



Abstract

Cassia Senna, commonly known as Sana Maki in Pakistan, is a large genus of flowering plants in the legume family Fabaceae. It is considered an important plant in pharmacology due to its laxative properties and is usually consumed as an herbal tea since ancient times. In the present study, *C. Senna* plants from the native area of Pakistan has been investigated to identify its broad medical spectrum. The study establishes that the plant extract from Pakistan not only possess antibacterial property but it has additional anticancer and antiviral properties as well. The metabolites in the plant sample were identified using H-NMR technique. The ethanolic extract of *C. Senna* showed antibacterial activity against the isolates of *Pseudomonas aeruginosa* and *Xanthomonas campestris*. Furthermore, the calorimetric MTT test examined the cytotoxic effect against cancer cell lines HT-29 showing anticancer potential. Likewise, the bead formation in the hamagglutination test against influenza avian virus confirmed the antiviral potential. Therefore, the study suggests that *C. Senna* plant species can be used for medicinal purposes. However, further studies should be tailored towards targeted metabolites responsible for conferring different biological activities.

KEYWORDS:

C. Senna, Pharmacology, Laxative, Antibacterial, Antimicrobial