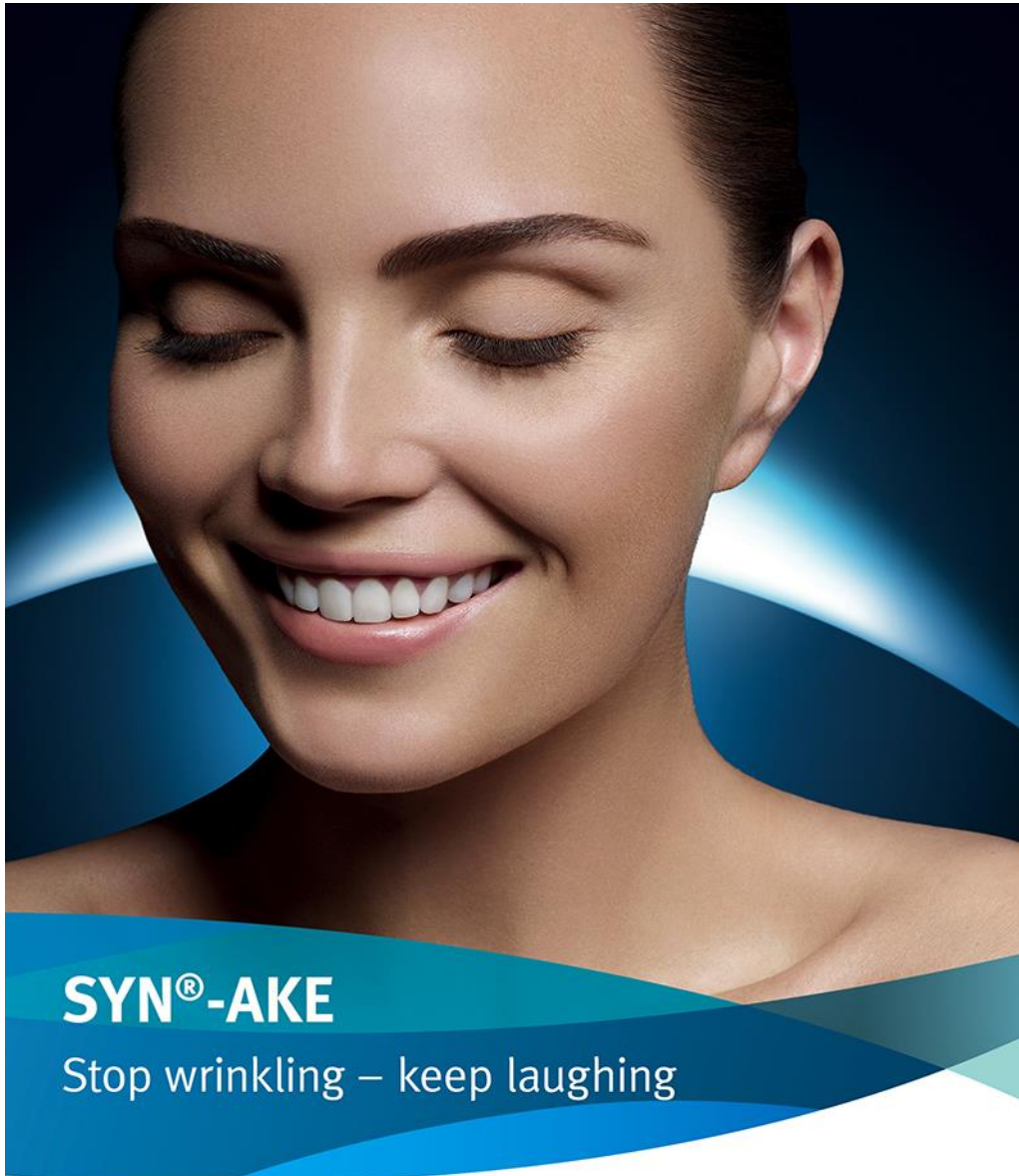


SYN[®]-AKE

Stop Wrinkling - Keep Laughing

April 2013



SYN[®]-AKE

Stop wrinkling – keep laughing

SYN[®]-AKE

- The ability to express emotions by facial expression is part of our way of communication.
- Young skin is flexible enough not to be „impressed“ by it.
- In older skin unintentional frequent facial muscle contractions leave their marks as mimic wrinkles.
- Help your face to relax without losing the ability to express yourself.



Stop wrinkling - Keep laughing
Treat your skin with SYN[®]-AKE

The Temple Viper

Inspirational origin of SYN[®]-AKE

The viper's venom contains proteins for different functions:

- Digestion
- Paralyzation
- Toxins

Waglerin 1 is an antagonist of muscular nicotinic acetylcholine membrane's receptor (mnAChR).

