

(シンポジウム)

「毛包脂腺系を科学する—毛髪のサイエンスと新しい育毛剤へのアプローチ」

発毛のメカニズム

田島 正裕*

Hair Growth Mechanisms

Masahiro TAJIMA*

Abstract

By the improvement of the culture techniques of hair follicle cells and the molecular biology, some studies about the behavior of epithelial cells and mesenchymal cells in hair follicle have been published. In this review, I summarized the reports concerning hair growth, that is the step from telogen phase to anagen phase in hair follicle cycle, in order to the application to hair growth promoter. The cross-talk between dermal papilla cells and stem cells of hair keratinocyte may play an important role on the trigger of shift to anagen from telogen phase. The stem cells have been mainly discovered in the bulge region. Some evidences show that the matrix cell in hair bulb also contains the stem cells. However, the detail mechanisms of the initiation of anagen phase still remain as unclear. Dermal papilla is going down in the skin through the early anagen phase, and then constitute the large hair bulb with hair keratinocyte. The experiments of the motility of cultured dermal papilla cell suggest that the motility occur due to autocrine factor(s). The deduced mechanisms of hair growth by immunosuppressants are discussed. The interaction between hormone receptor complex and immunosuppressant may be important for the hair growth.

Key words: hair growth, hair cycle, hair follicle, dermal papilla, hair keratinocyte.