The test formulation and petrolatum control were applied to hairless mice and full thickness skin samples were obtained 2 hours after application. Fluorescence microscopy was used to determine the depth of penetration. Untreated normal skin showed minimal fluorescence, while petrolatum showed strong fluorescence but only in the stratum corneum.The physiological lipids of the test formulation, however, penetrated the stratum corneum and were distributed throughout the viable epidermis.

CONCLUSION

The topical application of a novel water/lipid-based delivery system effectively penetrates the stratum corneum and distributes throughout the viable epidermis. The vehicle also has moisturizing and barrier-repairing effects that soothes scaling skin and decrease excoriation due to itching. The addition of taurine and an activator of the taurine transporter provides antibacterial, antiinflammatory, and osmoregulatory properties. These product characteristics lend themselves to widespread applications in numerous dermatologic disorders without compromising the normal barrier function of the skin.

DISCLOSURES

Daniel M. Seigel and Michael Burns are shareholders in TetraDerm Group LLC.

ACKNOWLEDGMENT

The authors acknowledge the editorial assistance of Dr. Carl S. Hornfeldt, Apothekon, Inc., during the preparation of this manuscript.

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