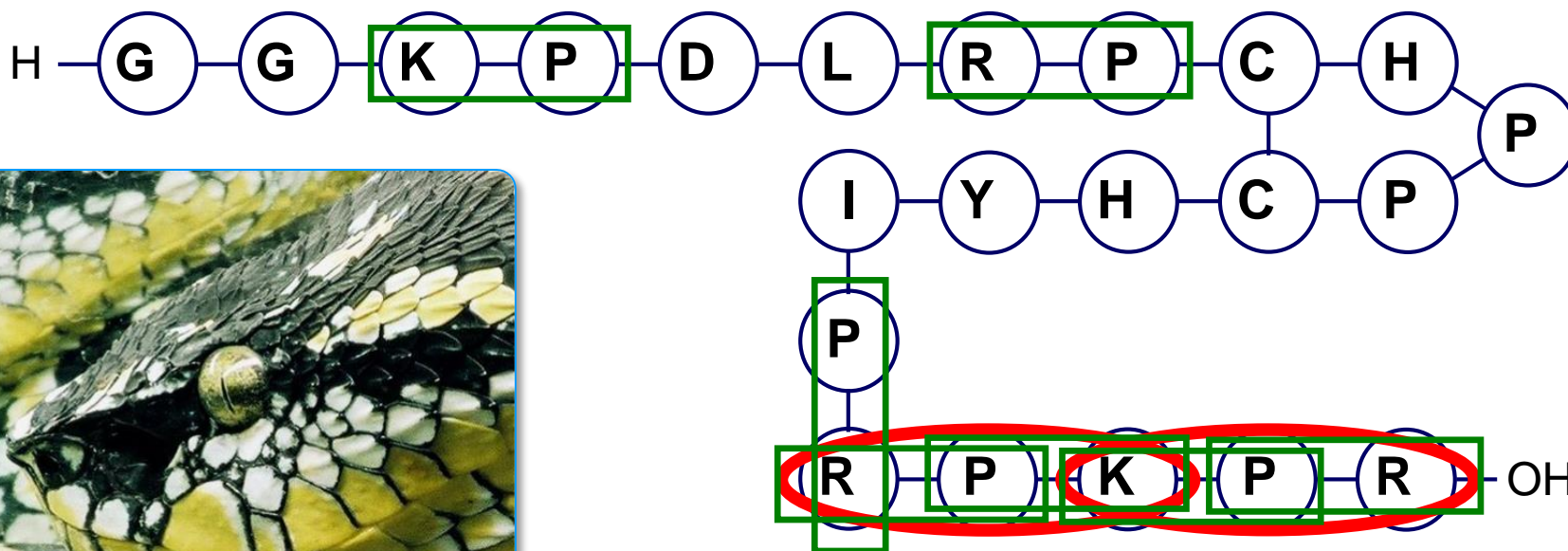


***Waglerin 1* blocks neuromuscular contraction.**

Source: McArdle, JJ, T L Lentz, V Witzemann, H Schwarz, SA Weinstein & JJ Schmidt. 1999. Waglerin-1 selectively blocks the epsilon form of the muscle nicotinic acetylcholine receptor. J. Pharmacol. Exp. Therap. 289:543-550.

