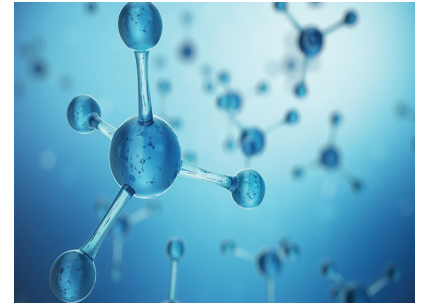


Ultraviolet Use In Dermatology

Overview

The exposure to ultraviolet radiations and visible light, or phototherapy, is a well-known therapeutic tool available for the treatment of many dermatological disorders. The continuous medical and technological progresses, of the last 50 years, have involved the field of phototherapy, which evolved from UVA and PUVA in its various forms, to the development of narrowband UVB (NB-UVB) and NB-UVB micro-focused phototherapies. Further advances in technology have now permitted the introduction of a new device emitting UVA-1 radiations.



Technical Details

UVA1 radiation induces apoptosis (cell death) in the presence of active oxygen molecules, such as singlet oxygen, hydrogen peroxide, or superoxide radicals. It activates programmed (induced) and non-programmed (natural) cell death. The success of UVA1 in atopic dermatitis was found to result from UVA radiation-induced apoptosis in skin-infiltrating T-helper cells, leading to the loss of T cells from eczematous skin. The effect of UVA1 in inducing T lymphocyte apoptosis may also help treat cutaneous T cell lymphoma (CTCL). UVA1 also activates fibroblasts to produce matrix metalloproteinases, which break down excess collagen in the extracellular matrix. is why it is useful in sclerosing (scar-like) skin conditions.

