should be useful for identifying a hair-inducing factor.