

This is the trade name for *Acetyl Hexapeptide-3*<sup>1</sup>, a peptide made up of six amino acids attached to the acetic acid residue, manufactured and patented by the Barcelona-based company *Lipotec*. Argireline was first introduced in 2006 as an alternative treatment to Botox promising satisfactory results in reducing wrinkles and lines around the forehead and eyes. Argireline is administered externally to the skin in the form of creams, lotions, serums, body milks, eye creams, gels, or emulsions. Unlike the administration of BTA, it does not require injections making it appealing to those with needle phobia or those on anti-coagulants (e.g. coumarins) or antiplatelet drugs (e.g. Clopidogrel).

When applied to the skin, Argireline supposedly relaxes facial tension leading to the reduction in facial lines and wrinkles with regular use. According to studies funded by its manufacturer it has been suggested that using 10% Argireline solution in cosmetics will produce a reduction in the depth of wrinkles by up to 27% after 30 days of treatment. Theoretically, Argireline mimics the N-terminal end of SNAP-25 competing with the natural protein for a position in the SNARE<sup>2</sup> complex. If the SNARE complex is slightly destabilized, the vesicle cannot release neurotransmitters efficiently and therefore muscle contraction is attenuated, producing thus similar results to the **Botulinum Toxin type A (BTA)**.

The great advantage of Argireline is that it is not toxin-based and is a milder (and cheaper) alternative to BTA which is particularly useful in cases of allergic reactions or sensitivity to the BTA. In addition, limited studies suggest that Argireline, used as a topical wrinkle reducing agent, is also a safe option provided that concentrations do not exceed 10%.

I have little experience in the use of Argireline and I must say that I have not been impressed by its promising effectiveness in reduction of the visible facial lines and wrinkles. My experience with this product lies mainly in its use on expression lines on the forehead, glabella and periocular area (crow's feet) where I use it as an adjunct to Mesotherapy. Please note that I normally use 5% of Argireline with 5% of Leuphasyl (see page .....) in 2ml ampoules after -recommended- or before Mesolift or Mesoglow treatments in order to supposedly achieve a mild, non-toxic Botox effect, especially in cases where BTA is contra-indicated. In addition, due to its short life on the market there are no reliable data with regard to its safety in the long-term usage. Finally it is worth mentioning that facial musculature relaxing agents such as Argireline should be used with caution in the lower half of the face where skin toning is required instead, as theoretically it may contribute to facial sag.

## References

- Lipotec S.A. Peptides & Delivery Systems (2006) "Argireline an anti-aging peptide" Code: PD010/PD011
- Dr. Senen Vilaro (2005) "Study on anti-wrinkle effect of Argireline by confocal profilometry techniques" Advancell, advanced in vitro cell technologies. Ref: CT441a

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1 [Hexa- /heksə/ [Greek]=six].

2 An acronym derived from «**SNAP** (**S**oluble **N**SF **A**ttachment **P**rotein) **RE**ceptors».