

**CONFERENCE PROCEEDINGS**



**Healthcare & Biological Sciences Research Association**

**2nd ICHLSR Pattaya - International Conference on Healthcare  
& Life-Science Research, 30 June - 01 July, 2018**

30 June - 01 July, 2018

Conference Venue  
Avani Pattaya Resort & Spa, Beach Road, Pattaya, Thailand

**KEYNOTE SPEAKER**



**Prof. Oranuch ketsungnoen**  
**Faculty of Medical Science Nakhon Ratchasima College, Thailand**

Oranuch Ketsungnoen is a Lecture of Physics at the Faculty of Medical Science Nakhon Ratchasima College in Thailand. She received her Master of Science Program in Physics from Naresuan University. Currently I am working on lecture courses in mathematics, Calculus, Physics, Physics Laboratory, Chemistry and Chemistry Laboratory. In addition, I also have another role is to conduct research on high energy physics, forensic science and aesthetic science and health. Her recent publications include Physics Laboratory for Medical and Health Science (books, 2016). Her research interests include the Influence of the in-medium kaon potential on kaon production in heavy ion collisions, Kaon production in Au-197 and C-12 collisions and Azimuthal Distributions of  $K^+$  Mesons in Heavy-Ion Collisions.

**Topic:** “Application of Synchrotron Radiation for Industrial Herbal and Medical”

<p><b>Bello Malami Tambawal</b> GICICHLSR1807052</p>	<p style="text-align: center;"><b>Antifungal Activity And Phytochemical Screening Of Leaf Extracts From Guiera Senegalensis Lam. On Some Fungal Isolates</b></p> <p style="text-align: center;"><b>Bello Malami Tambawal</b> Department of Science Laboratory Technology, Umaru Ali Shinkafi Polytechnic, Sokoto, Nigeria Malami Shuaibu Department of Science Laboratory Technology, Umaru Ali Shinkafi Polytechnic, Sokoto, Nigeria</p> <p style="text-align: center;"><b>ABSTRACT</b></p> <p>The aim was to investigate the in vitro antifungal activity of crude ethanolic, methanolic and water extracts of the leaf of one of the popular Nigerian medicinal plants, <i>Guiera senegalensis</i> to reveal the possible presence of highly active phytochemicals. The minimum inhibitory concentration (MIC) observed of the ethanol and methanol extracts were between 5.0 and 7.5mgml<sup>-1</sup> while that of water extract ranged from 7.5 to 10 mgml<sup>-1</sup>. It was shown that all the extracts exhibited observed activity against all the fungal species investigated. The zones of inhibition exhibited by the extracts against the test fungal species ranged between 15 and 18, 15 and 20 and 5 and 10 mm for ethanol, methanol and water extracts respectively. Indicating the high activity in methanolic extract and the least recorded in water extract. The effect of the extract on fungal isolates was highest <i>Candida rugosa</i> with (19 ± 0.5mm), (16 ± 0.5mm) and (10 ± 0mm) followed by <i>Microsporum audouinii</i> with (18 ± 1.2mm), (15 ± 0.5mm) and (5 ± 0mm) and the least was <i>Trichophyton rubrum</i> with (14 ± 2.0mm), (13 ± 0.1mm) and (8 ± 0mm) for methanol, ethanol and water extracts. <i>Fusarium oxysporum</i> showed no activity in water extracts (0 ± 0mm) and all was compared with amphotericin B and ketoconazole at a concentration of 1 mg/ml. Phytochemicals screening of the leaves conducted revealed the presence of higher concentrations of alkaloids and flavonoids, moderate concentration of steroids, Terpenoids, proteins, and carbohydrates and low concentration of saponins and tannins in the extracts. The ability of the crude leaf extracts of <i>G. senegalensis</i> to inhibit the growth of keratinophilic dermatophytes, yeasts and saprophytic fungi, is an indication of its broad spectrum antimicrobial potential which may be employed in the management of fungal infections. This could also serve as alternative potential source of antifungal agents for treatment and control measures.</p> <p><b>Key words:</b> <i>Guiera senegalensis</i>, antifungal activity, phytochemicals.</p>
<p><b>Belet Lydia Ingrit</b> GICICHLSR1807054</p>	<p style="text-align: center;"><b>Application of Nursing Theory Conservation Levin and Comfort Kolkaba in Nursing Care of patients with cervical cancer third stadium.</b></p> <p style="text-align: center;"><b>Belet Lydia Ingrit</b> Fakultas Keperawatan dan Ilmu Kesehatan Universitas Pelita Harapan, Jln Jendral Sudirman Boulevard, Lippo Karawaci, Tangerang, Banten 15811</p> <p style="text-align: center;"><b>Setyowati</b> Universitas Indonesia, Kampus Fakultas Ilmu Keperawatan Universitas Indonesia, Jl. Prof.Dr. Bahder Djohan, Depok, Jawa Barat 16424 <b>Tri Budiati</b> Universitas Indonesia, Kampus Fakultas Ilmu Keperawatan Universitas Indonesia, Jl. Prof.Dr. Bahder Djohan, Depok, Jawa Barat 16424</p>

