Contribution ID : **133** Type : **Oral**

Dynamic transformations of drug delivery systems by proteins: when equilibrium studies are not enough.

Tuesday, 3 December 2019 13:50 (20)

Lipid-based drug delivery systems have great potential in biomedical applications. They comprise of the self-assembly of biocompatible lipids, where the structures they form dictates the rate of release of drug. However, their potential has been limited by an incomplete understanding of their fate in vivo. The presented research gives insight into the response of lipidic membranes to exposure to different proteins: liposomes with phospholipase C and cubosomes in physiologically mimetic media. What was observed in dynamic studies was not what was predicted by equilibrium experiments, highlighting the need to understand physiological processes in real time. Synchrotron SAXS was key to observing these interactions. Understanding the type and timing of phase transitions in these lipid based drug delivery systems will better direct their design for biomedical applications.

Speakers Gender

Female

Travel Funding

No

Level of Expertise

Expert

Do yo wish to take part in the poster slam

No

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Session Classification : Session 20

Track Classification : Imaging