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To provide effective ways of dealing with hair problems, and to bring smiles to more people, we have expanded our total hair solutions business worldwide in North America, Europe, and Asia.

Our corporate mission, as the Aderans Group, is to utilize our hair-related business to help as many people as possible acquire the physical and emotional qualities that underpin the realization of dreams and promote a good impression, and in so doing, bring smiles to faces and support happy lives. Guided by the three pillars of our management vision “ESCR Sampo Yoshi”, which incorporates Customer Satisfaction (CS), Employee Satisfaction (ES), and Corporate Social Responsibility (CSR), the Aderans Group, as a whole, will strive to realize its shared goals of “Product Excellence,” “Technological Excellence,” and “Heartfelt Omotenashi (Hospitality),” in order to establish itself as a global brand which can make a contribution to the entire world.

Our missions in mind, it is very meaningful to support cutting edge research on hair and scalp.
Elongation of anagen by red LED possibly through paracrine mediators for dermal papilla

Shigeki Inui, M.D., Ph.D.

President, S Inui Clinic, Osaka, Japan
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Expertise keywords: dermatology, hair biology, nanomedicine

To explore effect and mechanism of LED on hair growth, we utilized red LED (638nm) and explored its effect on hair growth of mice. First, to examine effect of LED light on hair growth, 7-week-old female BL-6 mice were anesthetized and shaved off the dorsal hairs. Starting the next day (day 1), red LED light (638nm / 1.0J/cm2) was irradiated for 20 minutes from 3cm distance of their dorsal skins every second or third day (3times a week). At the day1, 11, 18, 22, 27, we took photos of the dorsal skins and measured the percentage of hair regrowth areas. As a result, at day 18 and 22, hair regrowth areas were significantly increased by red LED light irradiation, compared to the sham treatment. We also found that red LED delayed the catagen induction of hair plucking on the back of 7-week-old BL-6. Next, to investigate molecular mechanisms of LED stimulation on hair growth, cultured normal human dermal papilla cells were irradiated with red LED light for 20 minutes from 3cm distance of the culture dishes. To search potential mediators for the stimulatory effect by LED light, at 0, 4, 8 and 24 hours after irradiation, RNA samples were extracted from the cells and subjected to semiquantitative RT-PCR for growth factors and cytokines, which reportedly released from dermal papilla cells and can play important roles in hair growth. HGF, Leptin, VEGF-A mRNA were increased, compared to the control. Likewise, ELISA using the conditioned media of human dermal papilla cells after the LED irradiation showed that HGF, Leptin and VEGF-A were significantly increased by red light irradiation. Together, HGF, Leptin, VEGF-A from dermal papilla are potential mediators for the red LED on hair growth.

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Development of new treatment for chemotherapy induced alopecia - basic and clinical study-

Masafumi Inomata, M.D., Ph.D.

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Chemotherapy induced alopecia (CIA) is a serious adverse event of anticancer drugs. However, effective therapies have not been developed. We evaluate effects of newly synthesized antioxidants, alpha-lipoic acid derivatives (ALAD), for CIA in a rat model. We established a 5D rat model of cytotoxic arabinoside (Ara-C)-induced alopecia by intraperitoneal administration. ALAD was administered percutaneously for 12 days, and then the degree of alopecia was assessed. In macroscopic findings, alopecia was reduced in the ALAD group, especially in the group to which a 1% concentration was administered, compared to Ara-C group. In histological findings, hair shafts and roots were dramatically decreased and inflammatory cell infiltration was observed in Ara-C group, compared to those in the control group. In contrast, ALAD group showed that these changes were significantly improved. In evaluating skin tissues of each group, the level of caspase activity and malondialdehyde were significantly decreased in ALAD group, compared to that in Ara-C group. These results suggest that preventive effects of ALAD on alopecia may involve the inhibition of apoptosis and oxidant stress to tissues surrounding hair. Then we elucidated a preventive effect of ALAD for CIA in clinical pilot study with 19 patients with postoperative adjuvant chemotherapy for breast cancer, and we have conducted multi-institutional phase-III trial (UMIN-CTR:UMIN000014840) recruiting 100 patients with breast cancer from 2013 to 2017. These results would contribute to develop the new treatment agent for patients with CIA.

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Resident, S. Inoue Clinic

CS11-2 [Research collaborated with Adieras]

CS11-3 [Research collaborated with Adieras]
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