

REVIEW ARTICLE

CONTROLLED RELEASE AMORPHOUS SOLID DISPERSION-HARNESSING THE POTENTIAL OF DOSE TOLERABILITY

Sandipan Roy^a and Sujata Sawarkar^{a*}

(Received 29 November 2024) (Accepted 26 April 2025)

ABSTRACT

The article describes detailed scope of controlled release amorphous solid dispersion (CASD) and its implication on dose tolerability profile, which is quintessential for reduced occurrence of adverse reaction and successful therapy of chronic disease management. Solid dispersion along with controlled release results increase in bioavailability with reduced dose and dosing frequency, resulting in improved tolerance and minimal occurrence of adverse effects. It has given immense opportunity to drug researcher, to maintain consistent release of drug with predetermined rate, so that minimum effective concentration of the active ingredient is maintained with reduced frequency and reduced cumulative daily drug exposure that increases tolerability to patients. CASD can be manufactured by different techniques like spray drying and hot melt extrusion. Global regulatory agencies are always encouraging viable and economic alternative for novel drug delivery with the rationale of more dose tolerability to patients and CASD has come a suitable alternative.