This Issue at a Glance

The present issue of *Skin Pharmacology and Physiology* is dedicated to two main topics: signal processing on a cellular level and the ever young aspect of barrier properties of the skin.

Schmid-Wendtner and Korting (Skin Pharmacol Physiol 2006;19:296–302) give a review on the pH of the skin surface and its impact on barrier function. Changes in pH play a central role in the pathogenesis of skin diseases, such as irritant contact dermatitis, atopic dermatitis, ichthyosis, acne vulgaris and fungal infections. Therefore, the use of skin-cleansing agents, especially synthetic detergents with an acidic pH of approximately 5.5, may be of relevance in the prevention and treatment of these skin diseases.

Winiarska et al. (Skin Pharmacol Physiol 2006;19:311–321) present an interesting new pathogenetic approach in androgenetic alopecia. They investigated the influence of testosterone and α -dihydrotestosterone on proliferation, cell death and bcl-2/bax expression in cultured dermal papilla cells. They suggest that dermal papilla cells from non-balding scalp regions do have the capacity to undergo apoptosis, but need a high androgen stimulus.

The intercellular adhesion molecule, ICAM-1, functions as a counter-receptor for other adhesion molecules and is required for the interaction of a large variety of cells with leukocytes. Kaatz et al. (Skin Pharmacol Physiol 2006;19:322–328) demonstrated that microtubules regulate the expression of ICAM-1 in epidermoid cells. Human epidermoid cells treated with microtubule-disrupting agents potentiate the constitutive and cytokine-induced ICAM-1 expression on the cell surface.

Frum and Viljoen (Skin Pharmacol Physiol 2006;19:329–335) investigated the possible mechanism of action

of medicinal plants used for dermatological pathologies. The anti-inflammatory activity and the antioxidative activity of 14 medicinal plants were studied. A high number of plants exhibited significant antioxidative activity.

Magnusson et al. (Skin Pharmacol Physiol 2006;19:336–342) showed the distribution of five steroids in human skin using excised epidermal, dermal and full-thickness membranes in vitro. Hydrocortisone has the highest dermal diffusivity and dermal penetration. Increasing lipophilicity has been seen to have a minimal influence on steroid penetration through the epidermis and a tendency to decrease penetration rates through the dermis.

Remane and Leopold (Skin Pharmacol Physiol 2006;19:303–310) used the erythema onset time after application of methyl nicotinate ointments as a response parameter to investigate penetration-enhancing agents. The erythema onset time is an easy and efficient parameter for quantification of the pharmacodynamic response caused by nicotines. They demonstrate that different penetration kinetics do not influence the erythema onset, as these data are comparable to those obtained under finite dose conditions. With regard to the penetration enhancers, a significantly enhanced penetration of methyl nicotinate could be observed for diethylene glycol monoethyl ether and dimethyl sulfoxide.

We hope to see you in Rome, October 5–7, 2007, for the 2nd International Meeting of the ISP (International Society of Skin Pharmacology and Physiology). The title of our meeting is 'Skin Irritation and Penetration Pathways'. Our homepage (www.isp-society.org) gives you an update regarding the program and registration.

Jürgen Lademann, Editor
Joachim Fluhr, Secretary of ISP