Amphiphilic Polypeptoids Serve as the Connective Glue to Transform Liposomes into Multilamellar Structures with Closely Spaced Bilayers

Scientific Achievement

A newhydrophobicallymodified polypeptoid (HMP) was shown to induce morphological transition of liposome into multilamellar structures

Significance and Impact

Opens new research directions in the development of new materials and approaches for multirug encapsulation and delivery and transmembrane protein recovery.

Research Details

- HMP induces in the liposomemultilamellarmorphological transition in a concentration dependent manner
- At low concentrations of HMP, multilamellarvesicles are formed through a mechanism opatchwiseaddition of lipid rafts onto existing posomes
- At higher concentrations of HMP, we see a total breakdown of liposomes into small

Zhang, Y.; Xuan, S.; Owos@n;Omarova, M.; Li, X.; Saito, M.; He, J.; McPherson, G.;HMP induced structural evolution of lipid assemblies a RaghavanS.; Zhang, D. *; John, Vangmuir2017, DOI10.1021/acs.langmuir.6b04190. revealed by SANS andyoTEMstudies.