Heterocyclic curcumin derivatives of pharmacological interest: Recent progress

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 Curcumin, a natural yellow polyphenol, is isolated from the herb Curcuma longa L. (turmeric), a member of the ginger family. It has been extensively studied due to their multiple pharmacological properties. Nevertheless, curcumin has disadvantages such as poor water solubility, poor bioavailability and rapid metabolism, which has prompted the search for analogues that overcome these shortcomings while maintaining or improving their good pharmacological properties. Among the main curcumin analogues that have been developed, the heterocyclic curcuminoids show a high interest. In this review, we describe recent progress in the synthesis and pharmacological properties of new heterocyclic curcumin derivatives. The most recent developments in anti-cancer, anti-Alzheimer, anti-bacterial and anti-oxidants heterocyclic curcumin derivatives are covered.