Mitochondria-targeted iron chelator offers photoprotection

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(HealthDay)—A mitochondria-targeted iron chelator can protect

primary skin fibroblasts against the harmful effects of ultraviolet A (UVA), according to a study published in the August issue of the *Journal of Investigative Dermatology*.

Olivier Reelfs, Ph.D., from the University of Bath in the United Kingdom, and colleagues designed a mitochondria-targeted hexadentate iron chelator linked to mitochondria-homing SS-like peptides. They evaluated the photoprotective potential of this compound against UVA-induced oxidative damage and cell death in cultured primary skin fibroblasts.

The researchers found that the compound provided protection against UVA-induced mitochondrial damage, depletion of adenosine triphosphate, and the ensuing necrotic cell death. This effect was fully related to the iron-chelating property in the mitochondria.

"This mitochondria-targeted iron chelator has therefore promising potential for skin photoprotection against the deleterious effects of the UVA component of sunlight," the authors write.

More information: Abstract
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