



**Global Research &  
Development Services**

**CONFERENCE PROCEEDINGS**

**16th International Conference on Healthcare & Life-Science Research  
(ICHLSR), 15-16 July 2017, Bali, Indonesia**

**15-16 July 2017**

Conference Venue

Ibis Bali Kuta, Jl. Raya Kuta No. 77, 80361 Kuta, Bali, Indonesia

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**PLENARY SPEAKER**



**Hajime Hirao**

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**Cici Suci Maulina**  
GICICHLSR1705051

**MEDICINAL PLANT DIVERSITY BY KOKODA TRIBE'S CULTURE IN UGAR VILLAGE, UGAR ISLAND, FAKFAK, WEST PAPUA**

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**ABSTRACT**

Papua island has a number of ethnics, include as many as 271 ethnics, as well as including one of the island that has the largest tropical rain forest in Indonesia. Kokoda tribe is the tribe in West Papua who still maintain ancestral traditions in the use of plants for medicinal treatment. This study aims to explore the traditional knowledge of Kokoda tribe to use plants as traditional medicine. The study was done from February to May 2016 in the Ugar village, District of Kokas, Fakfak, West Papua with coordinates in 02o38'18.9 "LS - 132o26'41.8 BT. This study used qualitative methods with purposive and snowball sampling technique. Data was analyzed wit qualitative (descriptively) and quantitative (ICS and UVs value).

The results showed that there are 70 species of plants used Kokoda tribe as traditional medicines, covering 67 genera and 41 families of medicinal plants. Major families of plants used as traditional medicine, are Fabaceae and Euphorbiaceae. Seventy species of plants can treat 73 kinds of illness. The large part of plant which used as raw material for medicine by Kokoda tribe is leaf (50%). Boiling is the most technique to process raw material by people of Kokoda tribe. The most common grievance was experienced by people of Kokoda tribe include: body aches, wounds, and added blood.

**Keywords:** Papua island, Kokoda tribe, snowball sampling, traditional medicine, medicinal plant



**Muhammad Saud**  
GICICHLSR1705052

**Exploring the role of Health in Promoting Sustainable Development in Islamabad (ICT), Lahore (Punjab) & Mardan (KPK): A Case Study of Human Development Foundation Pakistan**

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Universitas Airlangga (UNAIR) Surabaya, Indonesia

**Asiya Ashfaq**

**Abstract**

Better health education are the important indicators of the development of any healthy society. Sustainable Development is one of the key areas for the researchers in modern age. The present research was aligned with the contemporary debate on sustainable development goals set by the United Nations in 2015. This particular study was conducted to explore the effects of health education programs in Human Development Foundation (HDF) communities particularly in Islamabad, Lahore & Mardan, Pakistan. The main objectives of the study were: i) To study the socio-economic background of respondents ii) To study the point of views of the families benefiting from health education institutes established by (HDF) and iii) To explore the availability and the use of (HDF) Pakistan health care services by the respondents in the study area. Quantitative design was opted for the research purpose and the proportionate multistage random sampling technique was used to draw the



	<p>sample from the population. In order to conduct the study, Parents of the HDF formal school students who are befitting Health education services from HDF were selected as the respondents. Only parents of students who are studying under the HDF formal school in three areas of Pakistan were selected. A total of 401 respondents from various places of each field areas were selected. The study found that HDF is playing a vital role in promoting both the health education facilities in its related communities that benefit and enriches the Pakistani health sector in general and the same in its functional communities in particular. The health educators and the community health centers of HDF are utilized by the people of those communities at a larger level.</p> <p><b>Keywords:</b> Health awareness, Health care, Health education, Medical care system, Sustainable hospitals, community empowerment.</p>
<p style="text-align: center;">Shao-Yu Peng GICICHLR1705056</p>	<p style="text-align: center;">Shao-Yu Peng Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p>
<p style="text-align: center;">Ruei-Chang Huang GICICHLR1705068</p>	<p style="text-align: center;">The effect of cryopreservation constitution toward canine semen freezing - thawing procedure</p> <p style="text-align: center;">Ruei-Chang Huang Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p style="text-align: center;">Shao-Yu Peng Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p style="text-align: center;"><b>Abstract</b></p> <p>Semen cryopreservation is a method for long-term storage semen at -196 °C liquid nitrogen. Although cryopreservation of canine semen has been established, its efficiency is still low. In order to stabilize and increase the penetration to cell membrane, the cryoprotectants combination is essential. The animals used for this study were 3 adult canine (Maltese) from the Pingtung, Taiwan. The study was investigated to understand the dilution of added low density lipoprotein (LDL) concentration toward canine semen freezing - thawing effect at 0 to 3 hours. Semen quality assessments are divided into motility (%), viability (%), acrosome integrity (%), mitochondrial integrity (%), and DNA integrity by CASA and flow cytometry. Results showed that the extender is added 11% LDL, and canine spermatozoa motility (%) after thawing at 3 hours (<math>P &lt; 0.05</math>) significant higher than other treatment. The viability of freezing - thawing canine spermatozoa which is added 11 and 12% LDL treatment is significant (<math>P &lt; 0.05</math>) higher than other treatment. In the acrosome integrity treatment, different LDL treatment has no significant difference (<math>P &gt; 0.05</math>). It is concluded that this technology can be applied to male canine genetic preservation and break the regional restrictions, also be used as wild mammals semen preservation.</p> <p><b>Key:</b> Canine, Cryoprotection, Low density lipoprotein, Semen quality</p>



