THE EFFECT OF SYNTHETIC ACETYLHEXAPEPTIDE-8 (AH8) ON SEBACEOUS FUNCTION

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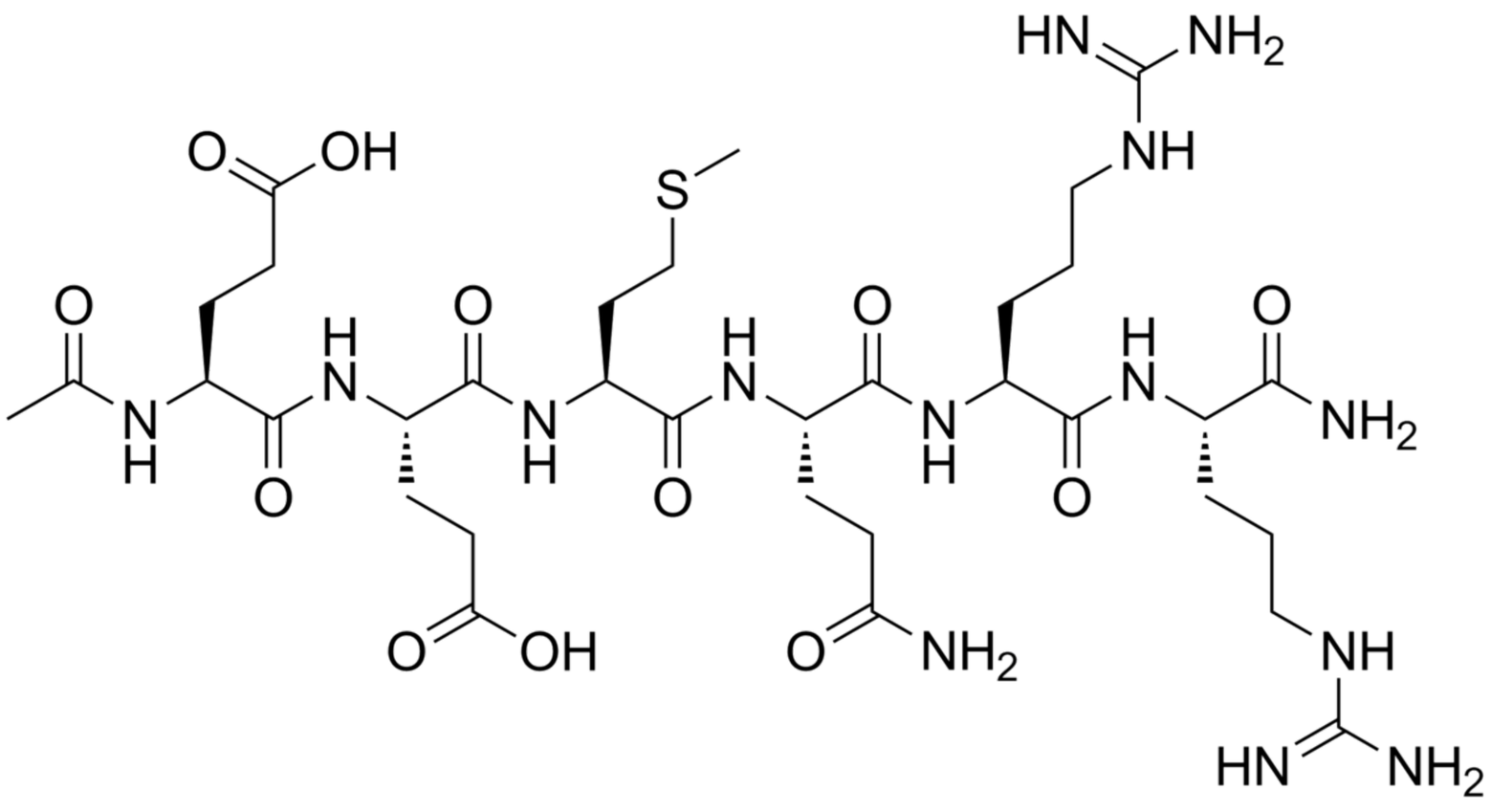
ABSTRACT

Objective:
This study aims to evaluate the in vitro and clinical effects of topical acetylhexapeptide-8 (AH8) on the appearance of oily skin.

Method:
In vitro SEB-1 human sebocyte cell lines were exposed to different concentrations of AH8, then the lipid content of the sebocytes was measured. For the randomized, controlled, split-face clinical study, participants received AH8 10% lotion formulated in Cetaphil Moisturizing Facial Lotion on one side of their face and the control vehicle lotion on the other side of their face. Facial oiliness was assessed by a trained physician using a three-point grading system, high-resolution digital photographs, and a sebumeter (SM815). Participants also filled out self-assessments of their skin oiliness.



Conclusion:
AH8 inhibits the accumulation of lipids in sebocytes in vitro without altering cell proliferation or SREBP-1 expression. Topical AH8 trended towards decreased sebum production in human participants. The use of AH8 may serve as a promising agent to reduce sebocyte lipid production and the appearance of oily skin.

RESULTS:

The in vitro experiments showed that sebocyte lipid content significantly decreased after AH8 treatment:

- *$p < 0.05$ at 0.00005% AH8;*
- *$p = 0.09$ at 0.0005% AH8;*
- *$p < 0.05$ at 0.005% AH8;*
- *and $p < 0.001$ at 0.025% AH8.*

In the clinical study, participants trended towards a 10% reduction ($p = 0.16$) in sebum production after AH8 treatment in comparison to the vehicle treatment.