Sequence analysis of *Waglerin-1*

Inspirational origin of SYN[®]-AKE



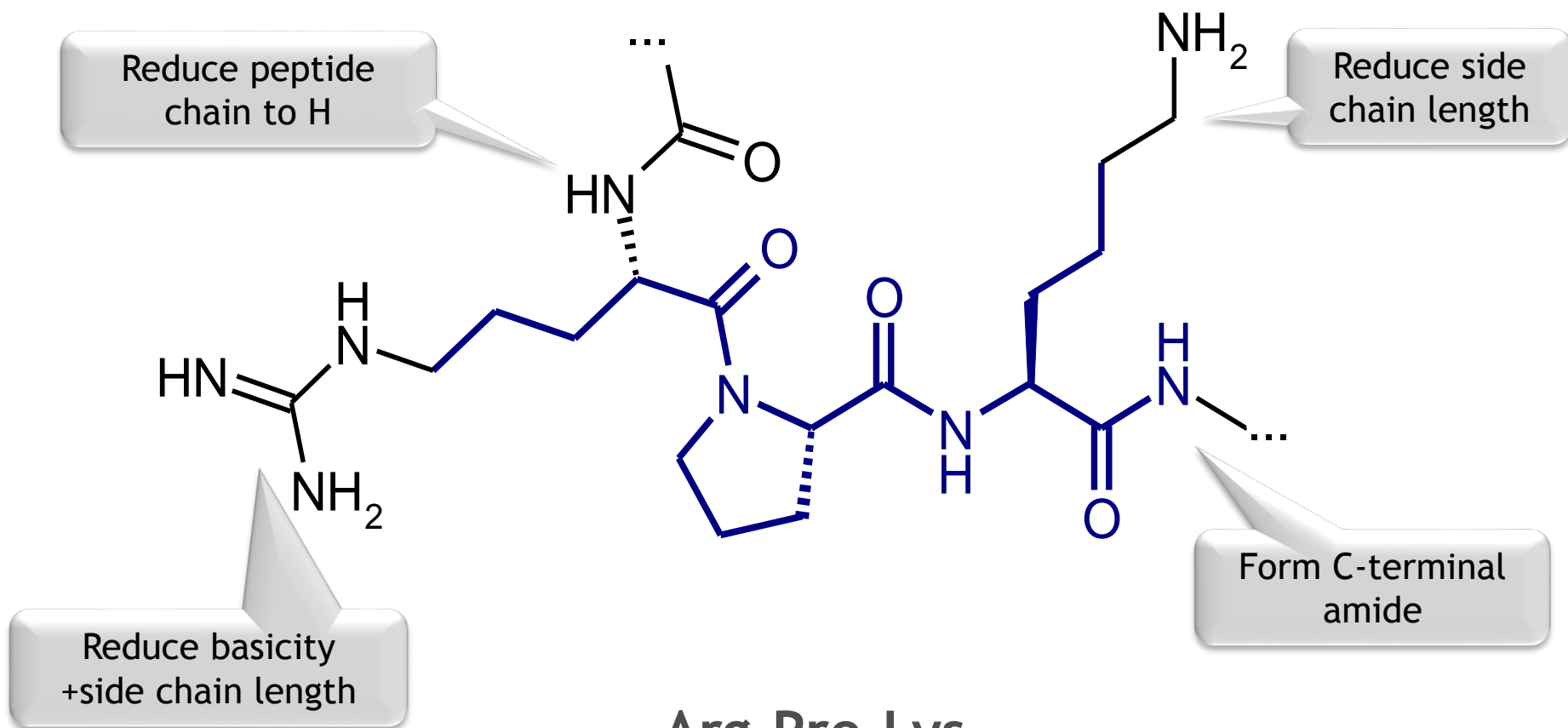
Temple viper
(*Tropidoleamus wagleri*)

Hypothesis:

Activity of the Waglerin 1 is based on two basic amino acids separated by a proline

Waglerin 1

From the peptide chain ...



