

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

Wong, C.P.¹, Tee, L.C.¹, Wong, W.Y.¹, Loh, P.L.¹, Tiong, V.¹, Bong, C.S.¹,
Phuah, B.H.¹, Soh, Y.H.¹, Ong, H.C.², Ho, A.S.H.¹ & Lim, Y.M.^{1*}

¹Department of Bioscience and Chemistry, Faculty of Engineering and Science,
Universiti Tunku Abdul Rahman, Jln. Genting Klang, Setapak, 53300, Kuala Lumpur.

²Institute of Biological Sciences, Faculty of Science, Universiti Malaya

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.