

ABSTRACT BOOK

13th

INTERNATIONAL SYMPOSIUM OF HEALTH SCIENCES



i-Sihat

24 - 25th August 2022

**Embracing Resilience in the COVID-19 Pandemic:
Health Sciences to the Forefront**



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whether the level of health literacy among older adults with Cognitive Frailty (CF) and if limited health literacy can be a predictor of CF. The purpose of this study is to assess health literacy level and its associated factors among older adults with Cognitive Frailty (CF) in Klang Valley and Rembau. We employed a cross sectional design and collected our data from April 2021 to May 2022. Citizen aged 60 years and above who are able to understand Malay and English languages were selected through purposive sampling from Ageless Trial Screening sample frame. Health Literacy questionnaire HLS-M-18 was administered. A total of 757 participants were included in the analysis. Those scored ≤ 33 were classified as having limited health literacy. The prevalence of limited health literacy was 76.5% in CF group. There was significant mean difference between CF and Non-CF group with HLS-M-Q18 Index Score 33.38 (S.D 8.64) and 36.12 (S.D 10.52) respectively, $p < 0.05$. In binary logistic regression, we found that limited health literacy, age, locality and education level were independent predictors for occurrence of CF. These results show that limited health literacy may be a predictor of cognitive frailty. Health literacy assessment should be included in multidimensional geriatric evaluation.

Keywords: health literacy, cognitive frailty, older adults, predictors, risk factors

OS40 i-SIHAT 2022

Potential Photochemopreventive Effect of Fatty Acids and Terpenoid-Rich Leaf Extract of *Canarium odontophyllum* Miq. on UVB-induced

Immortalized Human Keratinocytes (HaCaT) Skin Cancer Model

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Keratinocyte carcinoma is found in skin areas which are often exposed to the sun and a variety of natural products has been developed as a chemoprevention agent. One example is the *Canarium odontophyllum* Miq, or "Dabai", which is an indigenous plant to Borneo, Sarawak. Fatty acids & terpenoid-rich extract from the leaf were obtained via extraction using hexane. FRAP assay showed antioxidant capacity for both 500 & 1000 $\mu\text{g/ml}$ extract but not significantly different between doses. Untreated and treated immortalized human keratinocytes (HaCaT) were irradiated with UVB for 6 passages to a cumulative of 180 mJ/cm^2 UVB. Findings showed 1000 $\mu\text{g/ml}$ of TRCO significantly reduced p53 expression compared to the untreated group. Both 500 & 1000 $\mu\text{g/ml}$

of TRCO significantly reduced the expression of Ki67 compared to the untreated group. Antioxidant and oxidative stress markers measurement revealed 500 µg/ml of TRCO significantly increased superoxide dismutase activity compared to the untreated group, both 500 & 1000 µg/ml TRCO significantly reduced catalase, glutathione peroxidase, glutathione S-transferase, and protein carbonyls compared to the untreated group. Reduced glutathione peroxidase activity is potentially due to depletion in glutathione by the UVB and extract. In vitro evaluations of TRCO on UVB-induced HaCaT skin cancer model revealed photochemopreventive properties. These promising findings validate further evaluation of *C. odontophyllum* Miq leaf extract as a potential therapeutic agent.

Keywords: *Canarium odontophyllum*, photochemopreventive, antioxidant, terpenoids, fatty acids.

OS41 i-SIHAT 2022

Effects of Orally Administered Pterostilbene in DMBA/TPA induced Multistage Skin Squamous Cell Carcinoma Mouse Model

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Skin squamous cell carcinoma (SCC) is one of the common types of skin cancer that has a risk of metastasis and is life-threatening if left untreated. Pterostilbene is a natural compound that has been proven to exhibit various pharmacological properties related to chemopreventive effects including anti-inflammatory, antioxidant, and anti-proliferation. Our study was conducted to investigate the chemopreventive effect of oral pterostilbene on initiation, promotion and continuous in multistage carcinogenesis of SCC induced by 7, 12-dimethylbenz[α]anthracene (DMBA)/ 12-O-tetradecaboylphorbol-13-acetate (TPA). A total of 30 female ICR mice were randomly divided into five groups with two control groups. Vehicle group that received corn oil orally and 70% acetone topically at shaved dorsal skin twice a week. The cancer group received the DMBA/TPA without pterostilbene. Three pterostilbene groups were treated with DMBA/TPA together with 50 mg/kg of pterostilbene orally twice a week during the initiation, promotion and continuous. The tumour formation was monitored weekly and after 24 weeks of treatment, all mice were sacrificed for histopathological observation using haematoxylin and eosin (H&E) staining. Results showed that oral pterostilbene significantly reduced the tumour incidence and volume. Histopathological observation revealed that vehicle group maintained the normal skin epidermis and the cancer group displayed highly pleomorphic cells and nuclei, epidermal thickening with hyperkeratinization, invasion of basement membrane and formation of keratin pearls. However, the



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