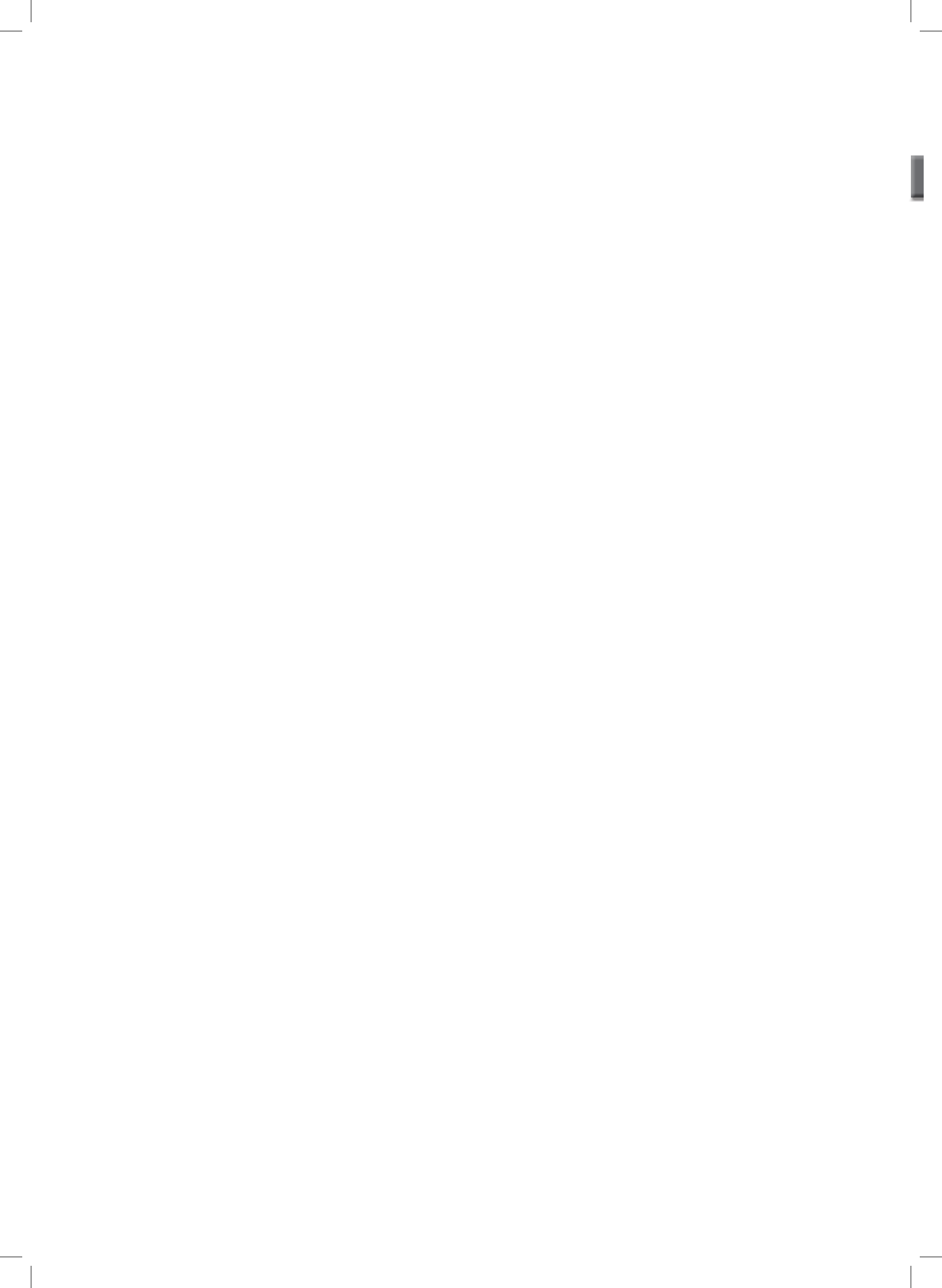




ABSTRACTS
(POSTER PRESENTATION)



Abstracts (Poster Presentation)

Comparative study on Efficacy of the Court-Type Traditional Thai Massage, Taping and Plantar Fascia Stretching in Plantar fasciitis patients: A Randomized, controlled trial

Jurairat Boonruab¹, Sunyarn Niempoog², Phiyaphon Poonsuk¹

Abstract

Background: Plantar Fasciitis is caused by chronic inflammation in the medial calcaneal tuberosity.