	<p style="text-align: center;"><b>Abstract</b></p> <p>Cervical cancer was the second leading cause of cancer in Indonesia. A total of approximately 21,000 new cases of cervical cancer are found in Indonesia each year. In 2013, cervical cancer had the highest prevalence of 0.8% (98,692 cases).</p> <p>This study cases is to describe an application of nursing theory of Levine Conservation and Kolkaba Comfort in patients with stage IIIB cervical cancer. Case study with five cases focused on Levin Conservation and Kolkaba's Comfort theory integrated in nursing process from assesment until evaluation patients with stage IIIB cervical cancer</p> <p>The reported cases concerned patients with stage IIIB cervical cancer, involving a female (44 years) who has been diagnosed since October 2017, with complaints of nausea and vomiting since a week before hospital admission and a history of vaginal discharge since nine months ago. The emerging nursing problems are structural integrity conservation disorders: tissue perfusion, structural integrity conservation disorders: changes in elimination patterns, energy conservation disorders: less nutrients than body needs, comfort disorders: pain and anxiety to disease processes. The interventions were provided to maintain energy, improve adaptability, improve standard comfort, educate and provide psychological comfort, in accordance with Levin's conservation principles and Kolkaba's comfort.</p> <p>The result of evaluation showed that the patient was able to adapt to the condition of the illness and the sense of comfort that were completed during hospitalization. Therefore Levin's conservation theory and Kolkaba's comfort can be applied in performing nursing care in patients with cervical cancer.</p> <p><b>Keywords :</b> Cervical cancer, Kolkaba's comfort, Levin's conservation, Nursing process</p>
 <p><b>Renata Komalasari</b> GICICHLRSR1807055</p>	<p style="text-align: center;"><b>Quality Of Life Of People With Heart-Related Conditions: A Descriptive Study</b></p> <p style="text-align: center;"><b>Renata Komalasari</b> Lecturer of Faculty of Nursing, University of Pelita Harapan Evanny Indah Manurung Lecturer of Faculty of Nursing, University of Pelita Harapan Nurjanah Student of Faculty of Nursing, University of Pelita Harapan</p> <p style="text-align: center;"><b>Abstract</b></p> <p>Heart disease ranks 9th amongst 22 types of diseases as the cause of death in Indonesia. Changes due to the ageing process in the cardiovascular system cause a decrease in the cardiac function, affecting the quality of life of people with heart diseases. The purpose of this study was to determine the quality of life of older people with heart-related conditions. This study was conducted in an outpatient department of a private hospital in Banten Province, Indonesia. The method used was quantitative descriptive study design involving 397 older patients. Data was collected using purposive sampling. Inclusion criteria consisted of older patients with heart related conditions, age of 60-74, ability to communicate and understand the Indonesian language, not in a state that hinders completing a questionnaire. Quality of life was measured using the WHOQOL-BREF, a questionnaire which consisted of four domains: physical health, psychological aspect, social relationships and environment. Data was analyzed using descriptive analysis. The results showed that majority of respondents with heart-related conditions (94%) had good quality of life, which was characterized by 85% having adequate environmental</p>

