



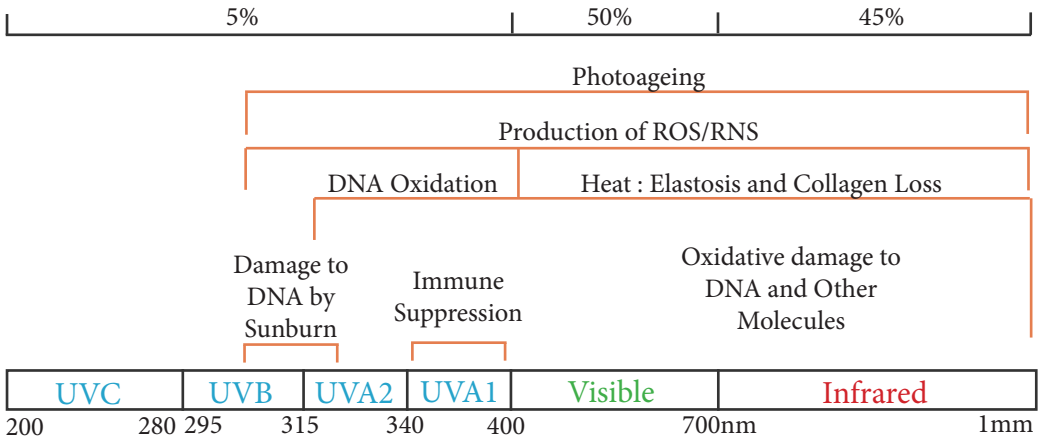
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predictive toxicology center

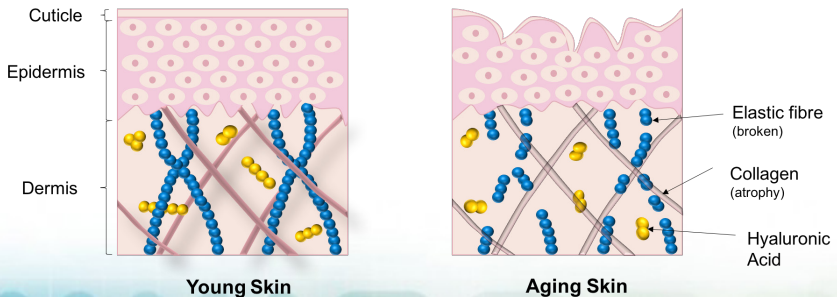
# Solar Elastosis & Ageing

Extrinsic environmental factors (sun radiation, pollution, tobacco, etc.) have a damaging effect on the skin which lead to ageing. This is due to the degradation of the extracellular matrix, inflammation and DNA damage caused by the generation of reactive oxygen species (ROS).

## Proportion of Solar Radiation :



The ageing process contributes to a decline in the elasticity and strength of the skin, and a rise in the formation of wrinkles.





# atoxygen

predictive toxicology center

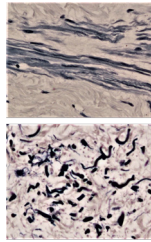
## Solar Elastosis & Ageing

### 1. Histochemical Staining

The structural alteration of skin mostly results from the degradation and disorganisation of elastin fibers and collagen networks.

#### Evaluation :

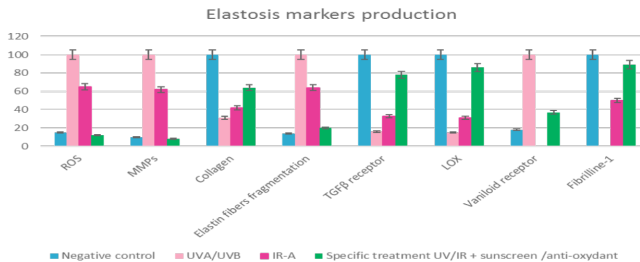
- Specific Immunostaining of molecules involved in elastogenesis and all types of collagen
- Staining of elastin and collagen



➔ Dye staining of healthy young skin

➔ Dye staining of solar damaged skin with degraded collagen (pink) and elastin

### 2. Quantification



- Quantitative evaluation by ELISA (MMPs)
- Elastase and collagenase activity evaluation



#### Upregulation

- ROS
- MMPs
- Vanilloid Receptor
- Elastin Fibers Fragmentation



#### Downregulation

- Collagen
- TGFβ
- LOX
- Fibrilline-1



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