Objectives: This study investigated the efficacies of Court-Type Traditional Thai Massage (CTTM), Taping (KT) and Plantar Fascia Stretching (PFS) in plantar fasciitis patients.

Methods: Ninety patients were randomly assigned for 4 weeks to receive either: 1) CTTM twice a week, 2) KT once a week, or 3) PFS of the Achilles tendon and plantar fascia every day. Pain Intensity (VAS), Pressure Pain Threshold (PPT), Ankle Range of Motion (A-ROM), Foot Function Index (FFI), Foot and Ankle Ability Measure (FAAM), and Quality of Life (QOL) were assessed at week 0, week 4 and week 8.

Results: After treatment, VAS-M, VAS-24h, Ankle Dorsiflexion, PPT, FFI and FAAM were significantly improved. In addition, CTTM, KT, and PFS showed significant increases in all age groups with QOL at week 4 and week 8. Furthermore, Ankle Plantar Flexion significantly increased in CTTM but did not significantly increase in KT and PFS. Comparative efficacy, CTTM showed significant improvements in VAS-24h, Ankle Plantar Flexion, and FFI at week 4 and week 8. Nevertheless, VAS-M and PPT only showed improvement during the follow-up period. In contrast, Ankle Dorsiflexion was significantly increased in all three groups. Additionally, all three groups did not significantly enhance FAAM. The QOL, when comparing Physical Health domain scores among the three groups found that only the Bodily Pain in middle age patients showed significant differences at week 4 after treatment. Meanwhile, when comparing Mental Health domain scores among the three groups showed no significant differences at week 4 and week 8 in all ages.

Conclusions: CTTM is an effective treatment that can be used as an optional treatment technique for plantar fasciitis patients.

Keywords: Plantar Fasciitis, Court-Type Traditional Thai Massage, Heel pain

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Abstracts (Poster Presentation)**Longcovid Condition at 3 and 6 Months During Delta Epidemic Wave**

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Thana Khawcharoenporn², Thonvarin Aphichotwasit³,
Chonlawat Chaichan⁴

Abstract

- Background:** Longcovid condition has been introduced as a diverse set of symptoms after a minimum of 4 weeks from the onset of a diagnosed COVID-19 infection.
- Objectives:** This study aimed to determine the 3 & 6 month-prevalence of longcovid condition and its clinical characteristics after Covid-19 infection during Delta-variant epidemic wave.
- Material & Methods:** All Covid-19 individuals, aged >18 years, at Thammasat University Hospital during October to December 2021 were recruited and followed for symptoms of longcovid condition at 3 and 6 months by telephone interview using the structured questionnaire.
- Results:** Of 1,400 eligible Covid-19 cases enrolled in the study, there were 1,129 and 932 cases completed the interview at 3 and 6 months after the infection respectively. There were 431 cases and 314 cases having at least one persist symptom defined as longcovid condition. The point prevalence of longcovid condition at 3 months and 6 months after the infection were 38.2% (95% confidence interval: 35.3% to 41.1%) and 33.7% (95% confidence interval: 30.7% to 36.7%) respectively. By multivariable logistic regression model, independent risk factors of the longcovid condition included female, diseases severity, and symptomatic acute infection.
- Conclusions:** Longcovid is common among covid-19 during delta epidemic wave in Thailand.

