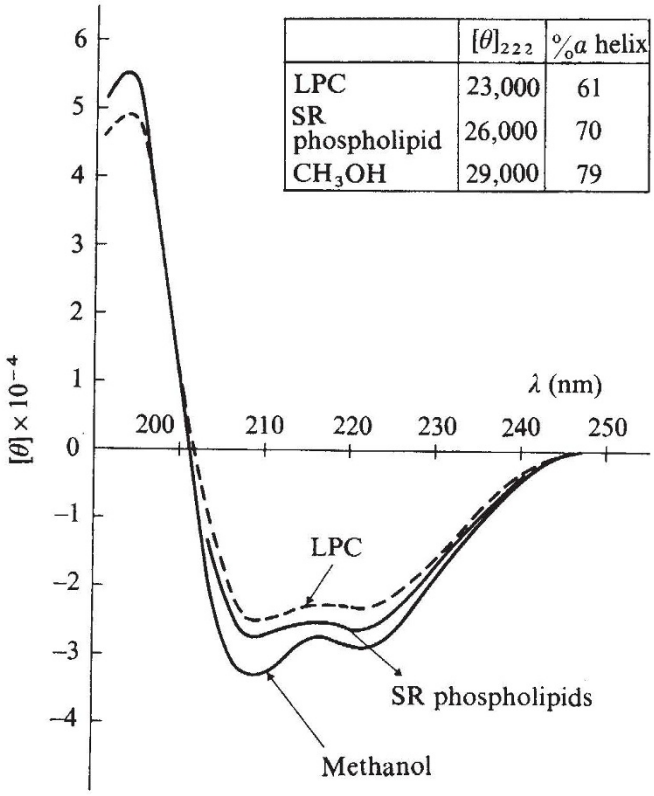

Fig. 1 Far ultraviolet circular dichroism spectra of SR proteolipid in methanol and in aqueous dispersions of membrane phospholipids and LPC (from egg yolk lecithin, Lipid Products, South Nutfield, UK), measured on a Cary 60 spectropolarimeter equipped with a Cary 6001 CD-accessory. Blanks measured with solutions of all components except the proteolipid were substracted. The molar ellipticities [θ] in deg cm^2 dmol^{-1} were calculated from [θ] = mean residue weight × (θ/10*lc*), where θ is the observed ellipticity, *l* is the optical path length in cm, *c* is the protein concentration in g cm^{-3} determined by the Lowry[11] method using bovine serum albumin as a standard, and the mean residue weight was taken as 119.3 (calculated from the amino acid composition[1]). Weight ratios of protein–SR phospholipids, and protein–LPC were 1:50 and 1:20, respectively. Dispersions of SR phospholipid and proteolipid were sonicated under N_2 and ice-cooled for 20 min in volumes of 1 ml using a microsoniprobe (MSE, England). The α-helical fraction was calculated from $[\theta]_{222}$ according to Glaser and Singer[8].

methanol solution indicates that the conditions of proteolipid preparation do not interfere severely with the native conformation. Considering that the α-helical regions are essentially of cylindrical or rod-like shape, the relatively low α-helix fraction in the LPC-system can be rationalised on the grounds of the spherical micellar structure of the aggregates, which does not allow the formation of extended α-helical stretches within its restricted low-polarity core. No such hindrance prevails in the bilayer structure of the SR-phospholipid vesicles and, correspondingly, the α-helical proportion is higher there.

These results support the hypothesis that in the SR membrane the proteolipid is arranged predominantly in extended cylinders of α helices in the plane of the bilayer. The formation of a two-dimensional network of aggregated proteolipid molecules into which the phospholipid alkyl-chains are interdigitated would also explain the observed physical effects (P. L. and M. D. Barratt; and P. L. and D. E. Graham, unpublished) of a protein of relatively small molecular weight on a high number of phospholipid molecules.