Mita Kurniasari  
GICICHLSR1705070

**Utilization of Marchantia polymorpha as Gel Hepatoprotector Supplement with Edible Coating of Chitosan**

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**Abstract**

Liver is one of vital organs in human body which is functioned as antidote and toxin neutralizer. All this time, liver diseases is categorized as the most frequently occur and deadly disease worldwide. One that categorized as liver disease is cirrhosis, which is responsible for approximately 2% of death in the world (EASL, 2016). Liver cancer is also responsible for approximately 383,000 death in China every year, which is 51% of total death caused by liver cancer (Wang et al., 2014). Another type of liver disease is hepatitis B. According to WHO data in 2017, it is estimated that 248 million people suffer from chronic hepatitis B annually. Marchantia polymorpha is one of liverworts which is found in damp and rocky area. This type of liverworts is still underutilized, even though it contains anti-oxidant compounds (flavonoids), anti-hepatic compounds (flavonoids and petroleum ether), anti-bacterial and anti-fungal compounds (terpenoids and steroids), as well as anti-microbial compounds (terpenoids, steroids, flavonoids, and bibenzyl). Based on these facts, Marchantia polymorpha has high potential to be used as a hepatoprotector supplement which serve to protect and treat liver diseases. Hepatoprotector supplements that is proposed is made in the form of a gel with edible coating of chitosan, which acts as natural preservative. Generally, liver supplements exist on the market in the form of tablets or capsules with a bitter taste, in which lead most people to think that it is consumed as medicine. Therefore, the authors innovate to make Marchantia polymorpha as a gel hepatoprotector supplement coated with chitosan and various flavors to make it more acceptable by every society around the world.

**Keywords :** Marchantia Polymorpha, liver disease, hepatoprotector, edible coating, chitosan

Diah Setyaningsih  
GICICHLSR1705072

**Prevalence and Risk Factors of Postpartum Depression In Asian Countries: A Systematic Review**

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**Abstract**

**Introduction:** Postpartum mood disorder is usually found in women after delivery. One of the postpartum mood disorders is postpartum depression. This disorder could give long effect if they don't get treatment. The prevalence of postpartum depression is different in the different country.

**Methods:** This study used systematic review with 7 articles from 7 countries in

	<p>Asia. The results from every article compared in prevalence, methods, risk factors and recommendations.</p> <p><b>Results:</b> The lowest prevalence of postpartum depression found in Indonesia (2,32%) and the highest is Iran (between 47%-64% base on risk factors). Suicidal ideation only found in Vietnam (19%). All of the study of the articles used Edinburgh Postpartum Scale (EPDS) except Indonesia. Low prevalence in Indonesia could be caused by different methods of study.</p> <p><b>Conclusions:</b> There are many similar risk factors dan recommendations in many countries. Identification of risk factors and early detection is the best way to prevent and to find the right treatment for postpartum depression</p> <p><b>Keywords:</b> postpartum depression, Edinburgh Postpartum Scale (EPDS), prevalence, risk factors</p>
<p><b>Irwan Unggul Widodo</b> GICICHLSR1705073</p>	<p style="text-align: center;"><b>Risk Factors And Stress Management For Hospital Nurses : A Systematic Review</b></p> <p style="text-align: center;"><b>Irwan Unggul Widodo</b> Magister of Hospital Administration, Faculty of Public Health, University of Indonesia</p> <p style="text-align: center;"><b>Dr. Pujiyanto, S.KM.</b> Magister of Hospital Administration, Faculty of Public Health, University of Indonesia</p> <p style="text-align: center;"><b>Abstract</b></p> <p><b>Introduction:</b> Work stress has become one of the most serious health problems in the twentieth century. Work stress occurs in many of the workers in the health sector since the responsibility for the human health sector lead health workers are more vulnerable to stress. Work stress experienced by nurses predicted to continue to increase in the years to come. It is a trend that can not be ignored because it is very closely related to the safety of nurses and patients. The purpose of this review is to look at the risk factors on nurse job stress and job stress management that are used to address them. The method used to search the data base as through ProQuest, ScinceDirect, and Google Scholar using keywords. The filtrate obtained six studies that met the criteria.</p> <p><b>Results:</b> Of the review showed that the risk factors of stress in the various countries are very diverse ranging from the high work load, stress management of the hospital to the high anxiety of the patient.</p> <p><b>Conclusions:</b> Stress management is done in some countries is almost the same with the individual approach. Stress management through individual approach looks quite effectively reduce stress levels in nurses, reduce anxiety and able to make a better public health nurse.</p> <p><b>Keywords:</b> Work stress, hospital nurses, risk factor dan stress management</p>
<p><b>Juniar Ernawaty</b> GICICHLSR1705075</p>	<p style="text-align: center;"><b>THE USE OF ICT (INFORMATION COMMUNICATION TECHNOLOGIES) IN CLINICAL PLACEMENT OF UNDERGRADUATE NURSING STUDENTS</b></p> <p style="text-align: center;"><b>JUNIAR ERNAWATY</b> M.Kep. M. NG Riau University School of Nursing, Patimura street No 9 Building G, Pekanbaru Riau, Indonesia</p> <p style="text-align: center;"><b>ABSTRACT</b></p>