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Abstracts (Poster Presentation)

The Diagnostic Accuracy of Harris Imprint Index, Chippaux-Smirak Index and Staheli Index Compared with Talar-First Metatarsal Angle for Screening Arch of The Foot

Siranya Paecharoen¹, Marut Arunakul², Nuttharat Tantivangphaisal¹

Abstract

Objectives: To determine the diagnostic accuracy and reliability of the Harris imprint index (HII), Chippaux-Smirak index (CSI), and Staheli index (SI) compared with the talar-first metatarsal angle

Methods: Data was collected at the orthotic and prosthetic clinic, Thammasat university hospital from 1 January 2016 to 31 August 2020. The three footprints were measured by the rehabilitation physician and the orthotist. The talar-first metatarsal angle was measured by the foot and ankle orthopaedist.

Results: The data from one hundred and ninety-eight patients with 274 feet was analyzed. The diagnostic accuracy of the footprint triad showed that CSI was the most accurate in pes planus prediction, followed by HII and SI (AUROC = 0.73, 0.68, 0.68, respectively). In pes cavus, HII was the most accurate, followed by SI and CSI (AUROC = 0.71, 0.61, 0.60, respectively). For pes planus, the intra-observer reliability by Cohen's Kappa was 0.92 for HII, 0.97 for CSI, and 0.93 for SI, the inter-observer reliability 0.82, 0.85, and 0.70 respectively. For pes cavus, the intra-observer reliability was 0.89 for HII, 0.95 for CSI, and 0.79 for SI, inter-observer reliability of 0.76, 0.77 and 0.66 respectively.

Conclusions: The accuracy of HII, CSI, and SI was fair in screening of pes planus and pes cavus. The intra- and inter-observer reliability were in the moderate to almost perfect range by Cohen's Kappa.

Keywords: pes planus, flatfoot, pes cavus, high-arched foot, reliability and validity

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Abstracts (Poster Presentation)**Case Fatality Rate and Characteristics of COVID-19 death cases in Thailand**

Surasak Buranatrevedh

Abstract

This research aimed to find case fatality rate and characteristics of COVID-19 death cases in Thailand between January 1, 2020 and December 31, 2021 by searching data from Facebook page of Thai Covid-19 data center. There were 2,223,435 cases and 21,698 deaths of Covid-19 in Thailand during that period. Case fatality rate was 0.98%. Death cases were males (53.91%) more than females (45.51%). Mean and standard deviation of age of death cases were 54.98 and 21.91 years. Common races of death cases were Thai (96.41%) and Myanmar (1.77%). Most death cases lived in Bangkok (31.21%), Samut Prakarn (6.73%), Samut Sakorn (3.96%), Pathum Thani (3.71%) and Chonburi (3.63%). Common underlying diseases among death cases were hypertension (1.37%), chronic kidney disease (1.24%), hyperlipidemia (1.23%), and obesity (1.17%). Common risk factors of death cases were contact with Covid-19 patients (48.59%), living in risk areas (40.83%), going to crowded areas (2.22%), risk career (1.65%) including health care workers (0.06%). Further study from more complete data will have benefit to prevent deaths from Covid-19.

Abstracts (Poster Presentation)**Comparison of Cytotoxic Activity Against Gastrointestinal Cancers and Anti-inflammatory Activity of *Basella alba* L. and *Basella rubra* L.**Srisopa Ruangnoo^{1,2}, Yanisa Ruaysup¹, Arunporn Itharat^{1,2}**Abstract**

Background: Gastrointestinal (GI) cancer is one of the most common cancers around the world. The incidence and death rate of GI cancers are very high. *Basella* (Indian spinach or Ceylon spinach) is an importance leafy vegetable grown for its nutritive value and has been shown to have biological activities i.e. wound healing, anti-microbial, anti-inflammatory and anti-ulcer activities.

Objectives: To compare the in vitro cytotoxic activity against GI cancers and anti-inflammatory activity of fresh and dry *B. alba* and *B. rubra*.

Methods: The ethanolic and aqueous extracts of fresh and dry *B. alba* and *B. rubra* were test cytotoxic activity against five types of GI cancer and one type of normal cell by using SRB assay and the anti-inflammatory activity through inhibition of nitric oxide (NO) production.