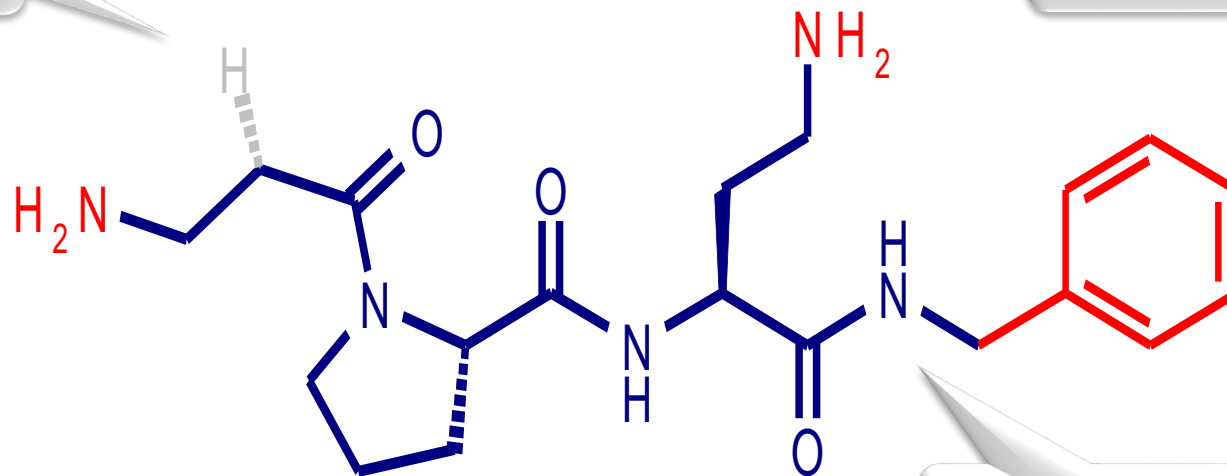
-Arg-Pro-Lys-
- R - P - K -

Waglerin 1

From the peptide chain ... to the final product

Reduce peptide chain to H

Reduce side chain length



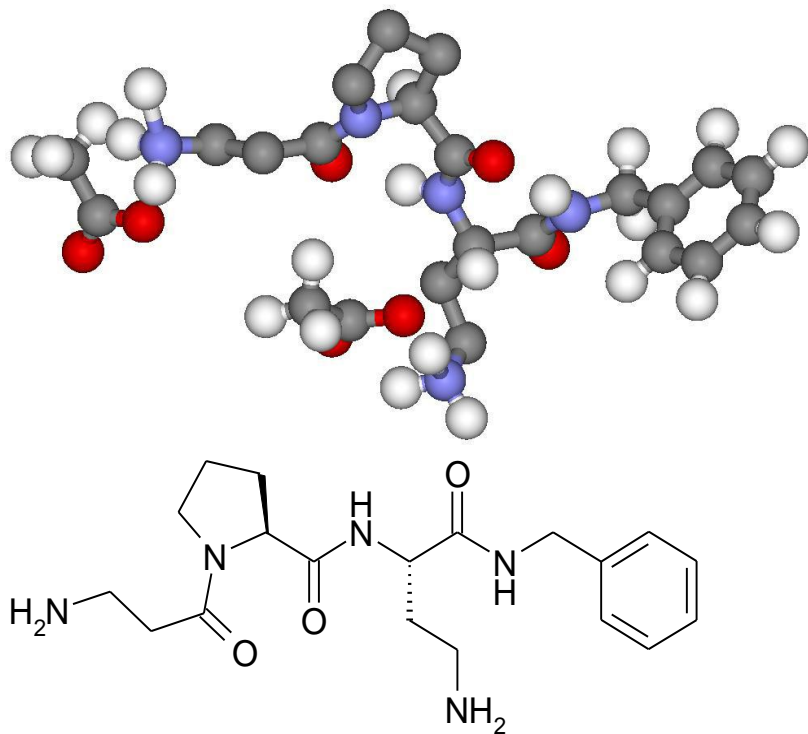
Reduce basicity
+side chain length

Form C-terminal
amide

H-b-Ala-Pro-Dab-NH-Bzl

SYN[®]-AKE

Beta-Ala-Pro-Dab-NH-Bzl * 2AcOH



Patent WO 2006/047900 (11.5.06)

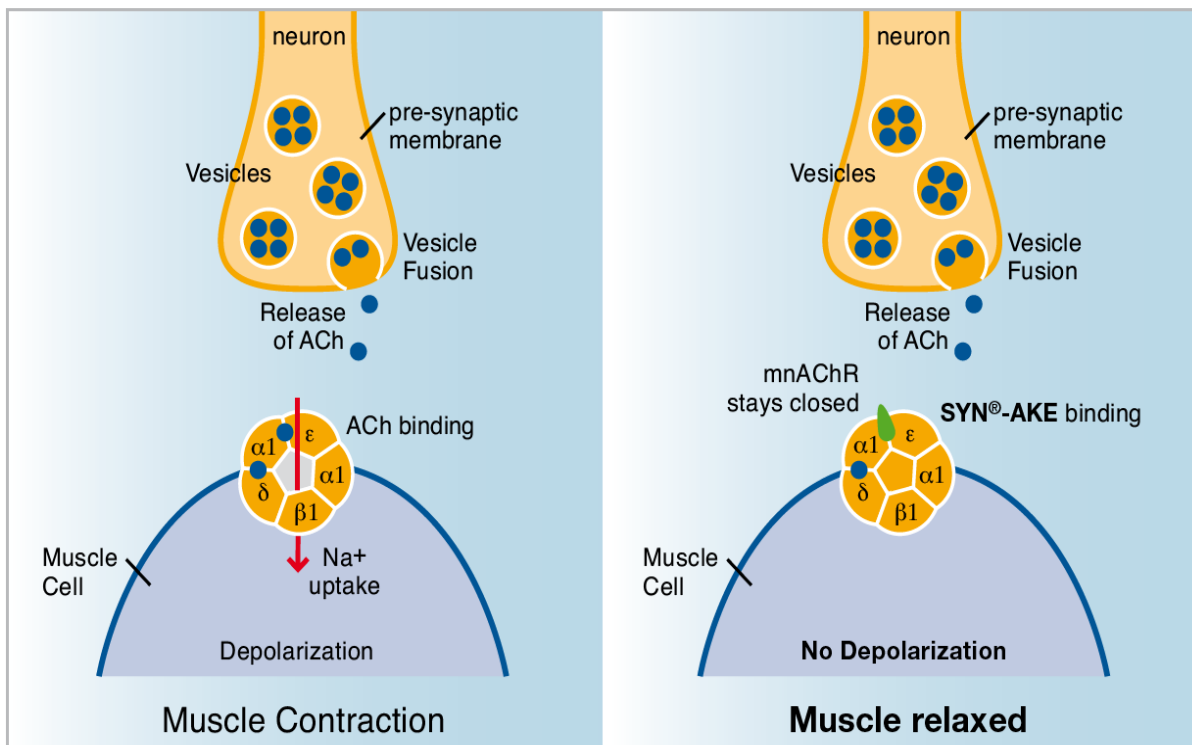
- Synthetic tripeptide with mol weight below 500 Da for optimal skin penetration.
- Mimic of a small sequence of *Waglerin 1* found in the venom of the temple viper.
- INCI name (active): Dipeptide Diaminobutyroyl Benzylamide Diacetate

SYN[®]-AKE - Probable Mode of Action at Muscle Nicotinic Acetylcholine Receptor (*mnAChR*)

Signal transduction at the synaptic cleft.

