Ethnomedicinal Approach: A Perspective in The Hit Rate of Cytotoxic Drug Screening Using Cancerous Cell Lines

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In this study, potential anti-cancer local medicinal herbs were chosen based on the ethnomedicinal approach. The MTT cytotoxic assay was conducted to screen for the cytotoxic effect of 229 plant extracts at 50µg/ml, which obtained from Universiti Tunku Abdul Rahman’s Natural Product Library. The cytotoxic effect of the plant extracts were tested on Raji, HL-60, U-2 OS, HSC-2, HSC-3, K-562, and MCF-7 cell lines. Results from this study shows that, *Elephantopus scaber* is the most cytotoxic to Raji and K-562 cell lines; *Impatiens balsamina* is the most cytotoxic to HL-60, HSC-3, and MCF-7 cell lines; *Andrographis paniculata* is the most cytotoxic to U-2 OS cell line; and *Rhinacanthus nasutus* is the most cytotoxic to HSC-2 cell line. These results indicated that a high hit rate was obtained, which ranging from 6.99% to 34.93%. Therefore this suggests that a promising way to search for anti-cancer agents from potential local medicinal herbs can be realized via ethnomedicinal approach.