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## Development of materials for skin aging control using natural products

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Due to development of health science and medicine, life expectancy has increased. Therefore, more people have been showing dermatological concerns in recent years. Chronic exposure of human skin to solar ultraviolet (UV) radiation causes photoaging which accelerates the visible ageing of skin together with intrinsic aging. Many studies showed that naturally occurring compounds are known to have anti-photo aging effects via oral administration. The market for cosmetics that are natural is converging with the growth of foods and nutritional products catering to “beauty from within” to create great opportunities for anti-wrinkle treatment. And topical treatment like cosmetics is also important because of their pharmaceutical benefits. Our study started from this concept; these two types of topical cosmetics and nutricosmetic need to be combined to work in a complementary and alternative way, which replenish the body's own collagen by providing essential sources and enhancing epidermal function. Our lead material (KIOM-HB10) used in this study showed anti-wrinkle properties in terms of skin thickness, and changes in collagen fibers in HR-1 hairless mice. In the *in vivo* results, UVB-induced mean length and mean depth of skin wrinkle, epidermal thickening, and damage to collagen fiber were restored by oral administration of KIOM-HB10. *In vitro* results showed that KIOM-HB10 inhibited UVB-induced damage in HaCaT human keratinocyte by lowering the level of matrix metalloproteinase (MMPs).

### Biography

Sungwook Chae has earned his PhD from Natural Products Research Institute at Seoul National University, South Korea and Postdoctoral studies from Massachusetts Institute of Technology, USA. He is Senior Researcher of KM based herbal drug research group. He has published more than 40 papers in reputed journals regarding antioxidant and skin research field.

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