	<p>aspect, 60.7% having active social relations, 54.7% having good physical health, and 44.8% having stable psychological condition. The measurement tool used in the study was measurement of quality of life in general. Future research should consider use of quality of life measurement tool with specific focus on people with heart diseases. Keywords: Quality of life, Heart related quality of life, Older people, Ageing, WHOQOL-BREF</p>
 <p><b>Theresia</b> GICICHLR1807056</p>	<p><b>Effectiveness Of Menstrual Flow Monitoring Education Toward Knowledge, Awareness, And Attitude Regarding Menstrual Health For Economic Education Major's Female Students Teacher College Universitas Pelita Harapan</b></p> <p><b>Ns Theresia, S.Kep</b> Clinical Educator Faculty of Nursing Universitas Pelita Harapan</p> <p><b>Ns Dora Samaria, S.Kep, M.Kep</b> Clinical Educator Faculty of Nursing Universitas Pelita Harapan</p> <p><b>Abstract</b></p> <p>Students as one of the subpopulations in the late adolescent age range have experienced a menstrual cycle. They have the possibility of experiencing irregular menstrual cycles and menstrual health problems such as premenstrual syndrome. If they are not given early health education, it will be difficult to do early detection of menstrual abnormalities. The disorder may develop into a serious reproductive organ disorder that continues into adulthood. The purpose of this study was to identify the effect of menstrual flow monitoring on knowledge, awareness, and attitudes related to menstrual health using lecture, demonstration, and exercise methods. This research used the menstrual flow chart and the menstrual calendar during the training sessions. This study used quasi experimental design with one group pretest and posttest only. The sample was students of Teacher College of Economics Study Program Universitas Pelita Harapan as many as 117 people. The sample was taken by purposive sampling method. The data were processed using Paired t Test. The results showed that there was a significant increase of mean score of pretest to posttest 2 on knowledge variable (p value 0,006), awareness (p value 0,006), and attitude (p value 0,000). The researchers recommend that this research be continued by using randomized control trial design aimed at bigger population to get more accurate result. Keywords: late adolescent, menstrual flow monitoring, menstrual flow chart, menstrual calendar, knowledge, awareness, attitude.</p>
 <p><b>Yenni Ferawati</b> GICICHLR1807057</p>	<p><b>Nursing Students' Experiences In Online Learning Course: A Qualitative Study Report</b></p> <p><b>Yenni Ferawati Sitanggang</b> Faculty of Nursing &amp; Allied Health Sciences Universitas Pelita Harapan Tangerang, Indonesia</p> <p><b>Juniarta Sinaga</b> Faculty of Nursing &amp; Allied Health Sciences Universitas Pelita Harapan Tangerang, Indonesia</p> <p><b>Ni Gusti Ayu Eka</b> Faculty of Nursing &amp; Allied Health Sciences Universitas Pelita Harapan Tangerang, Indonesia</p>


