Comment to the Editor

Interpretation of Spectroscopic Results

The statement given by Dr. Pérez-Gil that ''the information provided by microscopic and spectroscopic techniques should be considered complementary'' is absolutely correct and is exactly what we demonstrated in our articles. Having used electron spin resonance and other spectroscopic techniques for a long time, I am very much aware about the limits of the techniques with respect to time and space resolution. Pérez-Gil showed in his article that in vesicular systems at very high protein concentrations under given ionic and pH conditions, the electrostatic interaction between SP-B and phosphatidylglycerol (PG) leads to an immobilization of the PG chains (1). This sounds reasonable, since SP-B is positively and PG is negatively charged. An extrapolation from one condition (high protein concentration) to another (e.g., the physiological range) is not possible, however, independently of the technique that was used.

We never doubted his experimental result under those conditions. What we did show, however, is that in a planar system and under the ionic conditions we used, SP-B is dissolved in fluid phase domains (2,3). This is a fact as is the observation published by Pérez-Gil et al. (1), and our article is not meant to disprove any other interpretation. Thus I fully concur with the commenting author and agree that spectroscopic (and other scientific) experiments have to be discussed properly, which is what we did. The term ''specific'' might be used very carefully, especially in cases where one is unable to give clear numbers for binding constants. Scientific discussion is always to be encouraged, and the Comment by Pérez-Gil is thus very helpful to remind readers that interpretation of scientific findings is a priori restricted to the specific system considered and to the technique used to obtain the results. Care needs to be taken when any generalization about other systems or methodological approaches is attempted.

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