Results: The ethanolic extract of fresh *B. alba* showed the highest cytotoxicity against colon cancer cells (SW480), gastric cancer cells (KATOIII), bile duct cancer cells (KKU-M156), oral cavity cancer cells (KB) and liver cancer cells (HepG2) with IC₅₀ values of 31.54, 33.82, 33.79, 39.31 and 59.63 µg/mL, respectively, but this extract showed less cytotoxic activity against normal cells (HaCaT). Interestingly, the aqueous extract of fresh *B. alba* possessed potent NO inhibitory activity against lipopolysaccharide (LPS) induced nitric oxide production with an IC₅₀ value of 4.27 µg/mL.

Conclusions: The ethanolic and aqueous extracts of *B. alba* exhibited potent and selective cytotoxic and anti-inflammatory activities. These two extracts have potential for further development as anticancer and anti-inflammatory drugs.

Keywords: *Basella alba* L., *Basella rubra* L., Cytotoxic activity, Anti-inflammatory activity, Gastrointestinal cancers

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Abstracts (Poster Presentation)**Effect of Curcumin on The Expression of
Helicobacter pylori virulence genes**

Sasichai Kangsadalampai, Nantapong Ritdet

Abstract

An increased antibiotic resistance of *H. pylori*, a major cause of dyspepsia and a carcinogenic agent of gastric cancer, leads to a number of searches for new antibacterial compounds. Curcumin, a major bioactive ingredient of turmeric (*Curcuma longa* L.), shows the capability to inhibit *H. pylori* growth and a therapeutic potential against the bacterial infection. Several effects of curcumin were demonstrated on patient gastric tissues while those on *H. pylori* have not been clear. To gain a better understanding of the effects on *H. pylori*, the bacteria were grown in the presence of curcumin at subinhibitory concentration and expression of their major virulence genes (*cagA*, *vacA*, *ureA*, *ureB*, *rocF*, *ggt*, *babA*, *sabA*, *napA* and *oipA* genes) were analyzed by the qPCR method. After curcumin exposure, the spiral-shape bacteria transformed into the coccoid form in dose dependent manner. It was noted that the curcumin-induced coccoid bacteria continuously expressed the virulence mRNAs with the topmost up-regulation of the *ureA*, *ureB* and *babA* genes. Data obtained in this study not only suggested other possible bacterial targets of curcumin but also revealed the infectious ability of the *H. pylori* after exposure to antibacterial compounds such as curcumin at subinhibitory concentration.

Abstracts (Poster Presentation)**Ethanollic Extract of *Dioscorea membranacea* in vitro Inhibition of The Endometrial Cancer Cell Line and Inflammation**

Sumalee Panthong, Duangpacharaporn Kwanchian, Srisopa Ruangnoo, Intouch Sakpakdeejaroen

Abstract

Background: Endometrial cancer is the most common genital cancer in women and uterine cancer constitutes about 5.1% of the female cancer burden in Thailand. Currently, alternative medicine and natural products are preferred cancer treatment choices. *D. membranacea* is used by Thai traditional doctors as an ingredient in the herbal preparation for treating lymphography, inflammation, cancer, venereal disease and leprosy. However, anticancer properties of *D. membranacea* against endometrial cancer cells has yet to be explored.

Objectives: To investigate anticancer activity of *D. membranacea* ethanollic extract against the endometrial HEC-1A cell line and determine its anti-inflammatory activity.

Methods: The *D. membranacea* rhizome extract was obtained by maceration, using 95% ethanol. Anticancer activity was tested by sulforhodamine B assay and anti-inflammatory activity was investigated in LPS-stimulated RAW264.7 cells.

Results: *D. membranacea* ethanollic extract showed significantly inhibited growth of HEC-1-A with IC₅₀ values of 48.26 µg/mL. It also demonstrated low toxicity to HaCaT cell lines with IC₅₀ values of 90.57 ± 0.13 µg/mL. The extract selective index was 1.88 compared with HaCaT. In addition, the extract inhibited nitric oxide production and IL-6 with IC₅₀ values of 15.75 and 39.57 ± 2.34 µg/mL, respectively; it showed no toxicity on RAW264.7 cells.

