SciTechnol
International Publisher of Science, Technology and Medicine

Journal of Genetics and Gene Therapy

Polysaccharide-rich fraction of *Lycium barbarum* fruits associated with the photobiomodulation therapy repairs UV-induced photodamage in mice skin

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Abstract

Chronic exposure to ultraviolet radiation (UVR) induces premature aging in both the epidermis and the dermis. A topical hydrogel formulation from a polysaccharide-rich fraction of *Lycium barbarum* fruits (LBP) was combined with the photobiomodulation (PBM) therapy, which promotes protein synthesis and cell proliferation, and have been demonstrate to repair the photodamage. The aim of this study was to evaluate whether the isolated and/or combined treatments would reduce the UVR-mediated photodamage in mice skin. Histological, immunohistochemistry, and immunofluorescence analyses were used to investigate the levels of c-Fos, c-Jun, MMP−1, −2, and −9, collagen I, III, and FGF2. The results will be presented and discussed in an elucidative way, in order to demonstrate research insights on repair of photodamaged skin and potential clinical application in skin rejuvenation.

5th International Conference on Wound Care, Nursing and Tissue Science, April 16-17, 2021

Citation: : Lia Mara Grosso Neves: *Polysaccharide-rich fraction of Lycium barbarum fruits associated with the photobiomodulation therapy repairs UV-induced photodamage in mice skin*: Wound Care Congress 2021: 5th International Conference on Wound Care, Nursing and Tissue Science, April 16-17,2021