- Botox prevents release of Acetylcholine (ACh)
- *Waglerin 1* binds to *mnAChR* and reverts the uptake of ACh.

Different mechanism, similar effect.



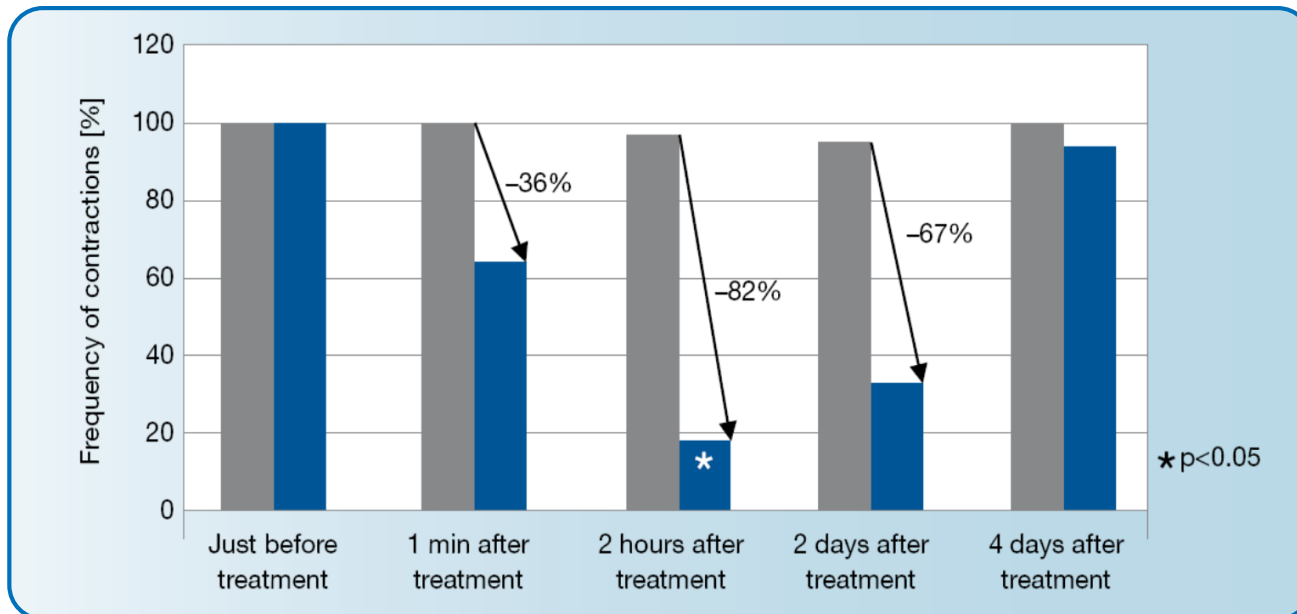
SYN[®]-AKE attenuates neuronal signal transduction.

Likely by binding to *mnAChR*.

SYN[®]-AKE - *In vitro* Efficacy

Contraction of the innervated muscle cells

Frequency of contraction as a function of post-incubation time (Peptide concentration: 0.5 mM)



- SYN[®]-AKE peptide reduces muscle cell contraction.
- Its action is fast-acting, long-lasting and fully reversible.

