

〈教育セミナー〉

(21世紀を迎えてのアンチエイジング—髪を美しく保つために)

毛 器 官 の 形 態 学

伊藤 雅章*

Morphology of Hair Apparatus

Masaaki ITO*

Abstract

Hair apparatus in anagen is a cylindrical multi-layered epithelial tissue, each cell layer of which shows characteristic cell differentiation and keratinization. At the beginning of catagen, the hair bulb including hair matrix, which surrounds still intact dermal papilla, undergoes cell degeneration. Subsequently, the hair root composed of outer root sheath cells shrinks up by apoptosis of the epithelial cells themselves. In telogen, the club hair root is surrounded by an outer root sheath layer showing a keratinization without keratohyaline formation. A secondary hair germ generates at the lower end of the telogen hair follicle; the germinative cells may originate from stem cells located in the hair bulge portion of the hair follicle. During the hair cycle, hair dermal papilla cells are known to play important biological roles operating induction, acceleration or termination of the cell proliferation of hair epithelial cells. These functions have been found to be mediated by several cytokines such as IGF-1, HGF, FGF 5, and so on. It seems very important for hair cosmetologists to understand basic knowledge in hair biology, especially in hair morphology.

Key words: human hair apparatus, morphology, cell differentiation, hair cycle, hair dermal papilla cell.