

〈シンポジウム〉
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Introduction for the Bioengineering of the Skin

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Abstract

Because the skin is a visible and easily accessible organ, dermatologists have been mostly trained based on the tradition of descriptive dermatology. Skin histopathology has also become important and unique expertise of dermatologists. Thus, the introduction of modern technologies into the field of dermatology has been rather delayed as compared to other disciplines. However, even such diagnostic expertise of dermatologists has been proven to be totally incompetent when they must deal with individual skin differences in normal people or when they see senile xerosis or the uninvolved skin of patients with atopic dermatitis. Moreover, the histopathologic studies are definitely invasive ones requiring surgical procedures for biopsy that always leaves unsightly scars in subjects, in addition to causing pain. For the past 20 years, a great progress has been made in the field of non-invasive instrumental measurements of the skin. The technology is showing daily advances and we are now facing floods of information about new instrumental techniques that even enable us to observed microstructures of the cutaneous tissue. In the present symposium on bioengineering and the skin, four of the expert Japanese cosmetic scientists bravely challenged the difficult problems in this field. Namely, they tried to address to such problems as kusumi, the unique loss of transparency of the facial skin observed in middle aged Japanese females, as well as skin aging and evaluation of the efficacy of vitalizing agents of the skin metabolism. Through their studies we are now beginning to understand the usefulness of the skin bioengineering.

Key words: instrumental measurement.