	<p style="text-align: center;"><b>Abstract</b></p> <p>Faculty of Nursing UPH in collaboration with the Directorate of Higher education known as DIKTI has developed an online learning in one private nursing school in Jakarta-Indonesia that had never experienced any online learning course. The course offered was Family nursing which discusses about the concept of family and nursing process in family setting. This project report aimed to describe students' experiences in an online learning course. This paper reported the course evaluation that was conducted through a short essay format. This online (blended) learning project was given to sixty-five students. The students have agreed to fill up an open-ended question evaluation after their final exam. Two themes were emerged from the survey: The benefits of online learning and the challenges of online learning. Some beneficial feedbacks including enjoyable feeling and helpful experience in studying. On the other hand, students have some challenges to motivate themselves to do more independent learning. Moreover, some other challenging experience was lack of campus facility and the unclear instruction of the assignments.</p> <p><b>Keywords:</b> online learning, nursing, students' experiences</p>
<p style="text-align: center;"><b>Veronica Paula</b> <b>GICICHLR1807058</b></p>	<p style="text-align: center;"><b>Quality of Life of the Older Population: A descriptive Study</b></p> <p style="text-align: center;"><b>Renata Komalasari</b> Faculty of Nursing and Allied Health Science, University of Pelita Harapan, Jalan Siloam Hospital Karawaci, Tangerang, 15811, Indonesia</p> <p style="text-align: center;"><b>Veronica Paula</b> Faculty of Nursing and Allied Health Science, University of Pelita Harapan, Jalan Siloam Hospital Karawaci, Tangerang, 15811, Indonesia</p> <p style="text-align: center;"><b>Abstract</b></p> <p><b>Background:</b> Advanced technology is one factor that contributes to higher life expectancy, increasing the number of elderly in Indonesia. Aging is a process that gradually leads to changes in the physical body that will affect both psychological and social relations. These changes will in turn affect the quality of life (qol) of older people. Demographic characteristics may affect quality of life of the older population.</p> <p><b>Objective:</b> To identify quality of life of older people in Kampung Babakan, Tangerang, Banten.</p> <p><b>Methods:</b> This was a quantitative descriptive study undertaken in a villagae area, called Kampung Babakan, in Tangerang, Banten. The number of the respondents was 93 elderly respondents. The measuring tools used was the Indonesian version of WHOQOL-BREF 26 which has been tested for validity and reliability, consisting 26 questions covering four domains. This study used purposive sampling technique with inclusion criteria: adults age 60+, domicile in Kampung Cijengir and Babakan, ability to communicate and understand Indonesian language, not having a hearing loss or any other conditions that hinders participation. Ethical approval was received from the Mochtar Riady Research Institute of Nantotechnology. Data was analyzed using descriptive analysis. The investigators read the questionnaires to the respondents in the presence of family members as proxies. Data were analyzed using univariate analysis.</p> <p><b>Results:</b> This study showed that out of 93 elderly respondents in Kampung Babakan, 62.4% had a good physical health good, 57% had a good psychological domain, 54.8% had good social relations and 61.3 had a good environmental domain.</p>

	<p><b>Conclusion:</b> More than half of older people in Kampung Babakan, Tangerang, had a good quality of life respectively on four domains (physical health, social relationship, psychological, and environmental domains). The results of this study can be used as a database for further research on strategies to increase the quality of life of the elderly in general.</p>
 <p><b>Shinta Hasibuan</b> GICICHL SR1807059</p>	<p><b>People Knowledge On Hand Hygiene Practice As A Contributor Of Diarrhea In Rural Communities In Daboto, Papua</b></p> <p><b>Shinta Yuliana Hasibuan</b> Academic Staff Faculty of Nursing and Allied Health Sciences, Universitas Pelita Harapan</p> <p><b>Renata Komalasari</b> Academic Staff Faculty of Nursing and Allied Health Sciences, Universitas Pelita Harapan</p> <p><b>Yusuf Efendi Mauleti</b> Student Faculty of Nursing and Allied Health Sciences, Universitas Pelita Harapan</p> <p><b>Abstract</b></p> <p>The incidence of diarrhea in Papua Province became an Extraordinary Occurrence in July 2008. It was found that during this period the outbreaks has caused death of 87 people out of 575 cases. Basic Health Research in 2013 showed that incidence and period prevalence of diarrhea in Indonesia were 3.5% and 7% respectively. Papua has the highest prevalence of diarrhea amongst other provinces in Indonesia. This reflects low level of general health of the population. Diarrhea may be caused by poor hand hygiene practice due to lack of knowledge of the population. The purpose of this study was to determine the level of knowledge of people living in rural areas of Daboto in Papua, involving 60 respondents selected by purposive sampling. Inclusion criteria consisted of residence in Daboto, ability to communicate in the Indonesian language, willingness to participate in the study. This study was conducted from August to October 2017 using a measurement instrument of knowledge on hand washing. The instrument was tested for its validity and reliability (Chronbach Alpha 0.736). Data was analysed using univariate analysis. The results of the study showed that out of 60 respondents 37 (61.7%) had sufficient knowledge about hand hygiene, 15 respondents (25%) had lower level of knowledge and only 8 respondents (13.3%) had a good knowledge of hand hygiene. Future research can examine the factors that can improve people's knowledge about hand hygiene in Papua.</p> <p><b>Keywords:</b> diarrhea, hand hygiene, knowledge, Papua</p>
<p><b>Sanghoon Lee</b> GICICHL SR1807060</p>	<p><b>Ovarian cystectomy of borderline ovarian tumors in young women for fertility preservation</b></p> <p><b>Sanghoon Lee MD, PhD</b> Department of Obstetrics and Gynecology, Korea University College of Medicine, Seoul, Korea</p> <p><b>Abstract</b></p> <p><b>Introduction</b></p> <p>Borderline ovarian tumors (BOTs) are a disease of younger, fertile women, which could result in more favorable prognosis. Therefore, fertility preservation is an important issue although fertility sparing treatment might influence the risk of disease recurrence. The objective of this study was to evaluate the disease-free survival in borderline ovarian tumors according to the type of surgery, and to predict the</p>

