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## Drug-binding Properties of Human α-Foetoprotein.

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The drug-binding properties of human α-foetoprotein were investigated by a fluorescence-spectral method. Human α-foetoprotein was shown to bind to albumin's site I marker (warfarin, phenylbutazone), site II marker (L-tryptophan), but not site III marker (cholic acid, digoxin). The binding of human α-foetoprotein towards lower alcohols was examined, and this binding seems to depend partly on the hydrophobicity of the ligands. The binding of human α-foetoprotein is discussed in comparison with human serum albumin or rat α-foetoprotein.

〔Biochemistry, **24**, 4619 (1985)〕

## Interaction of Differently Oriented Lipids in Monolayer: Mixed Monolayers of 16-(9-Anthroyloxy) palmitic Acid with Phosphatidyl choline and Cholesterol.

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16-(9-Anthroyloxy)palmitic acid (16-AP) is a bifunctional molecule with carboxyl and 9-anthroyloxy groups attached at both ends of the hydrocarbon chain. At the air-water interface, in a monolayer, the 16-AP molecule has horizontal and vertical orientations, depending on the surface hressure of the monolayer. The miscibilities of 16-AP with dimyristoylposphatidylcholine (DMPC), cholesterol (CH), and fatty acids in mixed monolayers were evaluated in investigations of monolayer phase transitions. Lipid molecules with flexible hydrocarbon chains, i.e., DMPC and fatty acids, formed homgeneous mixed monolayers with horizontally oriented 16-AP.

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## Polymorphic Phase Transition and Monomolecular Spreading of Synthetic Phospholipids.

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The lyotropic anp thermotropic polymorphisms of synthetic phosphatidylcholine (DMPC, DPPC, DSPC) and phosphatidylethanolamine (DPPE) are investigated dy means of differential scanning calorimeter. The thermal phase transitions of anhydrated phase and hydrated lamellar phase of PCs are reversible, while the transition of anhydrated DPPE is irreversible. The spreading pressures of the anhydrated and hydrated lamellar phases are measured on water. The spreading pressure from the lamellar phase of DMPC shows a steep increment at the gel-liquid crystal transition temperature. The anhydrated phase of phospholipid has higher spreading pressure than that from hydrated lamellar phase.