Conclusions: Results were that *D. membranacea* ethanollic extract had a potent *in-vitro* anticancer effect inhibiting pro-inflammatory cytokines. These findings offer a useful basis for further studying *D. membranacea* as part of an anti-endometrial cancer mechanism.

Keywords: *Dioscorea membranacea*, Endometrial cancer, Anti-inflammation

Abstracts (Poster Presentation)**Genetic Variation of The Lymnaeid and Physid Snails (Mollusca, Gastropoda) in Thailand examined by Mitochondrial CO1 sequence**Chairat Tantrawatpan¹, Weerachai Saijuntha²**Abstract**

Background: The freshwater lymnaeid and physid snails serve as the sole intermediate hosts of several medically and veterinary important trematodes, such as fascioliasis, schistosomiasis and echinostomiasis that can infect and cause diseases in livestock and human. In Thailand, there is little information on the genetic variation of lymnaeid and physid snails.

Objectives: This study aims to explore the mitochondrial cytochrome c oxidase subunit 1 (CO1) sequence variation of lymnaeid and physid snails from different localities in Thailand.

Methods: The lymnaeid and physid snails were collected from 36 different geographical areas in Thailand, including 161 *R. rubiginosa*, 7 *Orientogalba* sp., 9 *Racesina* sp., and 75 *Physa acuta*. These snails were subjected to CO1 sequence analysis.

Results: A high level of genetic variation in *R. rubiginosa* was detected, with 40 haplotypes (H1 - H40) being recorded. Phylogenetic analyses revealed two clades in the material identified as *R. rubiginosa*. One clade contained all samples examined in this study with a sequence from Indonesia, while the second clade comprised specimens found in Singapore, Malaysia and Vietnam.

Conclusions: Our finding suggests that a lymnaeid snail *R. rubiginosa* in Southeast Asia is a species complex, comprises at least two species.

Keywords: Pulmonated snail; radicine snail; intermediate host; species complex; mitochondrial DNA

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Abstracts (Poster Presentation)**Large-scale Production of 4^G- α -D-maltotriopyranosyl-hesperidin by Intermolecular Transglucosylation of Recombinant Cyclodextrin Glycosyltransferase**Jarunee Kaulpiboon^{1,2}**Abstract**

Background: Diabetes mellitus (DM) is one of the major health problems in several countries, including in Thailand. The natural compounds such as phenolic substances from plants have been studied as alternative treatments for DM. One of those, hesperidin, shows α -glucosidase inhibitory activity which decreases blood glucose levels. This benefit can be applied for clinical application in DM treatment.

Objectives: This study focused on the production of hesperidin glucoside, 4^G- α -D-maltotriopyranosyl-hesperidin (HG₃), in large-scale level to obtain the higher yield for its structural identification and evaluation of the α -glucosidase inhibitory activity.

Methods: The recombinant CGTase, prepared from the p19bBC *E. coli* cells, was used to synthesize HG₃ under optimum conditions. The synthesized HG₃ was identified its structure by mass spectrometry and NMR. The α -glucosidase inhibitory activity of HG₃ and other hesperidin derivatives was also comparatively studied.

Results: Preliminary-structural investigation, HG₃ was treated with glucoamylase and analyzed on thin layer chromatography (TLC). The result revealed that after glucoamylase treatment, the spots of HG₃ disappeared and only the intensities of hesperidin (H) and glucose (G₁) increased. This result implied the presence of α -1,4 glycosidic bond in the HG₃ molecule. In addition, the LC-MS profile of HG₃ showed the peak at *m/z* ratio of 1,119.34; this value was in accordance with calculated HG₃. The combined ¹H- and ¹³C-NMR analysis confirmed that the structure of HG₃ was 4^G- α -D-maltotriopyranosyl-hesperidin. For the α -glucosidase inhibitory activity, the IC₅₀ values of hesperidin, HG₃, diosmin and acarbose (commercial α -glucosidase inhibitor) were 2.75 ± 1.57, 2.23 ± 1.45, 2.99 ± 1.23 and 1.64 ± 1.04 mg/mL, respectively. The most effective α -glucosidase inhibitor among the hesperidin derivatives, HG₃, was continuously studied on enzyme inhibition kinetics. Its Lineweaver-Burk plot revealed to be a competitive inhibition towards α -glucosidase with a K_i of 2.09 ± 0.13 mM.

