



RESEARCH PAPER

Selective anti-proliferative effect of leaf and rhizome part of Indian spices on human cancer cell lines

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Abstract : Spices have been used for thousands of years and are known for their flavour, taste and colour in food. Indian spices not only add aroma and taste to the food, but are known to possess bactericidal, bacteriostatic, fungistatic and antifertility with other medicinal properties. Many Indian spices have been proved to cure the diseases ranging from common cold and cough to cancerous tumors. Several spices have been used in Indian System of Medicine for the treatment of various diseases as they contain many bioactive compounds and possess a lot of beneficial health effects. Some antioxidants from spices control cellular oxidative stress and have the ability to block the production of reactive oxygen species. Therefore, spices could be used to prevent and treat cancers, because oxidative stress, inflammatory stress and immune response have been associated with the genesis, growth and metastasis of cancer. In the current investigation, we have focussed on some Indian spices namely *Cinnamomum tamala* (tejpatta), *Murraya koenigii* (curry patta), *Ocimum sanctum* (tulsi) and *Zingiber officinale* (ginger) for evaluating their *in vitro* cytotoxicity against various human cancer cell lines and the results revealed that these spices suppressed the proliferation of breast, colon, liver, lung, and prostate cancer cell lines with growth inhibition range of 72-100%.

Key Words : Tejpatta, Curry patta, Ginger, Tulsi, Spices, Antiproliferative, Cancer cell lines

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