ABSTRACT BOOK ABSTRACTS



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MEDICAL THERAPIES AND PHARMACOLOGY

## FOCUSING ON DERAILED CELLULAR CERAMIDE METABOLISM FOSTERS RECOVERY OF ATOPIC DERMATITIS LESIONS AND PSORIASIS PLAQUES

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Background: Topical disease management of atopic dermatitis and psoriasis relies on wellestablished, though problematic options such as topical corticosteroids and increasingly on systemic administration of antibodies to affect cytokine levels. Antibody therapy frequently is accompanied by urticaria and susceptibility to bacterial, viral and fungal infections of the skin and the upper respiratory tract. However, regardless of serious side effects antibodies are now considered as state of the art therapy in psoriasis, also emerging in atopic dermatitis disease management.

Objective: Prevention and topical treatment, however, lack a simple, safe, effective and modular approach to care and cure.

Results: We propose a compartmentalized concept of cellular ceramide metabolism and a derived topical disease management. Notably, this pathomechanism derived concept is capable of interrupting dermal inflammatory processes and regenerate the pivotal dermal lipid barrier by a shift towards stabilization of keratinocytes and prevention of premature apoptosis. This concept is not limited to skin disorders; it is applicable to other non-microbial inflammation of other epithelia and mucous membranes as well. A combination of lysosomotropic active ingredients (e.g. amitriptyline), reactive carbonyl and oxygen species scavengers (e.g. linolenic acid) may cure severe dermal lesions and psoriatic plaques without conveying known serious adverse effects of topical corticosteroids and systemic antibody administration and prevents recurrence. Our proposed pathomechanism allows to explain the occurrence of C16-Ceramide in atopic dermatitis lesions, idiopathic or drug-induced lupus erythematosus / psoriasis (inversa, pustulosa) induced by terbinafine treatment and non microbial nail disorders.

Conclusion: Precise knowledge of modifications of cellular sphingolipid metabolism in various skin diseases and the pivotal role of lysosomes enables designation of the underlying causes together with designing successful disease prevention.





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