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Chemopreventive study of *Clinacanthus nutans* on cervical cancer cells and GC-MS analysis

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Introduction: Chemoprevention is a new approach to suppress, delay or reverse the process of carcinogenesis instead of current treatment that causes many side effects and also possibility of recurrence of cancer. In South East Asia, *Clinacanthus nutans* Lindau (CN) has been used traditionally as herbal medicine to treat various diseases including cancer. However, the therapeutic potential of CN has not been explored for cancer prevention and treatment.

Objective: This study was conducted to evaluate the chemo-preventive property of CN extract on cervical cancer and to identify the compound in CN extract that has anti-proliferative potential using human cervical adenocarcinoma (HeLa) cell line.

Methodology: 500 gram of dried powdered CN was immersed in ethanol for 3 days. After filtration, the extract was concentrated *in vacuo* to give crude ethanol extract of CN (EECN). EECN with concentrations of 0.72-1.44mg/ml were treated on HeLa cells to get the IC50 value. The phytochemical contained in the crude extract of EECN were identified using GC-MS.

Result: Results shows that EECN inhibit the growth of cancer cells at IC50 value of 1.08 mg/ml. GCMS analysis of EECN showed that Lupeol, lup-20(29)-en-3-one, β -Amyrin, Linoleic Acid ethyl ester and Squalene were among the identified components of EECN. Lupeol is suggested as the main active compound that might contribute to the chemopreventive property of CN.

Conclusion: These results suggest that EECN exhibits anti-proliferative effect on HeLa cells and potential candidate to be a chemoprevention agent in anticancer drug discovery.

Biography

Che Noriah Othman is a Senior Lecturer at Faculty of Pharmacy UiTM Pulau Pinang and has involved in many research activities involving herbal, social and behavioral pharmacy. Her main interest is in Herbal Medicine, Complementary and Alternative Medicine and Malay Medicine. She has almost completed her PhD study in Clinical Pharmacy and will secure more research grants related to her field. She is presently collaborated with Universiti Sains Malaysia to conduct cancer related research and is supervising a few Master's and undergraduate students. She is currently a coordinator of Research and Final Year Project presentation for the Faculty of Pharmacy. She has published more than 30 papers in reputed journals and has been serving as an Editorial Board Member and reviewer of many conferences and journals around the world.

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