

How stereochemistry affects the physicochemical features of gemini surfactant based cationic liposomes

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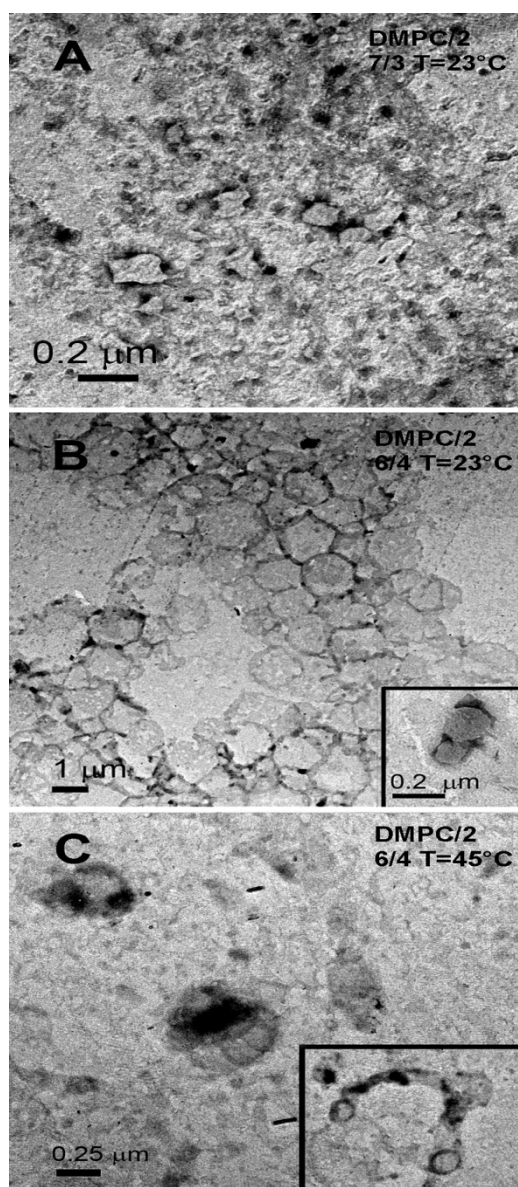


Figure 1S. TEM images of DMPC/2 formulations at different molar ratios and at different temperatures. A: 7/3 at 23 °C, B: 6/4 at 25 °C, C: 6/4 at 45 °C. In the inset, where not indicated, the bar length is like the one of the main panel. Panel A shows small particles observed at 7/3 molar ratio, with an average diameter of the order of ~100 nm or less, in accordance with DLS findings. Note that since in DLS measurements the size is obtained as an “intensity average”, and hence rather strongly biased to larger and higher scattering particles (the scattered light intensity is proportional to the squared volume of a particle), the DLS estimate roughly corresponds to the size of the largest particles observable in these images. At higher gemini content, and low temperature, large aggregates are visible (panel B, DMPC/2 6/4, T=23 °C) that are clearly the result of the aggregation of smaller particles (panel B and inset). As the temperature is increased, the large aggregates almost disappear and only the individual particles are clearly visible (panel C, DMPC/2 6/4, T=45 °C).