

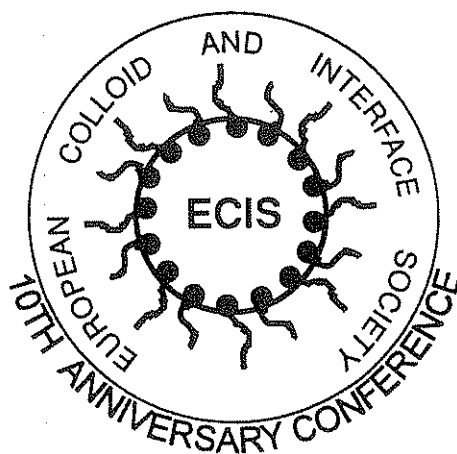
## **X Conference of the European Colloid and Interface Society**

**September 2-6., 1996 Abo  
(Turku), Finland**

# BOOK OF ABSTRACTS

## List of participants

### X. Conference of the European Colloid and Interface Society

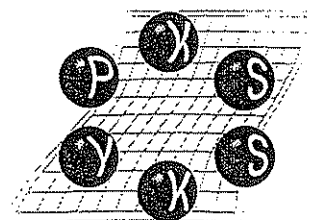
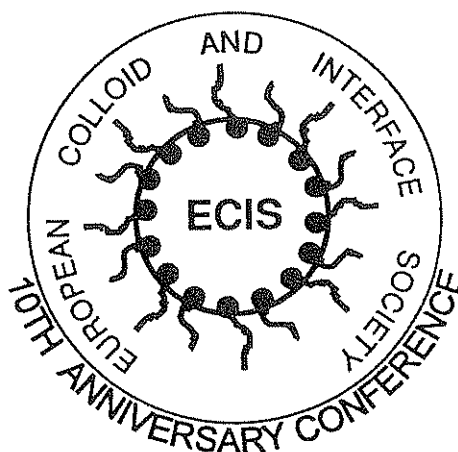


SEPTEMBER 2.-6., 1996  
Åbo (Turku), Finland

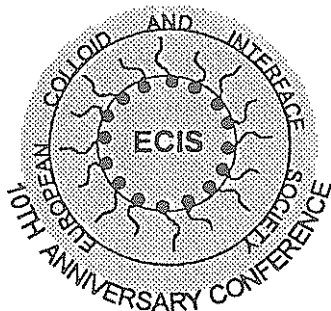
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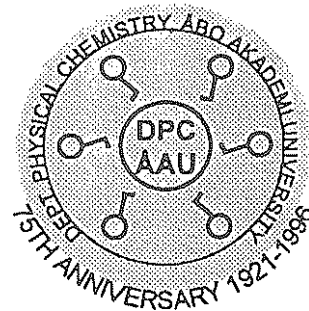
### X. Conference of the European Colloid and Interface Society



Pinta- ja kolloidiseura -  
Yt- och kolloidsällskapet



10th Conference of the European  
Colloid and Interface Society  
Abo, Finland  
September 2.-6. 1996



Turku, 30th April 1996

Dear Dr. Alfons de la Maza.

We are pleased to confirm you that your abstract(s):

**Permeability changes in liposomes modeling the stratum corneum lipid composition caused by surfactants**

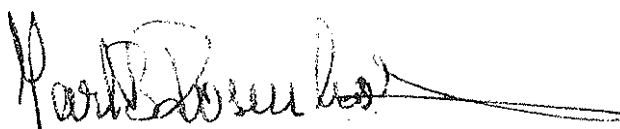
has/have been chosen as an POSTER presentation by the Scientific Advisory Committee.

In total 265 Abstracts were offered as oral and poster presentations. Clearly the anniversary 10th conference will be a success!

The preliminary program and the details concerning the poster sessions will be mailed shortly.

We hope that you will be able to present your valuable communication. If you haven't submitted your registration form, we will appreciate if you could do it as soon as possible.

Sincerely Yours,



Jan B. Rosenholm  
professor, chairperson of organizing committee

PS Please remember the payment of registration fee and sending back the registration form before 31th of May.

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**ABSTRACT**

The alterations caused by different surfactants in the permeability of liposomes formed by a lipid mixture modeling the stratum corneum composition (40% ceramides, 25% cholesterol, 25% palmitic acid and 10% cholesteryl sulphate) were investigated. The surfactant/lipid molar ratios ( $R_e$ ) and the bilayer/aqueous phase surfactant partition coefficients ( $K$ ) were determined at two sublytic levels. The selected surfactants were sodium dodecyl sulphate (SDS); sodium dedecyl ether sulphate (SDES) to assess the influence of the ethylene oxide groups on the anionic surfactant's behaviour; Triton X-100 (OP-10EO) and dodecyl betaine (D-Bet) as a representatives of nonionic and amphoteric ones. Permeability alterations were determined by monitoring the increase in the fluorescence intensity of liposomes due to the 5(6) carboxyfluorescein (CF) released from the interior of vesicles. The SC liposomes/surfactant sublytic interactions were mainly ruled by the action of surfactant monomers. The OP-10EO showed the highest ability to alter the permeability of bilayers and the highest affinity with these structures, whereas D-Bet showed the lowest tendencies. Although SDS and SDES exhibited similar activity at 50% CF release (similar  $R_e$  values), the SDES appeared to be more active at 100% CF release, its affinity with bilayers being also increased. Different trends in the evolution of  $R_e$  and  $K$  were observed when comparing the results obtained with those reported for phosphatidylcholine (PC) liposomes. Thus, whereas SC liposomes appeared to be more resistant to the action of surfactants, the surfactant affinity with SC bilayers was always greater than that reported for PC ones.

**TITLE:****PERMEABILITY CHANGES IN LIPOSOMES MODELING THE STRATUM CORNEUM LIPID COMPOSITION CAUSED BY SURFACTANTS****AUTHORS:**

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