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**Evidence of Intercalation of trans-Diethylstilbestrol and Its Methyl Ether Derivatives in Multibilayers of Egg Phosphatidylcholine by High-Power Deuterium Nuclear Magnetic Resonance ( $^2\text{H}$ -NMR) Spectroscopy\***

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The mode of incorporation of  $^2\text{H}$ -labeled trans diethylstilbestrol (DES) and its methyl ether derivatives into multibilayers of egg phosphatidylcholine was analyzed by means of deuterium nuclear magnetic resonance. A clear distinction was found between DES or its methyl ether derivatives incorporated into lipid bilayers and those precipitated in the aqueous phase, by taking into account the extent of the motionally averaged quadrupole interaction. Thus, it was found that the relative proportion of these compounds incorporated into multibilayers decreased in the following order: DES > DES monomethyl ether > DES dimethyl ether. In addition, we demonstrated that the mode of intercalation in the multibilayers differs greatly among these compounds.

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