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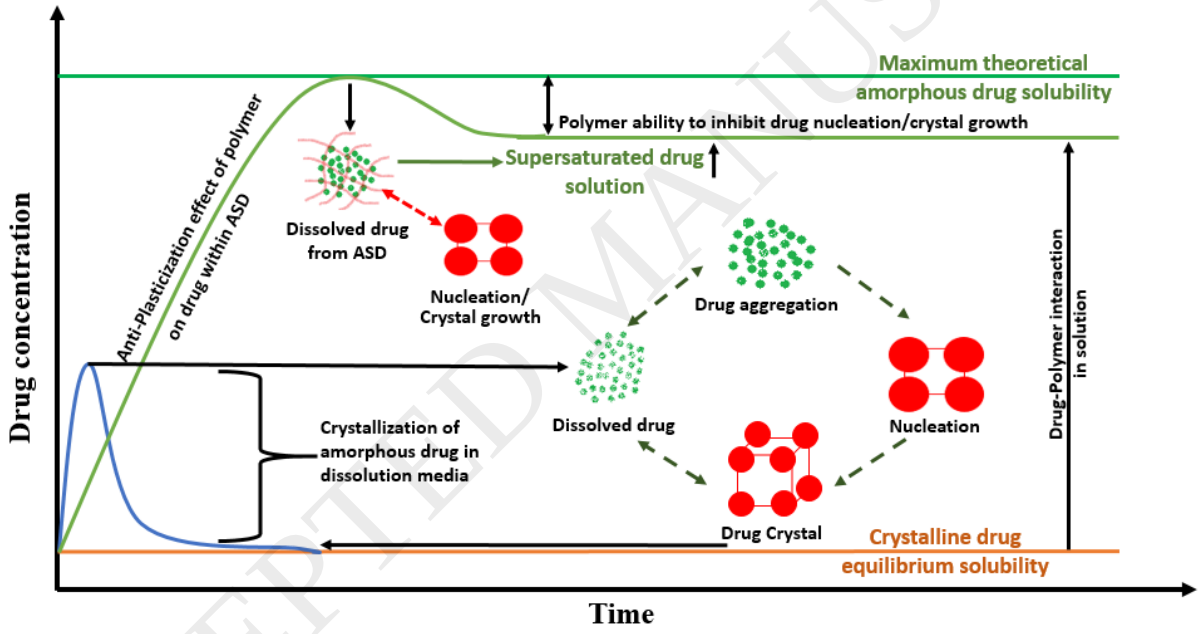
Graphical Abstract



ABSTRACT:

In this study, the dissolution behaviour of dipyridamole (DPM) and cinnarizine (CNZ) spray-dried amorphous solid dispersions (ASDs) using polyvinyl pyrrolidone (PVP) and polyacrylic acid (PAA) as a carrier matrix were evaluated and compared. The drug concentrations achieved from the dissolution of PVP and PAA solid dispersions were significantly greater than the equilibrium solubility of crystalline DPM and CNZ in phosphate buffer pH 6.8 (PBS 6.8). The maximum drug concentration achieved by dissolution of PVP and PAA solid dispersions did not exceed the theoretically calculated apparent solubility of amorphous DPM and CNZ. However, the degree of supersaturation of DPM and CNZ