

# Mandom Discovers the Scalp-Softening Effect of Keratinocyte Growth-Factor- Mimicking Peptides

Mandom Corporation (Headquarters: Osaka; CEO: Motonobu Nishimura; hereinafter, "Mandom") conducted a study of the scalp in Japanese men, in collaboration with Ayako Ito, Director of the Medical Corporation Xanadu Ayako Ito Clinic, with the aim of improving the functionality of cosmetic products (quasi-pharmaceuticals).

Previous studies showed that the scalp of men with thinning hair is harder and contains a higher quantity of sebuml.

The present study was conducted with the aim of improving poor scalp condition, and it showed that the scalp was softened and its condition improved by applying keratinocyte growth-factor-like peptides (oligopeptide-41; hereinafter, KGF- mimicking peptides).

The results of this study were announced at the 34th Annual Meeting of the Japanese Society of Aesthetic Dermatology held from 8/6 to 8/7/2016.

\*Reference: 12/14/2015 News Release

"Mandom reveals the actual state of the easily damaged male scalp and the improvement effect of scalp lotion."

#### 1. Focus on improving hard scalp in order to prevent hair loss in the future

In its previous research on the male scalp, Mandom determined that the scalps of men with thinning hair in their 30s to 40s were harder and contained a higher content of skin oil than the scalps of men of the same age without thinning hair.

Believing that the scalp must be softened and its condition improved to preventhair loss in the future, Mandom investigated the effect of KGF-mimicking peptides, which have a structure similar to KGF and are said to promote the keratinocytes and activate dermal papilla cells, on the improvement in the scalp condition.

#### 2. Effect of KGF- mimicking peptides (oligopeptide-41) on the scalp

Forty-two healthy Japanese men were divided into 2 groups. In one group, a scalp model lotion containing KGFmimicking peptides was applied, and in the other group, a scalp model lotion that did not contain these peptides was applied. In both groups, the lotions were applied once daily for a period of 4 weeks, and the change in scalp hardness before and after application was measured. When the scalp model lotion was applied, it was applied to the surface of the skin gently in order to prevent effects due to massaging. The results showed that the scalps of men who applied scalp model lotion containing KGF- mimicking peptides became softer in both the parietal and occipital regions of the head.

#### (Figure 1, Figure 2)

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The scalp was understood to become softer from using scalp model lotion, but the present study showed that the scalp was softened more and its condition was even more improved as a result of the additive effect of the KGF-mimicking peptides, in addition to the moistening effect of the scalp lotion. Mandom will continue to study the male scalp in the future and apply the findings in developing scalp-care products.

### <References>

Change in scalp hardness due to repeated application of model scalp lotion

Figure 1. Parietal region

Figure 2. Occipital region