SYN[®]-AKE - *In vivo* Efficacy Study Design

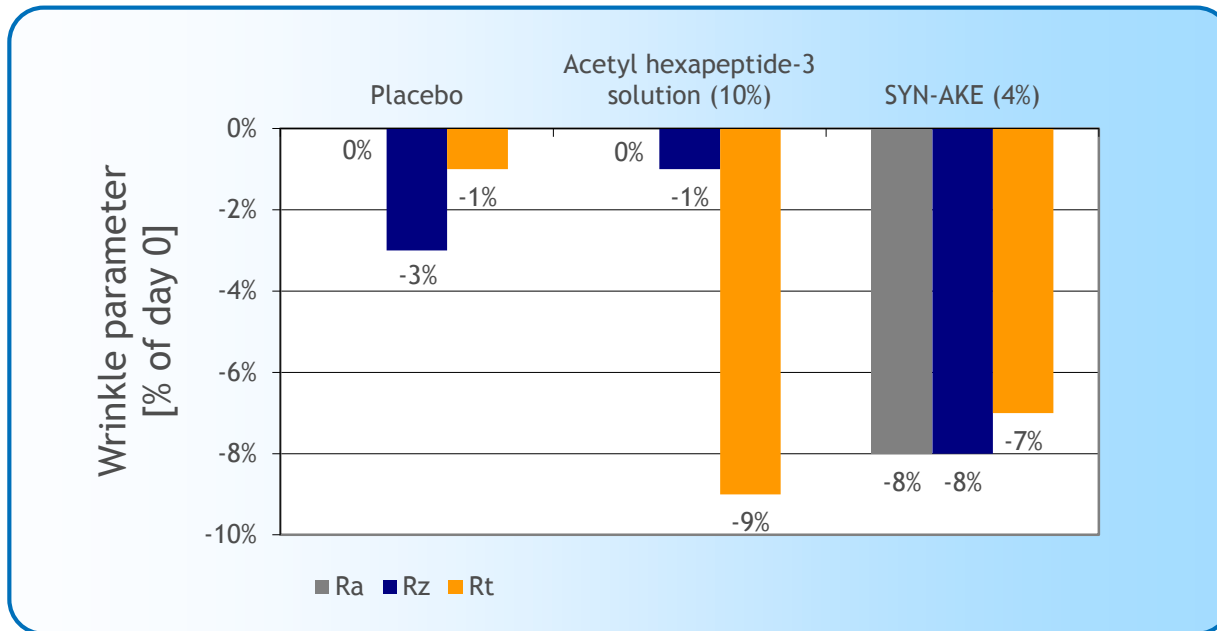
- Double blind and intra-individual study
- Before / After measurements
- 15 volunteers per group (female, age 41-60)
- 28 days applied twice daily on face

- Evaluation of anti-wrinkle effect with Primos 3D[®].
- Crow's feet and forehead
- SYN[®]-AKE (4%) compared to Acetyl hexapeptide-3 solution (10%) - equals the commercial product-, and Placebo

SYN[®]-AKE - *In vivo* Efficacy

Wrinkles on Crow's Feet

Effect of SYN[®]-AKE (4%) on smoothing (Ra) and anti-wrinkle (Rz and Rt) measured on the crow's feet after 28 days, compared with a competitive product (10%) and placebo.



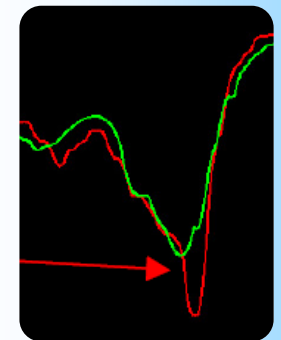
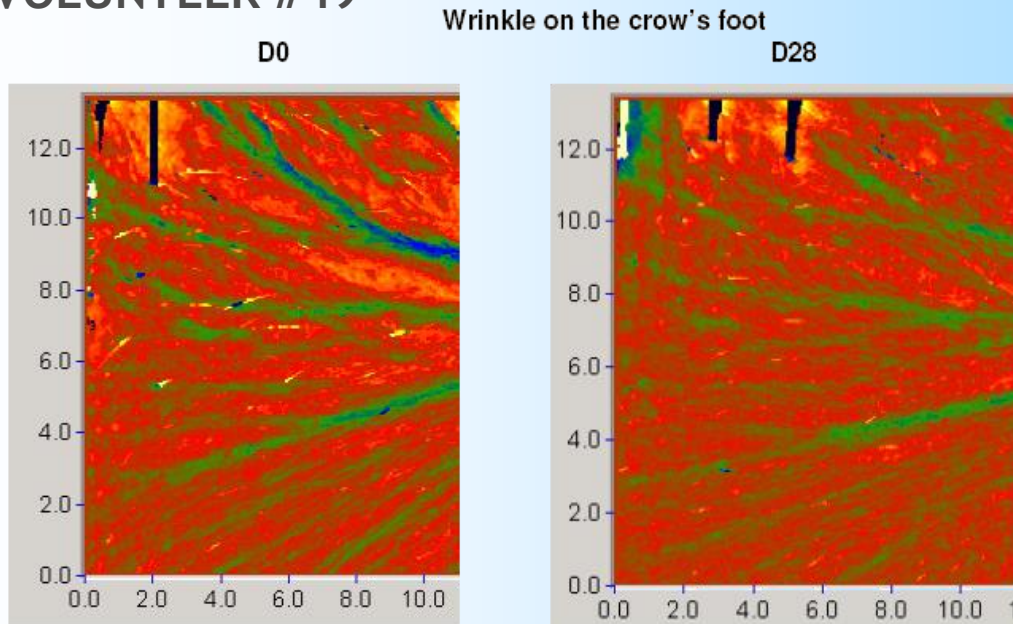
SYN[®]-AKE: Reduces all wrinkle aspects of crow's feet.

SYN[®]-AKE - *In vivo* Efficacy

Wrinkles on Crow's Feet

Measurement of the smoothing (Ra) and anti-wrinkle effect (Rz and Rt) of SYN[®]-AKE (4%) measured on the crow's feet after 28 days.