It is likely that similar structures are present in other biological membranes containing proteolipid. The finding of Racker and Kandrach[10] showing that a hydrophobic protein fraction from inner mitochondrial membranes, which by itself has no apparent biological activity, is essential to the functional reconstitution of an electron transport chain underlines the importance of such structural proteins. This type of intrinsic protein, of two-dimensional rather than corpuscular structure, may be considered in the discussion of current membrane models.

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1 MacLennan, D. M., Yip, C. C., Iles, G. M., and Seeman, P., *Cold Spring Harb. Symp. quant. Biol.*, **37**, 469–477 (1973).
2 Folch, J., and Lees, M., *J. biol. Chem.*, **191**, 807–818 (1951).
3 Folch-Pi, J., and Stoffyn, P. J., *Ann. N.Y. Acad. Sci.*, **195**, 86–107 (1972).
4 Ackers, G. K., *J. biol. Chem.*, **242**, 3237–3238 (1967).
5 Holzwarth, G., in *Membrane Molecular Biology* (edit. by Fox, C. F., and Keith, A. D.), 228–286 (Sinauer, Stamford, Connecticut, 1972).
6 Masotti, L., Lenaz, G., Spisni, A., and Urry, D. W., *Biochim. biophys. Res. Commun.*, **56**, 892–897 (1974).
7 Greenfield, N., and Fasman, G. D., *Biochemistry*, **8**, 4108–4116 (1969).
8 Glaser, M., and Singer, S. J., *Biochemistry*, **10**, 1780–1787 (1971).
9 Timasheff, S. N., *et al.*, in *Conformation of Biopolymers* (edit. by Ramachandran, G. N.), 173 (Academic, New York, 1967).
10 Racker, E., and Kandrach, A., *J. biol. Chem.*, **246**, 7069–7071 (1971).
11 Lowry, O. H., Rosebrough, N. J., Farr, A. L., and Randall, R. J., *J. biol. Chem.*, **193**, 265–275 (1951).

Errata

In the article "Chromosome imprinting and the mammalian X chromosome" by H. Sharat Chandra and S. W. Brown (*Nature*, **253**, 165; 1975), page 168, paragraph 2, line 1, for ref. 33 read ref. 32.

In the article "Energy spectrum of diffuse component of cosmic soft γ rays" by Y. Fukada, S. Hayakawa, I. Kasahara, F. Makino, Y. Tanaka and B. V. Sreekantan (*Nature*, **254**, 398; 1975) the ceiling heights given for the balloon in the fourth paragraph should read 430 and 680 Pa and not as printed.

Corrigenda

In the article "*Paracoccus denitrificans* and the evolutionary origin of the mitochondrion" by P. John and F. R. Whatley (*Nature*, **254**, 495; 1975) there is an error in the legend to Fig. 2. For Tris-acetate read Tris-phosphate.

In the article "Missing link between Milankovitch and climate" by G. J. Kukla (*Nature*, **253**, 600; 1975) the *Q* values in Table 1 are incorrect. The correct values are shown in the table reprinted below. These errors in no way affected the text, figures and conclusions that followed in the original article.

Table 1 Monthly means* of *Q*, *T* and *S*

	Globe			Northern Hemisphere			Southern Hemisphere		
	Q langley d^{-1}	*T* °C	*S* 10^6 km^2	*Q* langley d^{-1}	*T* °C	*S* 10^6 km^2	*Q* langley d^{-1}	*T* °C	*S* 10^6 km^2
January	566	12.2	76	380	8.0	58.4	751	16.5	18
April	547	14.1	59	644	14.2	41.2	451	14.1	18
July	536	16.1	42	723	21.6	14.3	349	10.6	28
October	548	14.3	57	480	16.2	22.8	616	12.4	34
Mean	550	14.2	60	556	15.0	34.8	543	13.4	25

Q, After Berland[10]; *T*, long term means after Shutz and Gates[11]; satellite observed mean *S* areas covered for at least five consecutive days in the Northern Hemisphere during 1967–73 interval and in the Southern Hemisphere in 1968 (ref. 14)