

5<sup>th</sup> International Conference and Exhibition on

# Pharmaceutics & Novel Drug Delivery Systems

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

## Cetirizine fast dissolving tablets for dysphagic and pediatric patients

Abrar Mohammad Al Khazinddar, Abrar Fahad Al Hameed, Alyaa MohammdAli Ajabnoor, Hayat Ahmed Ba-mansour, Shaimaa M Badr\_Eldin Ali and Gihan Salah Labib

King Abdulaziz University, Kingdom of Saudi Arabia

Cetirizine is an antihistamine drug used for Allergy and Urticaria. Adherence to medication has been an ongoing problem to patients especially the dysphagic and pediatric patients. The concept of Fast Dissolving Drug Delivery System emerged from the desire to provide patient with easy conventional means of taking their medication.

The main objective of the current study was to mask the bitter taste of Cetirizine HCl and make a simple yet effective Fast Dissolving Tablet (FDT). Taste masking was achieved by the preparation of solid dispersions using  $\beta$ - Cyclodextrin and 2-hydroxypropyl- $\beta$ -cyclodextrin. Solid dispersions of different molar: drug ratios were prepared by applying two techniques, the kneading method and the lyophilization method. The most optimal solid dispersion with respect to taste-masking effect was then prepared as tablets by direct compression. Sublimation technique was then applied to obtain porous FDT. Explotab and Gellan Gum were used in tablet formulations as superdisintegrants. Menthol was added in the formulations with the objective of its synergistic taste masking effect and due to its volatility as upon sublimation, it would generates porous structure that facilitate tablet disintegration.

Evaluation of tablets was performed and included; weight variation, tablet thickness, friability, wetting time, water absorption ratio, disintegration time and percent drug release. All prepared tablets showed satisfactory results. However, the results slightly favored the Gellan Gum formulation over the Explotab with respect to drug release and disintegration time.

[Smartsience\\_2011@hotmail.com](mailto:Smartsience_2011@hotmail.com)