

Evaluation of cytotoxicity of the aqueous leaf extract of *pogostemon heyneanus* benth. (Java patchouli)

Anjana Sheela, author

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Abstrak

Several plants have been recently reported to possess anticancer potential. *Allium cepa* root tip assay is a preliminary study to assess the cytotoxic effect of plant extracts. The cytotoxic activity of plants can be correlated to their anticancer potential. Cytotoxic potential of *Pogostemon heyneanus* (Lamiaceae) was evaluated using *A. cepa* root meristematic cells. This study was aimed at analyzing cytotoxic potential of *P. heyneanus* using *Allium cepa* root tip assay. Four different concentrations of the aqueous leaf extracts at three different durations were examined. Distilled water was used as control. The extract was found to be cytotoxic at all tested concentrations, when compared to control. Mitotic index was found to be decreasing with the increase in extract concentrations and treatment durations. The aqueous extract of *P. heyneanus* was found to be an effective cytotoxic agent, inducing various clastogenic and non-clastogenic aberrations such as chromosome gaps, bridges, multipolar anaphase, fragments, nuclear budding and lesions, hyperchromasia, laggards and mitotic pairing.