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## HPLC Screening of *Clerodendrum viscosum* leaf extract show possible photochemical responsible for antioxidant and anticancer activities

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The use of herbal based medicine is gaining importance worldwide and medicinal plants are believed to be an important source of new lead chemicals with potential therapeutic effects. Free radicals play a key role in many degenerative diseases such as cardiovascular disease, cataracts, weak immune system, brain dysfunction and cancer. Antioxidants modify the behavior of cancer cells by changing their redox surroundings as well as reduce their genetic instability and can be appraise as an innovative way for cancer therapy. Traditionally *C. viscosum* leaf was used in the folklore medicinal practices in anthelmintic, metic, mild laxative cholagogue, skin diseases and tumors. Initial screening for in vitro antioxidant and anticancer activity of 70% methanolic extract of *C. viscosum* leaf (CVLM) exhibited significantly promising results. The antioxidant property of hexane, chloroform, ethyl acetate and water fractions of CVLM was evaluated. The chloroform and ethyl acetate fractions displayed better antioxidant efficacy. So, the same fractions were tested on human breast cancer (MCF-7) as well as human lung adenocarcinoma epithelial cell line (A549) for their cytotoxicity and cell cycle distribution. The presence of phytochemicals in the fractions was assessed through high performance liquid chromatography (HPLC). Ethyl acetate fraction possessed highest cytotoxic activity on MCF-7 cells followed by chloroform fraction and it also further confirmed by cell cycle distribution. Since, the chloroform and ethyl acetate fractions exhibited potent antioxidant as well as anticancer activity, it was concluded that the phytochemicals in different fractions are responsible for antioxidant property could be useful in cancer treatment.

### Biography

Dipankar Chaudhuri is completing his PhD under the guidance of Prof. Nripendranath Mandal from Bose Institute and the University of Calcutta, India. He is a dynamic Researcher in the field of isolation of newer bioactive molecules from Indian medicinal plants, along with assessing their antioxidant and anticancer capacities. In this respect, he has published 18 research articles in reputed international peer-reviewed journals.

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