KOREADERMA 2023 Abstract Submission

Abstract submission for:

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Title of abstract *(25 words maximum)***:**
The utility of the novel alma hybrid laser system on scars

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Main body *(250 words maximum)*:

There is a continuous need to find the best treatment for scars. Scars can take on a multitude of varying characteristics making them a challenge to treat. Scars often have aesthetic, psychological, social, and functional consequences that impact a patient's quality of life. It is a challenge in dermatology to find a treatment approach for scars that will successfully treat a wide range of scar characteristics and provide long-lasting dramatic clinical results in the shortest time possible while mitigating post-inflammatory changes. Several ablative and non-ablative lasers have been evaluated and more recently combined with topical drug application for the treatment of scars. The topical application of medications is limited through intact skin due to the physiological barrier of the stratum corneum's lipid bilayer. Lasers can be an effective drug permeation-enhancement approach for facilitating drug delivery into or across the skin. Lasers enhance drug permeation and delivery into and across the skin. Ablative fractional lasers create uniform and controlled tubular ablation columns surrounded by microthermal zones which grant direct access to lower layers facilitating increased delivery of medications applied to the skin. Laser-assisted drug delivery is further enhanced by combining the novel approach of sonophoresis. Sonophoresis uses thermal and mechanical characteristics to produce physiological changes such as increased kinetic energy of molecules, altered resting potential and increased permeability of the cell membrane, and destruction of the stratum corneum lipids via cavitation to further promote drug delivery and synergistically improve the clinical outcome.