VOLUNTEER #49

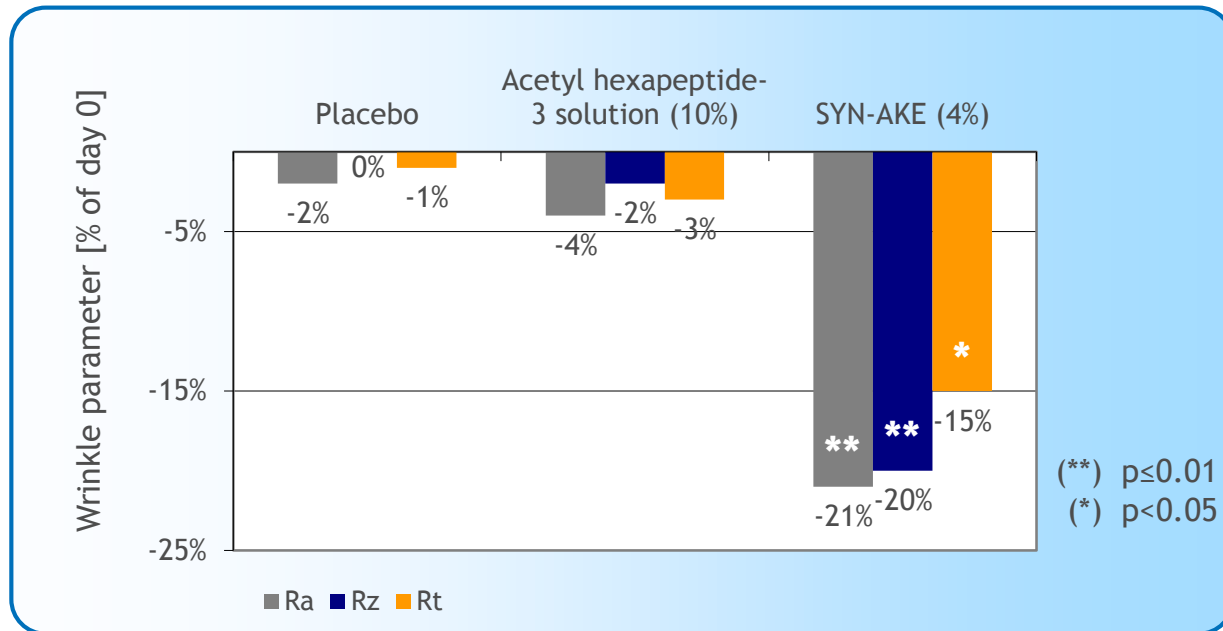


— Day 0
— Day 28

SYN[®]-AKE - *In vivo* Efficacy

Wrinkles on Forehead

Effect of SYN[®]-AKE (4%) on smoothing (Ra) and anti-wrinkle (Rz and Rt) measured on the forehead after 28 days, compared with a competitive product (10%) and placebo.



