DEVELOPMENT OF MICROENCAPSULATION TECHNIQUES

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When vesicles are formed using phospholipids containing terminal sulfhydryl groups it is possible to polymerize the sulfhydryl groups by oxidation to form disulfide linkages. Such cross-links lead to a considerable enhancement in vesicle stability for a given size. An important feature of the sulfhydryl system is that this type of phospholipid polymer can be readily depolymerized by reducing agents. We have also found formulations which result in spontaneous formation of vesicle structures. Spontaneous vesicle formation reduces many of the difficulties involved in vesicle preparation. Certain combinations of short

20. Abstract (continued)

and long chain lipids give rise to spontaneous vesicle formation. We are currently exploring whether this phenomenon may also occur for short and long chain polymerizable sulfhydryl phospholipids.