

under mild conditions, and yields well-defined products. Each vesicle-linked Fab' fragment retains its original antigenic specificity and full capacity to bind antigen. We have used Fab' fragments, coupled to vesicles by this method, to achieve immunospecific targeting of liposomes to cells in vitro. Vesicles bearing anti-human erythrocyte Fab' fragments bind quantitatively to human erythrocytes (at multiplicities up to 5000 0.2- $\mu$ m vesicles per cell) while essentially no binding is observed to sheep or ox red blood cells. Vesicle-cell binding is stable over a pH range from 6 to 8 and is virtually unaffected by the presence of human serum (50%). Cell-bound vesicles retain their aqueous contents and can be eluted intact from cells by treatment with reducing agents (dithiothreitol or mercaptoethanol) at alkaline pH.

**SOLID-STATE CARBON-13 NUCLEAR MAGNETIC RESONANCE OF THE LECITHIN GEL TO LIQUID-CRYSTALLINE PHASE TRANSITION.** R.J. Wittebort, C.F. Schmidt, and R.G. Griffin (Francis Bitter National Magnet Laboratory, Massachusetts Institute of Technology, Cambridge, MA) *Biochemistry* 20 (14): 4223-4228 (1981). The temperature dependence of the <sup>13</sup>C NMR spectra of dipalmitoylphosphatidylcholine (DPPC) which has been <sup>13</sup>C labeled at the carbonyl position of the sn-2 chain, 2-(1-<sup>13</sup>C)-DPPC, is reported. In the L $\beta$ ' phase an axially symmetric spectrum of 112-ppm breadth is observed, and this transforms to an isotropic-like line ( $\langle\Delta\sigma\rangle \sim 7$  ppm) in the L $\alpha$  phase. In the intermediate P $\beta$  phase a temperature-dependent superposition of these spectra is observed, which suggests that this phase exhibits microscopic structural and dynamical properties of both the L $\beta$ ' and L $\alpha$  phases. An analysis of the spectral line shapes leads to the conclusion that the appearance of the isotropic-like line in the P $\beta$ ' phase is primarily due to a conformational change at the sn-2 carbonyl which is complete at the main transition. Increased rates of axial diffusion in the P $\beta$ ' phase may contribute to the narrowing.

**PUBLICATIONS ABSTRACTED**

American Journal of Clinical Nutrition, 9650 Rockville Pike, Bethesda, MD 20014.  
 The Analyst—Analytical Journal of The Chemical Society, Burlington House, London W1V 0BN, England.  
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 Atherosclerosis, Elsevier/North Holland Scientific Publishers, Ltd., P.O. Box 85, Limerick, Ireland.  
 Bakers Digest, 4049 W. Peterson Ave., Chicago, IL 60646.  
 Biochemistry, American Chemical Society, P.O. Box 3330, Columbus, OH 43210.  
 Biochemical Journal, 7 Warwick Court, London WC1R 5DP.  
 Biochemica et Biophysica Acta, P.O. Box 1345, 1000 B.H. Amsterdam, The Netherlands.  
 Chemistry and Physics of Lipids, Elsevier/North Holland Scientific Publishers, Ltd., P.O. Box 85, Limerick, Ireland.  
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 Circulation Research, American Heart Association, 7320 Greenville Avenue, Dallas, TX 75231.  
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 Farbe+lack, Curt R. Vincentz, Publisher, Schiffgraben 41-43, Postfach 6347, 3000 Hanover 1, West Germany.  
 FEBS Letters, Federation of European Biochemical Societies, Elsevier/North Holland Biomedical Press, P.O. Box 211, Amsterdam, The Netherlands.  
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 Journal of the American Chemical Society, American Chemical Society, 1155 16th St. N.W., Washington, DC 20036.  
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 Journal of Chromatographic Science, P.O. Box 48312, Niles, IL 60648.  
 Journal of Coatings Technology, Federation of Societies for Coatings Technology, 1315 Walnut St., Philadelphia PA 19107.  
 Journal of Dairy Science, 309 W. Clark St., Champaign, IL 61820.  
 Journal of Food Science & Technology (India), Association of Food Scientists and Technologists, India: Central Food Technology Research Institute, Mysore-13, India.  
 Journal of the Indian Chemical Society; 92, Acharya Pratulla

Chandra Road; Calcutta, India 700 009.  
 Journal of Lipid Research, F.A.S.E.B. (Federation of American Societies for Experimental Biology), 9650 Rockville Pike, Bethesda, MD 20014.  
 Journal of Nutrition, 9650 Rockville Pike, Bethesda, MD 20014.  
 Journal of Oil & Colour Chemists' Association, Priory House, 967 Harrow Road, Wembley HA0 2SF Middlesex, England.  
 Journal of Organic Chemistry, American Chemical Society, 1155 16th St. N.W., Washington, DC 20036.  
 Journal of Food Science, Institute of Food Technology, Suite 2120, 220 N. LaSalle St., Chicago, IL 60601.  
 Journal of the Society of Cosmetic Chemists, 1905 Broadway, Suite 1701, New York, NY 10023.  
 Lipids, American Oil Chemists' Society, 508 S. Sixth St., Champaign, IL 61820.  
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