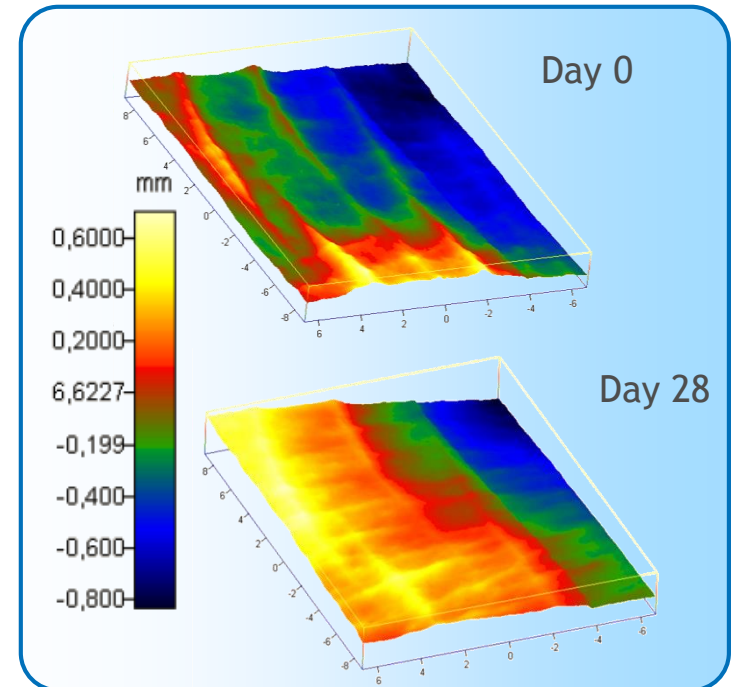
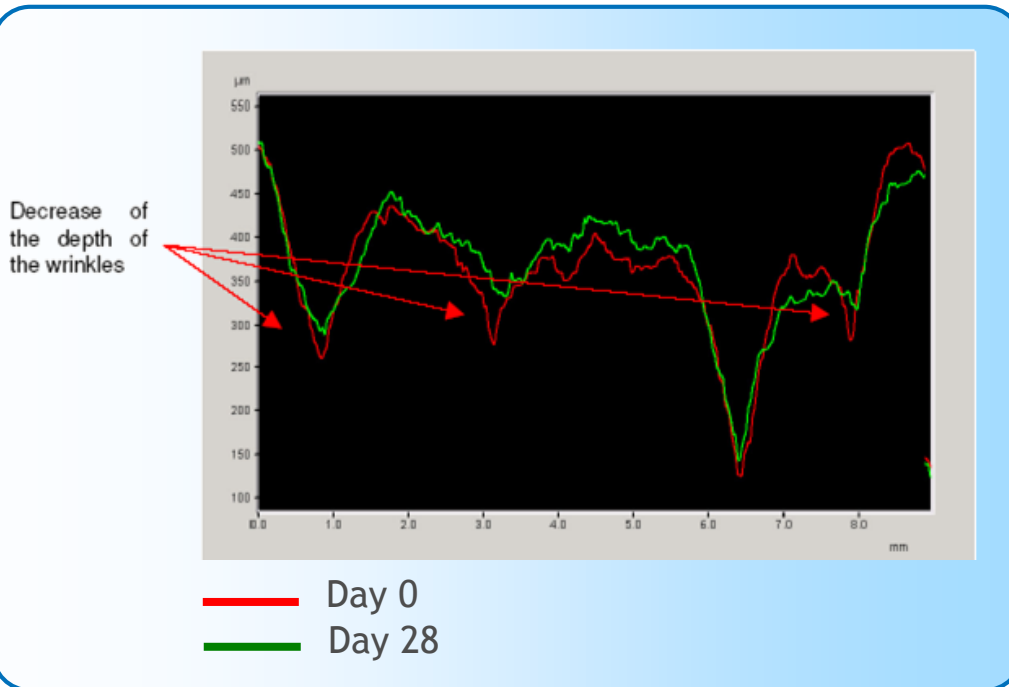
Smoothing effect measured on 80% of the volunteers

Anti-wrinkles effect measured on 73% of the volunteers.

SYN[®]-AKE - *In vivo* Efficacy

Wrinkles on Forehead

Measurement of the anti-wrinkle effect on Volunteer #9
(measured on the forehead after 28 days)



SYN[®]-AKE

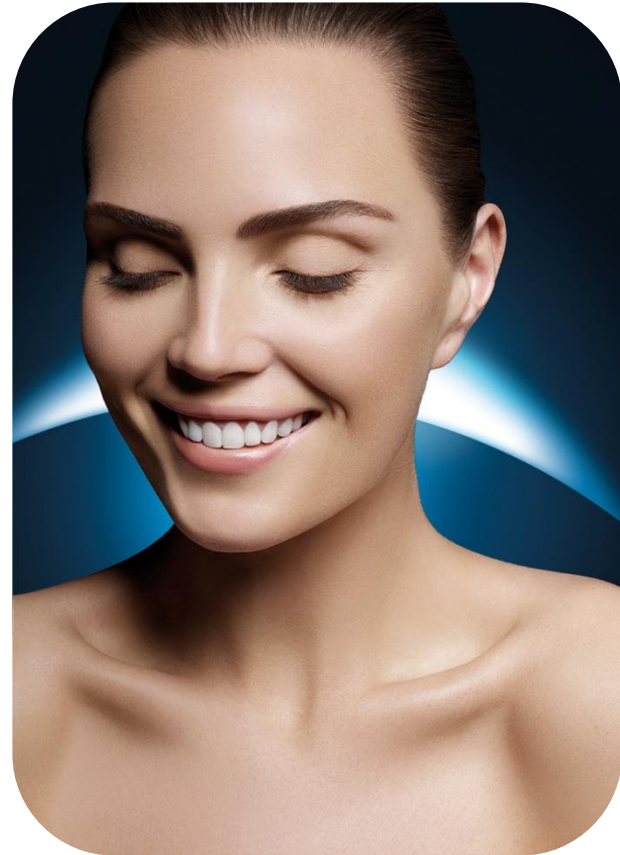
Products Details

- Offered as a glycerine-based aqueous solution
- Content of active material: around 2500ppm
- Optimal pH range in formulation from 3 to 7
- Stable at elevated temperature (70°C) for up to 2 hours
- No preservatives
- Recommended concentration: 1-4%
- Guide formulations available on request

SYN[®]-AKE - Age Killing Effect

Stop Wrinkling and Keep Laughing

- Snake venom-mimicking peptide
- BOTOX-like effect
- Excellent smoothing and anti-wrinkle properties
- Effective against mimic wrinkles
- Thoroughly tested for Safety
- Easy to formulate
- Swiss Technology Award 2006



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