

5th International Conference and Exhibition on

Pharmaceutics & Novel Drug Delivery Systems

March 16-18, 2015 Crowne Plaza, Dubai, UAE

Challenges facing liposomal delivery of Vancomycin for combating bacterial biofilm on abiotic surfaces

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Several published articles have tackled the issue of improving vancomycin performance. The performance areas targeted in these studies included broadening antibacterial spectrum to include Gram-negative organisms, enhancing antibacterial activity against drug resistant *Staphylococcus aureus* and enhancing the antibiofilm activity.

One of the active research areas in the Department of Pharmaceutics has been lipid vesicles including liposomes and niosomes among other types of modified liposomes such as propylene glycol liposomes with the aim of using these vesicles as vancomycin carriers to improve antibiofilm activity including inhibition and eradication of biofilms forming on abiotic surfaces such as catheters.

This presentation focuses on challenges encountered, and on lessons learnt, while conducting research in this area. Some of the challenges are related to vancomycin itself and some arise from the methodology used. The presentation also touches on speculation of how to move such systems from bench to bedside.

Biography

Nawal Khalafallah Current research interests include improving drug performance using lipid vesicles as carriers. Industry-related research interests include looking at the effect of source of excipients on excipient characteristics, and on product performance. Participated in developing a postgraduate two year PharmD program for hospital pharmacists

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