

Special Issue on
**Recent Advances in Synthesis, Characterization, and
Application of Liposomes as Drug Carriers**

CALL FOR PAPERS

In 1965, Bangham et al. first described the phospholipid vesicles. These were later called liposomes. Use of liposome as a potential drug carrier was put forth and investigated by Bangham in the early 1970s. Since then applicability of liposomes as a drug delivery systems (DDS) has been intensively investigated. Pharmaceutical, cosmetics, and food industries are the major beneficiaries of the 50 years of research in this area. Several nanocarriers like liposomes, nanoparticles, and micelles have been shown to deliver small molecule drugs and peptides at the intended site of action with improved potency and reduced toxicity. They are of particular interest for the delivery of promising molecules where stability, aqueous solubility, and nonspecific toxicity are the major concerns. Research in the field of liposome as DDS has resulted in about 11 liposomal drug formulations approved by FDA for clinical application. Many of these formulations have been approved for hard to treat cancers in advanced stages. Also, there are around 16 liposome-based formulations at different stages of clinical trials.

However, translation of liposome assisted drug delivery platforms from bench to bedside has not moved at the same pace as expected from numerous positive results available in the literature. The major reason, among others, for the lack of fast progress on the clinical application part has largely been attributed to the synthesis of liposomes. Synthetic methods that can easily be scaled-up to clinical scale are much needed. A good synthetic method can also solve the problems associated with batch to batch variability. Many liposome formulations have been shown to be leaky which results in the release of the encapsulated drug quickly after administration. Sterilization of the finished product is another major issue with the liposome-based DDS. Despite these challenges the field will continue to grow due to the numerous benefits it can provide to the field of nanomedicine. This will continue to encourage scientists to develop novel synthetic methods or improve the existing ones to circumvent some of the problems.

For this special issue, we invite original contribution from the authors related to novel synthetic methods, characterization, and their applications as DDS, in cosmetics, and as a food additive. Articles and reviews reporting the use of other polymer-based nanoparticles as a carrier for therapeutic agents are equally welcome.

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/jnm/rasca/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

Lead Guest Editor

Brajesh Kumar, TATA College,
Chaibasa, India
krmbraj@gmail.com

Guest Editors

Santosh Kumar, University of Coimbra,
Coimbra, Portugal
santoshics@gmail.com

Manish K. Singh, University of North
Carolina, Chapel Hill, USA
mksinghny@gmail.com

Submission Deadline

Friday, 29 June 2018

Publication Date

November 2018