	<p>safety of a fertility-sparing surgery.</p> <p><b>Materials and methods</b></p> <p>This retrospective study included 86 patients with borderline ovarian tumors who treated between August 2007 and August 2017 at a single institution. The patients were divided in two groups according to the type of surgery: cystectomy/oophorectomy with or without salpingectomy. The recurrence rates in oophorectomy and cystectomy groups were compared using the Kaplan–Meier method. The difference of surgical outcomes between two groups was also analyzed.</p> <p><b>Results</b></p> <p>A total of 86 patients were enrolled in the present study. 61 out of 86 (70.9%) patients had an oophorectomy with or without salpingectomy, and 25 (29.1%) had an ovarian cystectomy. Mean age at diagnosis of oophorectomy group and cystectomy group was 48.5 years, 28.8 years, respectively. Four patients (4.7%) developed recurrence of disease, and none died from the disease within our observational period; 3 patients (4.9%) in oophorectomy group, and 1 patient (4.0%) in cystectomy group. Mean disease free survivals were 88.6months in oophorectomy group and 79.3months in cystectomy group, and they were not statistically different(<math>p=0.92</math>). Method of surgical approach (Minimally invasive surgery or laparotomy) was not associated with disease recurrence. Histology, existence of invasion implant and capsule rupture also did not differ between two groups.</p> <p><b>Conclusion</b></p> <p>Ovarian cystectomy of borderline ovarian tumors was not found to be associated with an increased recurrence of disease, and may be reasonably considered for fertility preservation in young women with BOTs.</p>
<p><b>Fadhli Rizal Makarim</b> <b>GICICHLR1807061</b></p>	<p><b>Effect of Typhonium flagelliforme on the expression of CD44+/CD24- and estrogen receptor against breast cancer</b></p> <p><b>Fadhli Rizal Makarim</b> Sultan Agung Islamic University, Indonesia</p> <p><b>Agung Putra</b> Stem Cell and Cancer Research, Sultan Agung Islamic University, Indonesia Dwi. T.A., Sultan Agung Islamic University, Indonesia Anresa Gigih A, Sultan Agung Islamic University, Indonesia</p> <p><b>Dhanita C. P.</b> Sultan Agung Islamic University, Indonesia</p> <p><b>Abstract</b></p> <p>Breast cancer is the most widely recognized disease in women. The first study identifying and isolating tumorigenic breast cancer stem cell from non-tumorigenic cancer used the expression of two cell surface markers: CD44+/CD24-/low. Typhonium flagelliforme, is frequently utilized as a traditional therapy for alternative cancer treatments. This study aims to discover potential effect of Typhonium flagelliforme to cancer stem cell.</p> <p>24 C3H mice were divided into four trial groups and one control group. Each group were given 0,6 mg, 1,2 mg, and 2,4 mg Typhonium flagelliforme for 21 days. Immunological stained for estrogen receptor were made. MCF-7 breast cancer cell line with CD44+/CD24- were cultured and divided into four trial groups and one control group and incubated for 24 hours. Flow cytometry used to assess the expression of CD44+/CD24-each group after treated and incubated with Typhonium</p>