Conclusions: Thereby influencing its bioavailability and bioactivity, HG₃ is an interesting compound to be developed as a new drug for treatment of type 2 diabetes patients.

Keywords: Chemical structure, Cyclodextrin glycosyltransferase, Diabetes mellitus, α -Glucosidase inhibitor, 4^G- α -D-maltotriopyranosyl-hesperidin

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Abstracts (Poster Presentation)**The Effects of Human Mesenchymal Stem Cells on The Proliferative, Migratory, and Invasive Properties of Glioblastoma Multiforme**

Tanawat Uthanaphun¹, Sirikul Manochantr^{2,3}, Chairat Tantrawatpan^{2,3}, Duangrat Tantikanlayaporn^{2,3}, Pakpoom Kheolamai^{2,3}

Abstract

Glioblastoma Multiforme (GBM) is considered the most common and most aggressive brain tumor. GBM rapidly invades the surrounding brain tissue and resists most chemotherapeutic agents resulting in a high mortality rate even after receiving treatment. Previous studies suggest that several cancer stromal cells, especially the human mesenchymal stem cells (hMSCs) that are parts of the tumor, play essential roles in the growth, metastasis and drug responses of GBM cells. However, distinct sources of hMSCs might release different combinations of soluble factors that affect GBM cells differently. Therefore, in the present study, we established hMSCs from the placenta (PL-hMSCs) and chorion (CH-hMSCs) to study the effects of their released soluble factors on the proliferation, migration and invasion of human GBM cell, U251. The results showed that the soluble factors derived from PL-hMSCs and CH-hMSCs suppressed the proliferation of U251 cells in a dose-dependent manner. The soluble factors derived from PL-hMSCs have a higher suppressive effect on U251 proliferation than those of CH-hMSCs. On the contrary, the soluble factors derived from both hMSC sources increased the migration of U251 cells but did not affect the invasive property of those cells. The gene expression analysis showed that the soluble factors derived from PL-hMSCs and CH-hMSCs down-regulated the expression levels of *E2F1*, *E2F2*, *NFKB1*, *NFKB2*, *NOTCH1*, *NOTCH2*, *PROM1*, *MYC*, and *ITGA1* which promote GBM proliferation. These results suggest that the soluble factors derived from both hMSC sources might suppress the proliferation of GBM cells by inhibiting the expression of genes that promote GBM proliferation. Our study will provide a better understanding of the interaction between the GBM cells and hMSCs, which are the critical parts of the GBM stroma. This knowledge could be used to develop a more effective treatment that improves the survival and quality of life of GBM patients.

Keywords: Mesenchymal stem cell, Glioblastoma, Cytokine

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Abstracts (Poster Presentation)**High Glucose Stimulates The Expression of The Senescence Genes in Human Mesenchymal Stem Cells.**

Supawadee Duangprom¹, Chairat Tantrawatpan^{2, 3}, Pakpoom Kheolamai^{2, 3}, Duangrat Tantikanlayaporn^{2, 3}, Sirikul Manochantr^{2, 3*}

Abstract

- Background:** Glucose is an essential senescence regulator. High glucose prevents cell division and induces permanent growth arrest. A previous study has demonstrated that high glucose causes cells to enter a premature senescence state. However, high glucose-induced senescence's effects and molecular mechanisms in mesenchymal stem cells remain unknown.
- Objectives:** This study aimed to determine whether exposure to high glucose could result in mesenchymal stem cell senescence.
- Methods:** Under high glucose conditions, the cellular senescence and stemness of human mesenchymal stem cells (MSCs) were investigated. The expression of the senescence markers (*p53*, *p21*, *p16*) and stemness marker (*Oct-4*, *Nanog*, *Sox-2*) were determined by quantitative real-time reverse transcription polymerase chain reaction (qRT-PCR). The normal glucose concentration-treated MSCs served as a control.
- Results:** The results demonstrated that MSCs had significantly increased the expression of *p53*, *p21* and *p16* under high glucose conditions compared with those of the control. Moreover, MSCs also showed significantly decreased expressions of stemness genes, *Oct-4*, *Nanog* and *Sox-2*.
- Conclusions:** The results indicate that high glucose induces senescence of MSC as evidenced by increased expression of the senescence markers and decreased expression of the stemness markers.
- Keywords:** Mesenchymal stem cells, High glucose, Senescence

