Interest of Vitamin K Oxide in topical treatments
Why used vitamin K oxide to treat skin?
Elson 1 (clinical trial) observed that vitamin K influenced the absorption of bruising produced by the injection of autologous whole blood intradermally and subcutaneously.

Topical vitamin K is now emerging as potential factor in cutaneous physiopharmacology.

Melvin I. Elson, M.D. is a practicing dermatologist; medical director of the dermatology center Inc. Nashville, Tenn. and President & Chief Executive Officer of Cosmeceutical Research
TOPOCAL VITAMIN K

Topical Vitamin K Oxide in the litterature

- 1995 Melvin Elson, MD, published his clinical trial in Cosmetic Dermatology Journal for the use of vitamin K in the treatment of
  - actinic and traumatic purpura.

*Topical Phytonadione (Vitamin K) in the treatment of Actinic and Traumatic Purpura, Vol. 8 No. 12 December - Cosmetic Dermatology*
TOPICAL VITAMIN K

Topical Vitamin K Oxide in the litterature

Trial results prove that *topical vitamin K* has an influence on the disappearance of extra vascular blood decreasing the incidence of bruising when compared to its base.

In addition, there is a number of clinical situations in which there is increased bleeding diathesis into skin.

- **Steroidal therapy, both systemic and topical**
- **The use of salicylates**

*Topical Phytonadione (Vitamin K) in the treatment of Actinic and Traumatic Purpura, Vol. 8 No. 12 December - Cosmetic Dermatology*
VITAMIN K OXIDE

Metabolite Patented
VITAMIN K OXIDE

Formation of naphtoquinones with UV light or sunlight

- Vitamin K: Yes
- Vitamin K & retinol: Yes
- Vitamin K oxide: NO
- Vitamin K oxide & retinol: NO
5% of allergy occur in using vitamin K1 in various conditions on skin

We have tested the discovered allergic patients to vitamin K

We have found

Positive to vitamin K
Negative to vitamin K oxide

Ref: M. Castelain, Hop. St Marguerite Marseille, 2003
Composition

- The new generation of topical vitamin K
- Worldwide patented
Vitamin K and Vitamin K Oxide

Scheme I

Vitamin K₄

Reductase

Vitamin KH₂

— Glu —

O₂, CO₂, carboxylase

Reductase

Vitamin K₄ oxide

— Gla —
AURIDERM XO

Vitamin K and Vitamin K Oxide
Composition

- Phytonadione oxide (Vitamin K oxide)
- Ascorbyl Palmitate (Vitamin C)
- Tocopherol (Vitamin E)
- Tocopheryl Acetate (Vitamin E)
- Phospholipids
Advantages

➢ Faster action and better efficacy
➢ Colourless cream
➢ No photo-sensitivity
➢ No interaction with other components
➢ Far better skin tolerance
➢ No sensitivity to heat
Powerful Penetration Vectors

Nanosomes formulation
AURIDERM XO

Nanosome Delivery system

AURIGA INTERNATIONAL developed the modern technology of *vitamin K in nanosomes* to

1. Improve penetration and absorption of vitamin K
2. Reduce the concentration
3. Provide sustained release of vitamin K for 12 hours
4. Decrease the cost
Nanosome biotechnology formulation brings to AURIDERM XO the best penetration through the skin.

The system contains vitamin K which is a lipophilic substance within a monolayer of phosphotidylcholine. This unique technology results in particles of diameter of 180 nm.
AURIDERM contains Vitamins C and E.

The addition of those ingredients is very important because they have a synergistic action with vitamin K.
Vitamins C and E are able to maintain the iron under a bivalent form (Ferrous), avoiding transformation to trivalent form (Ferric).
Iron in the bivalent form (Ferrous) is soluble and easily eliminated.

Iron in the trivalent form i.e. as Ferric is insoluble, not eliminated, and produces subcutaneous deposits of hemosiderin.

Hemosiderin gives the unaesthetic spots with rusty color that will stay permanently.
Indications

- Decreases the appearance of broken vessels
- Decreases the appearance of rosacea
- Speeds up absorption of purpura associated with plastic surgery techniques, vascular laser treatments, sclerotherapy, or following any filling material
- Eliminates post laser resurfacing erythema
- Eliminates post chemical peel erythema
- Eliminates post microdermabrasion erythema
Indications

- Erythrosis
- Rosacea
- Purpura
- Spider veins
- Post sclerosis of small vessels
- Bruising post vascular laser treatment
- Bruising post sclerotherapy
- Bruising post traumatic
Indications

Purpura and bruising following:

- Liposuction
- Face or neck lift
- Blepharoplasty
- Rhinoplasty
- Any filling materials injection
  (New Fill, Botox, Collagen, Hyaluronic acid,...)
AURIDERM XO

Efficacy

Results

55 years old female, face lift & blepharoplasty
Efficacy

Results

Day 2

Day 6

Day 8

1 = Placebo

2 = AURIDERM
Efficacy

Blepharoplasty clinical trials

Dr Karavany, Antwerpen, Belgium

Study Design

- Auriderm XO study
- Double blind
- Right eye with Auriderm XO
EFFICACY

Blepharoplasty clinical trials

Dr Karavany, Antwerpen, Belgium

Results
EFFICACY

Erythrosis clinical trials

Pr. Philippe Humbert, Besançon, France, 2005

Study Design

- on 24 patients
- during 2 months
- in double blind
- compared with placebo

Different levels of intensity:

1. Erythrosis  
2. Erythro-rosacea  
3. Rosacea  
4. Rhinophyma

AURIDERM XO !!!

AURIDERM XO !!!
Results at d-56: Images made by videocapillaroscopy

- Treated with placebo
- Treated with Auriderm XO
Efficacy

Erythrosis clinical trials

Pr. Philippe Humbert, Besançon, France, 2005

Results

Results at d-56: Images made by videocapillaroscopy

Treated with placebo  Treated with Auriderm XO
AURIDERM must be applied **thinline twice a day**, morning and evening, after cleansing the skin. Gently massage into skin until the gel is absorbed.

AURIDERM is recommended for **10 to 15 days** as preparatory skin care **after** surgical and medical cosmetic procedure.

AURIDERM must be applied before all other beauty or cosmetic skin care products and can be used as a base for those preparations.
PRECAUTIONS & CONTRE INDICATIONS

Do not apply on wounds, mucous areas or eyes.

Hypersensitivity to any component of the product.