

# 5<sup>th</sup> World Congress on Bioavailability and Bioequivalence Pharmaceutical R&D Summit

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## Bioavailability of dermal products

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In the field of dermatopharmacy, drug release from semisolid formulations is an essential point in order to control the concentration profile of a drug in the different skin layers. The multilayer membrane system (MLMS) was used in order to measure drug release from the dermal products as described by Neubert et al. The MLMS contains penetration cells arranged one over the other in a penetration cell stand. Each penetration cell comprised four layers of circular 40 mm membrane films arranged one over the other. The membrane stack was placed on a circular base plate. A stencil, with a square opening of 4 cm<sup>2</sup> at the centre, was put above the membranes to enable application of the formulations and the whole cell was covered by a covering plate. The following processes can be studied using the MLMS: i) dissolution of the drug in semisolid formulation, ii) diffusion in the formulation and iii) penetration of the drug into the acceptor of the MLMS. Using the MLMS influences of the on release process could be described and drug release from semisolid formulation can be optimized. In the lecture examples were presented to demonstrate the effectiveness of the MLMS. The drug penetration into the human skin can be studied excised human skin and the Franz diffusion cell. Examples are presented showing in which way the penetration data from this cell can be used in order to determine topical bioavailability of dermal products.

## Biography

Reinhard H H Neubert completed his PhD in 1974 from Martin Luther University (MLU) and made an Honorary Doctorate from Poznan University of Medicine. He is the Dean of the Faculty of Biosciences of the MLU. He has published more than 400 papers in reputed journals and has been serving as an Editorial Board Member of repute.

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