	<p>flagelliforme. The expression of estrogen receptor was significantly increase (p=0.000) and expression of CD44+/CD24-were significantly decrease (p=0,000) after given Typhonium flagelliforme. In conclusion, the study shown that Typhonium flagelliforme may induce growth inhibition of human breast cancer MCF-7 stem cells through the activation of estrogen receptor and decrease the expression of CD44+/CD24- in MCF-7 breast cancer cell line. Keywords: Breast cancer, cancer stem cell, CD44+/CD24-, Typhonium flagelliforme, estrogen receptor</p>
<p><b>Akhmad Ulil Albab</b> GICICHLSR1807062</p>	<p style="text-align: center;"><b>Stress, Anxiety, And Depression Relationship Among Undergraduate Medical Students And Their Final Exam Mark</b></p> <p style="text-align: center;"><b>Elly Noerhidayati</b> Faculty Of Medicine, Sultan Agung Islamic University</p> <p style="text-align: center;"><b>Fadhli Rizal Makarim</b> Faculty Of Medicine, Sultan Agung Islamic University</p> <p style="text-align: center;"><b>Akhmad Ulil Albab</b> Faculty Of Medicine, Sultan Agung Islamic University</p> <p style="text-align: center;"><b>Abstract</b></p> <p>Medical students often experiencing a stressful environment in their medical school. Stress occurred in students that currently studying for examinations. Higher stressor expose leads to higher levels of anxiety and depression. High level of stress declines cognitive functioning and learning process in their medical academic process and cause mental health impairment.</p> <p>A prospective cross-sectional study with 26 end-stage medical students as a participant, the participant ordered to fill 3 section questionnaire that measures stress, anxiety, and depression. Final exam mark obtained from Indonesian Medical Education Institution Association (AIPKI) one month after the exam held.</p> <p>There is no significant relationship between stressor in all domain and anxiety, and there is a significant relationship between academic related stress, social related stress, and depression. There is no significant difference between stress, anxiety, depression and their final exam mark.</p> <p>In conclusion, there is a strong relationship between stress that leads to depression in undergraduate medical students. Therefore, a good coping mechanism of stress should be well managed in medical students.</p> <p>Keywords: Stress, anxiety, depression, medical students, final exam</p>
<p><b>Md Monoarul Haque</b> GICICHLSR1807064</p>	<p style="text-align: center;"><b>Socio-economic Condition, Dietary Pattern and Nutritional Status of Pre-School Children among Settlers and Ethnic Communities in Bandarban District of Bangladesh</b></p> <p style="text-align: center;"><b>Md Monoarul Haque</b> PhD Research Fellow, Bangladesh University of Professionals</p> <p style="text-align: center;"><b>Abstract</b></p> <p>Nutrition is foundation to ensure good health. The geographic and demographic factors affect food and nutrition. Life of the tribal people is diverse and distinct. This study focuses socio-economic condition, dietary pattern and nutritional profile of preschool children among ethnic minorities and settlers at a single point in a specified time. This area was conveniently selected to collect sample because both settlers and ethnic groups reside here concurrently. Each union/ward was one cluster and from each cluster sample was collected by visiting door to</p>

