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The influence of ergosterol on the phase behaviour of phospholipid membranes YA-WEI HSUEH, M.-T. CHEN, National Central University, Taiwan — Lipids in biological membranes form domains having distinct physical properties. Defined mixtures of lipids and sterols are of interest to ascertain the fundamental interactions governing these lipids in the absence of other cell membrane components. We study the effect of ergosterol (an important component of fungal plasma membranes) on the physical properties of phospholipid multibilayers using deuterium nuclear magnetic resonance (^2H NMR). In the ^2H NMR experiments the sn-1 chain was perdeuterated and NMR spectra were taken as a function of temperature and ergosterol concentration. It is found that domains of different composition and phase state are present in membranes. The phase diagram constructed from the NMR spectra will be discussed.

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