

## **Therapeutic Implications of Caffeic Acid in Cancer and Neurological Diseases**

### **ABSTRACT**

Caffeic acid (CA) is found abundantly in fruits, vegetables, tea, coffee, oils, and more. CA and its derivatives have been used for many centuries due to their natural healing and medicinal properties. CA possesses various biological and pharmacological activities, including antioxidant, anti-inflammatory, anticancer, and neuroprotective effects. The potential therapeutic effects of CA are mediated via repression and inhibition of transcription and growth factors. CA possesses potential anticancer and neuroprotective effects in human cell cultures and animal models. However, the biomolecular interactions and pathways of CA have been described highlighting the target binding proteins and signaling molecules. The current review focuses on CA's chemical, physical, and pharmacological properties, including antioxidant, anti-inflammatory, anticancer, and neuroprotective effects. We further described CA's characteristics and therapeutic potential and its future directions.