	<p>door. The dietary energy intake was determined by 24 hour recall method. Nutritional status was determined by ENA for SMART - Software. Mean age of the children was <math>4.07\pm 0.87</math> (ethnic) and <math>4.09\pm 0.84</math> (settler). Average weight and height of ethnic and settler children was 14.94 kg and 96.38 cm as well as 13.91 kg weight and 94.37 cm. Normal and underweight ethnic children were 73.80% and 26.20% whereas 67% and 33% among settler. Distribution of normal and stunted ethnic children were 67.30% and 32.70% and among settler it was 54.50% and 45.50%. About 11.30% and 15% children were wasted among ethnic and settler. Significant association was found between condition of latrine and source of drinking water with ethnic children nutritional status (WAZ). Average calorie intake of ethnic and settler children was 1066.88 and 981.48 per day. Mean protein and carbohydrate intake of ethnic children was higher than settler which was statistically significant. Nutritional status of ethnic children was comparatively better than settlers.</p>
 <p><b>Dr. Kah Keng Wong</b> GICICHLRSR1807065</p>	<p><b>DNMT1 is associated with cell cycle and DNA replication genesets in diffuse large B-cell lymphoma</b></p> <p><b>Dr. Kah Keng Wong (BSc Hons, Mal; DPhil, Oxon)</b> Department of Immunology, School of Medical Sciences, Health Campus, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan, Malaysia.</p> <p><b>Suzina Sheikh Ab. Hamid</b> Tissue Bank Unit, School of Medical Sciences, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan, Malaysia.</p> <p><b>Mustaffa Musa</b> Department of Immunology, School of Medical Sciences, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan, Malaysia.</p> <p><b>Suet Kee Loo</b> Department of Immunology, School of Medical Sciences, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan, Malaysia.</p> <p><b>Abstract</b></p> <p><b>Research Objectives:</b> Deregulation of the functions or expression of DNA (cytosine-5)-methyltransferase 1 (DNMT1) is associated with the pathogenesis of lymphomas, and it is frequently expressed in germinal center B-cell-like diffuse large B-cell lymphoma (GCB-DLBCL). In this study, we set out to investigate its functions in the disease.</p> <p><b>Methodologies:</b> In this study, we gene expression profiled (GEP) shDNMT1-treated germinal center B-cell-like DLBCL (GCB-DLBCL)-derived cell line (i.e. HT) compared with non-silencing shRNA (control shRNA)-treated HT cells through lentivirus-mediated knockdown of DNMT1 expression (trans-Lentiviral shRNA; Dharmacon, Piscataway, USA). GEP was conducted using SurePrint G3 8x60K microarray (G4851B; Agilent Technologies, Santa Clara, USA). Independent Gene Set Enrichment Analysis (GSEA) performed using GEPs of shRNA-treated HT cells and primary GCB-DLBCL cases derived from two publicly-available datasets (i.e. GSE10846 and GSE31312) produced three separate lists of enriched gene sets for each Molecular Signatures Database (MSigDB).</p> <p><b>Research Findings:</b> Subsequent Venn analysis identified 268, 145 and six consensus gene sets from analyzing gene sets in C2 (curated gene sets), C5 [gene sets from gene ontology (GO) biological process ontology] and Hallmark databases, respectively, to be enriched in positive correlation with DNMT1 expression profiles in shRNA-treated HT cells, GSE10846 and GSE31312 datasets [false discovery rate</p>

	<p>(FDR)&lt;0.05]. Cell cycle progression and DNA replication were among the significantly enriched biological processes (FDR&lt;0.05). Expression of genes involved in the activation of cell cycle and DNA replication (e.g. CDK1, CCNA2, E2F2, PCNA, RFC5 and POLD3) were highly correlated (<math>r&gt;0.8</math>) with DNMT1 expression and significantly downregulated (log fold-change&lt;-1.35; <math>p&lt;0.05</math>) following DNMT1 silencing in HT cells.</p> <p><b>Outcomes:</b> These results suggest the involvement of DNMT1 in the activation of cell cycle and DNA replication in GCB-DLBCL cells.</p> <p><b>Future scope:</b> Future studies on the inhibition of GCB-DLBCL's cell cycle progression and subsequent cell death by DNMT1-specific inhibitors (e.g. isofistularin-3 or 2,3-dimercaptosuccinic acid) are thus recommended.</p>
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## **LISTENERS**

<p>Sdadsa Weewq Asdasd,Asdasd,Adasdasd GICICLSR1807051</p>
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<p>Shristi Aryal Department of Nursing Science, Mahidol University, Thailand GICICLSR1807063</p>