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Dubai, UAE**Compritol® 888 ATO lipid matrix via twin screw extruder****Abishek Wadhwa, Vashish Mathura, Mahalaxmi Rathnanand, Anup Naha and Shaila Angela Lewis**
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Theophylline is a popularly used bronchodilator with a half-life of 8 hours in average non-smokers. The study aims to explore the potential of Hot Melt Extrusion (HME) technique by using theophylline as the model drug to produce sustained release tablets utilizing Compritol® 888 ATO as the retarding material and to study the influence of lipid:excipient ratio, excipient type as well as the processing conditions of the extruder on the release profile. The tablets prepared using hot fusion method was compared to the ones concocted by the HME technology. During the

HME process, a powder mixture of drug free of moisture content, lipid, and other adjuncts was introduced into the extruder and liquefied inside the barrel of the extruder. The in-vitro dissolution studies of the formulations were carried out in pH 7.2 buffer using USP Apparatus 2. The extrudates were characterized via differential scanning calorimetry. The theophylline sustained-release tablets were found to release the medicament gradually over a period of more than eight hours.

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