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Abstracts (Poster Presentation)**Molecular Identification of *Fasciola gigantica* Retinoid X Receptor (FgRXR)**

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Phornphan Sornchuer², Amornrat Geadkaew-krenc³,
Poom Adisakwattana⁴, Pongsakorn Martviset²

Abstract

Background: Fasciolosis is a parasitic infection caused by the liver fluke genus *Fasciola* that has spread throughout the world. The disease has a huge economic impact on domestic livestock industry. Due to the drug resistance has been increasingly reported, the discovery of new drug targets is required. Nuclear receptor (NR) is the huge protein family accumulating in the nucleus of the metazoans which regulates several cell metabolisms; therefore, NR would be potential drug target.

Objectives: This study aims to identify a novel Retinoid X Receptor (FgRXR) from the liver fluke *Fasciola gigantica* for further development as a drug target.

Methods: In this present study, nucleotide and amino acid sequences of retinoid X receptor of *F. gigantica* (FgRXR), a heterodimeric forming NR, were isolated from the transcriptome of the adult parasite. It has been analyzed by bioinformatics, cloned and expressed as a recombinant protein in *E. coli* expression system. The recombinant protein was used as an immunogen for raising of polyclonal antibodies. The native protein in parasite extracts and tissue was investigated using Western analysis and immunohistochemistry.

Results: The bioinformatics revealed the conservation of FgRXR to family 2 of NR with predicted properties and functions along with this NR family. The 2D and 3D structures demonstrated that FgRXR contained conserved functional domains both DNA binding domain (DBD) and ligand binding domain (LBD). The full-length cDNA encoding FgRXR was cloned and expressed as a recombinant protein in the bacterial expression system by using pET32a(+) together with thioredoxin then used for immunization. Western analysis confirmed that FgRXR could be detected in the parasite crude worm antigen but not excretory/secretory products.

Conclusions: Our findings indicated that FgRXR will probably be a novel drug target for developing of effective anthelmintic drugs combating drug resistance *Fasciola* spp. in the future.

Keywords: Fasciolosis; *Fasciola gigantica*; Retinoid X receptor; drug target

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Abstracts (Poster Presentation)**Antibiotic self-Medicating and Associated Factors Among Medical Students in Thailand: Identifying Predictors and Evaluating Potential Consequences.**

Porntita Sae-li, Sirashat Hanvivattanakul, Ruj Nana,
Thana Khawcharoenporn

Abstract

- Background:** Self-medication with antibiotics is common in Thailand due to their easy availability without a prescription, but can lead to antibiotic resistance.
- Objectives:** To assess antibiotic self-medicating, adverse outcomes, associated factors among Thai medical students.
- Methods:** An online survey was conducted among preclinical and clinical-year students at a Thai public university from January to April 2023 among Thammasat University medical students. Antibiotic self-medicating and associations with knowledge about antibiotic use and resistance and other factors were determined. The knowledge score was calculated based on the correct response to the 15 provided statements about antibiotic use and resistance.
- Results:** A total of 313 participants were included, 65% were in preclinical years and 56% were female. Most students (>85%) did not self-initiate antibiotics for conditions which antibiotics were not indicated. However, 13% reported adverse effects from self-initiated antibiotics and 26% were not given appropriate advice on antibiotic use from a pharmacy. Clinical-year students had significantly higher median knowledge scores than preclinical-year students (12 vs. 9; $p < 0.001$). Students who demonstrated proper antibiotic utilization, such as adhering to recommended treatment duration and indications had higher median knowledge score than those who did not ($p < 0.05$). In multivariable analysis, higher academic year was protective against not completing a full course of antibiotic treatment ($p = 0.01$) while being female was associated with initiating antibiotics with any upper respiratory tract symptoms ($p = 0.03$).
- Conclusions:** This study highlights antibiotic self-medicating practices, their adverse outcomes and associated factors among medical students. Efforts should focus on enhancing preclinical-year and female students' knowledge to establish a strong foundation in appropriate antibiotic use and combat the increasing antibiotic resistance.
- Keywords:** Antibiotics, Self-medication, Antibiotic resistance, Infectious control

