

Title : Biochemical characterization of Momordica charantia (leaf and fruit) and effect of soluble extract on MCF-7 breast cancer cell lines

Abstract

Biochemical characterization of Momordica charantia (leaf and fruit) and effect of soluble extract on MCF-7 breast cancer cell lines. Cell Biol Dev 3: 1-5. Cancer is a serious problem worldwide that has been targeted by variety of treatments that include the use of traditional medicinal plants. One such known medicinal plants is bitter gourd (Momordica charantia) that has been investigated for its anti-cancerous properties. This study was carried out to explore the biochemical analysis of different components of M. charantia (leaf and fruit) and effect of alcoholic extract of M. charantia to investigate their potential effect MCF-7 breast cancer cell line in comparison to cisplatin, a commercial anti-cancer drug. The different components (leaf and fruit) were separated, dried and converted to powdered form. MCF-7 (human mammary primary epithelial cancer cells) breast cancer cell line was treated with different concentrations (8 - 800 $\mu\text{g}/\text{mL}$) of the soluble extract and cisplatin (all dissolved in DMSO and diluted in the incubating medium) for 48 hours. Initial time course experiments established that maximal cell death occurred between 24-48 hours. Cell viability (cell death) was measured using established method. The results have shown that with MCF-7 cell line, the extract at high concentration (800 $\mu\text{g}/\text{mL}$) were more effective in killing the cancer cells when compared to cisplatin. The present results have clearly shown that either the ethanol soluble extract of M. charantia, especially at high doses, can be used effectively to treat breast cancer.

For more details :

<https://www.semanticscholar.org/paper/Biochemical-characterization-of-Momordica-charantia-Ansari-Singh/9c5697f62107232beebfcd66f7d9c8e3d6a2aa54>