

GENERAL LAB REPORT AND THE EFFICACY OF ARGIRELINE, AN ANTIAGING HEXAPEPTIDE

ARGIRELINE- AN ANTIAGING HEXAPEPTIDE

SUMMARY

Two cutting edge technologies permitted the discovery and production of ARGIRELINE: COMBINATORIAL CHEMISTRY and PEPTIDE SOLID PHASE SYNTHESIS. ARGIRELINE represents the discovery of a scientific pathway from rational design throughout basic biochemical mechanisms of anti-wrinkle activity.

This biochemical mechanism used skin topography (pictures below) to measure and confirm the effectiveness of Argireline on wrinkle reduction.

THE PRODUCT

One of the most striking signs of skin aging is increased wrinkling of the face. This can occur naturally over time and is identified by certain biochemical, histological and physiological changes that are enhanced by environmental exposure.

There are other secondary factors that can cause characteristic folds, furrows and creases of the face. These include the constant pull of gravity, frequent and constant positional pressure of the skin of the face (e.g. during sleep) or repeated facial movements caused by the contraction of the muscles of facial expression. In any case and independently on the ultimate physiological pathway, the molecular mechanism involved in face aging is directly related to the changes in the conformation of the collagen triple helix, degradation of the elastin polypeptides and certain disorders in the packing of the lipidic matrix of the skin. On the other hand, it has been clearly established in recent publications that these conformational changes and the disturbance of the perfect packing of the lipid matrix can be significantly avoided by inhibiting:

- a). The formation of the SNARE complex.
- b). The release of Catecholamines

The SNARE complex is a core of membrane proteins that mediates neuronal exocytosis (A. Ferrer Montiel et al, "The Journal of Biological Chemistry", 272, 2634-2638 (1997). Cleavage or inhibition of this complex by means of short synthetic peptides can decrease excessive neurotransmitter release preventing in such a way the formation of facial wrinkles and the aging of the skin.

On the other hand, it has been clearly demonstrated that the overproduction of Catecholamines release, which can also induce formation of wrinkles and fine lines expression on the skin, can also be inhibited by short synthetic peptides. (A. Ferrer Montiel, FEBS Letters, 435, 84-88 (1998)).

THE COSMETIC BENEFITS

a) ARGIRELINE reduces the depth of the wrinkles in the face caused by the contraction of the muscles of facial expression, especially in the front and around the eyes.

b) ARGIRELINE prevents aging of the skin induced by repeated facial movements mediated by excessive catecholamine release.

THE COSMETIC APPLICATIONS

ARGIRELINE can be incorporated in cosmetic formulations such as emulsions gels, serums, etc. where removal of the deep lines or wrinkles in the front or around the eye area is claimed. (Stay tuned for future products offered by Realm 7 International, Inc. containing ARGIRELINE!)

"IN VIVO" TEST

a).**ANTIWRINKLE TEST ON HEALTHY VOLUNTEERS:** Skin topography analysis for measuring the effectiveness of an emulsion containing 10% of ARGIRELINE (in solution) were performed obtaining silicon imprints from around the eyes of 10 healthy women volunteers. Silicon imprints were obtained after 0 and 30 days of twice a day treatments. Analysis of the imprints were performed by confocal laser scanning microscopy to assess the evolution of the skin surface before and after treatment. Skin topography images from the three dimensional reconstruction of optical sections are shown in Fig 3. It can be observed that the depth of the wrinkle is significantly decreased after 30 days of treatment which confirms the validation of the biochemical mechanism hypothesis.

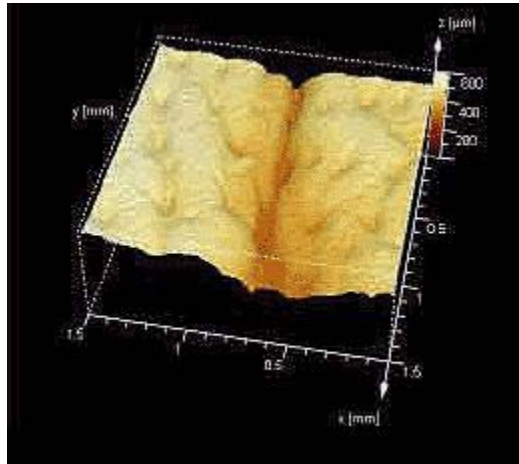


PHOTO 1 = 0 Days With Placebo

PHOTO 2 = After 30 Days With Placebo

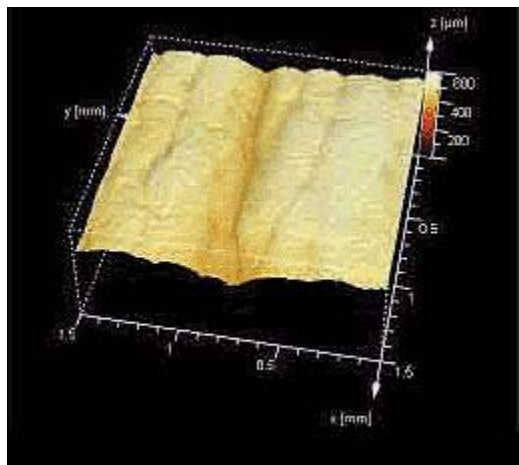


PHOTO 3 = 0 Days With Argireline

PHOTO 4 = After 30 Days With Argireline

DOSAGE

The recommended dosage of ARGIRELINE to obtain significant anti-wrinkle activity is between 3 and 10%.