Abstracts (Poster Presentation)**Examining The Incidence and Factors Influencing Zoom Fatigue in Thai Medical Students during the COVID-19 Pandemic**

Rinradee Lenavat¹, Sirashat Hanvivattanakul¹, Veevarin Charoenporn¹,
Kanathip Jongmekwamsuk², Korravit Hanvivattanakul³

Abstract

Background: The COVID-19 pandemic necessitated a shift from onsite to online learning for medical students, introducing the concept of “Zoom fatigue” due to the excessive use of video conferencing platforms.

Objectives: The objective is to assess the prevalence of Zoom fatigue among medical students during the COVID-19 pandemic and identify the possible associated factors.

Methods: This cross-sectional study involved Thai medical students from a large public university in Thailand. An online survey was administered to 1st - 6th-year students, collecting data on demographics, health behaviors, and the validated Thai version of the Zoom Exhaustion & Fatigue Scale (ZEF-T). Zoom fatigue and depression were defined as ZEF-T scores >1 standard deviation and PHQ-9 scores >9, respectively.

Results: A total of 386 students participated, with 57% being female and a mean age of 20.6 years. On average, students attended about 2 Zoom sessions per day, with 83.7% of the participants spending more than 1 hour per session. The prevalence of Zoom fatigue was 14.3% (N = 55). Multivariable regression analysis revealed that a lower academic year ($p < 0.001$) and a higher number of Zoom sessions ($p < 0.001$) were significant predictors of Zoom fatigue. Regular exercise ($p < 0.001$) and sufficient sleep ($p = 0.05$) were identified as protective factors.

Conclusions: Online learning during the COVID-19 pandemic resulted in a substantial prevalence of Zoom fatigue among medical students. Strategies such as reducing online learning sessions, promoting regular exercise and ensuring adequate sleep may help alleviate Zoom fatigue.

Keywords: Zoom fatigue, ZEF-T scores, medical students, student’s mental health

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Abstracts (Poster Presentation)

Investigating The Knowledge, Attitudes and Their Correlation with Vaccine Acceptance Regarding COVID-19 and Its Vaccines among Individuals Living with HIV: A multicenter study.

Sirashat Hanvivattanakul, Thana Khawcharoenporn

Abstract

Background: Data existing on knowledge and attitudes toward COVID-19 and vaccine acceptance are limited among people living with HIV (PLHIV).

Methods: An online survey study was conducted among PLHIV receiving care at two medical centers in Pathum Thani, Thailand between July and December 2022.

Results: There were 513 participating PLHIV (57.9% male and median age 50 years). Most of the PLHIV (95%) were knowledgeable about transmission, prevention, symptoms, causative agent and cause of death of COVID-19, but more than a quarter were less knowledgeable about adverse effects (AEs) of COVID-19 vaccines and populations at-risk for severe COVID-19. Most PLHIV agreed that “COVID-19 is a major public health and socioeconomic problem” and “everyone should have an equal right and access to the vaccines”. Of the 513 PLHIV, 46 (9%) did not accept the vaccine. No confidence in vaccine safety was the main reason for no acceptance (82.6%). In multivariable analysis, unknown HIV viral load within one year, advanced age, national health plan coverage, being a merchant and living outside Bangkok and its vicinity were factors associated with no vaccine acceptance.

Conclusions: Educational interventions regarding AEs of COVID-19 vaccines and at-risk populations for severe COVID-19 are needed among PLHIV. While those with factors associated with no vaccine acceptance should be explored for their underlying reasons and provided appropriate measures to improve vaccine acceptance.