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Bioactive amentoflavone isolated from *Cassia fistula* L. leaves exhibits therapeutic efficacy

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Abstract novel natural compounds endowed with sound bioactivities are currently the utmost need as leads toward drug discovery. For the first time, here, we report the presence of amentoflavone (biflavonoid) in the leaves of *Cassia fistula* L. Structural characterization was carried out using ultraviolet-visible spectrophotometer, Fourier transform infrared, nuclear magnetic resonance and thin-layer chromatography. The isolated compound was further evaluated for its bioactivity. The compound demonstrated moderate cytotoxicity in liver carcinoma (HepG2) cells and the comparative analysis for the standard and normal compound has also been validated. Antioxidant potential was assessed by DPPH assay. Furthermore, efficacy of the compound in the aforesaid assays asserts its bioactivity and subsequently its importance as a potent therapeutic. Our study strongly suggests that amentoflavone present in the leaf extracts of *Cassia fistula* L. definitely holds promise in the pharmaceutical industry.

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