	<p>Clinical placement is a part of nursing academic process of bachelor nursing education. Study related to the use of ICT (Information communication technologies) in academic process has been conducted in the nursing school Riau University. However, it's effectiveness has not yet been evaluated in clinical placement process. This study aims to evaluate the effectiveness of ICT in cognitive and clinical competences of nursing students while taking clinical placement. The design of the research was a quasi experiment with control group. The sample were 30 undergraduate nursing students. The research showed that there is improvement in both cognitive and clinical competence evaluation. This study recommends that the bachelor nursing institution to adopt the use of ICT in clinical placement in order to promote self-study and life-long learning.</p> <p><b>Key Words:</b> Clinical placement, nursing undergraduate, cognitive evaluation, clinical competence evaluation</p>
<p><b>Chien-Lung Hsu</b> GICICHL SR1705076</p>	<p><b>An Usability Assessment of User-Centered Mobile Healthcare Management System for Prevention of Dementia</b></p> <p><b>Chien-Lung Hsu</b> Department of Information Management, Chang Gung University, Taiwan Graduate Institute of Business and Management, Chang Gung University, Taiwan</p> <p>Department of Visual Communication Design, Ming-Chi University of Technology, Taiwan Administration, Chang-Gung Memorial Hospital, Taiwan</p> <p><b>Yen-I Chiang</b> Department of Information Management, Chang Gung University, Taiwan</p> <p><b>I-Ting Chen</b> Department of Information Management, Chang Gung University, Taiwan</p> <p><b>Abstract.</b></p> <p>Increasing of the average life expectancy and changing in dietary habits and environment, leading to many people suffering from chronic diseases. Dementia is a common chronic diseases, which is not easy to discover. Currently, due to change in family structure, the elderly are unable to live with their families, resulting in a lack of direct care, and missing the opportunity for early detection and treatment. It not only makes caregivers pay lots of effort to take care patients but also increases the enormous health burden. Nowadays, more and more applications are developed for healthcare. Simultaneously, many mobile healthcare systems are about dementia, but personalization and feedback might not be considered. A good mobile healthcare system should achieve user-centered services to improve user acceptances. We designed a system and characteristics of the proposed system are as follows. (i) It provides on-demand health education knowledge related to dementia to users individually; (ii) It provides monitoring of physiological status to users and helps them to regularly fill in dementia scale. That implies that it can be better to achieve the purpose of early detection and treatment in order to prevent dementia, while reducing the use of medical resources and expenses. To make the system more available and user-friendly. A total of 11 people were interviewed, including information specialists, clinical caregivers and people over the age of 50, according to the proposed prototype. Interviewed people</p>

	<p>generally thought this system as well as information provided by this system is usefulness, and the process of using this system is easy. But they thought format and style should be consistent, and it's better to guide users to operate this system. Since, the interface of system is important and causes user more easily to use this system, we will refine the system based on this assessment results.</p> <p><b>Keywords:</b> Dementia, prevention, user-centered, mobile healthcare, system usability</p>
<p><b>Arash Shishehian</b> GICICHLSR1705079</p>	<p style="text-align: center;"><b>Patient need's, desire vs dentist ability in new methods of full mouth reconstruction</b></p> <p style="text-align: center;"><b>Arash Shishehian</b> Prosthodontic Department, Hamedan University Of medical Science, Hamedan, Iran</p> <p style="text-align: center;"><b>Abstract</b></p> <p>This presentation summarizes key aspects of the interdisciplinary approach to implant or non-implant-based treatment in fully edentulous patients. Measures of success generally include implant integration and health of the surrounding periodontal tissues; in the fully edentulous patients function is the greatest issue for dentist, aesthetics must also be measured as a patient first demand. A successful team approach to treatment mandates that the periodontist have a clear understanding of what is expected in terms of the restorative result, including the restorative materials that will be used, as implant position or teeth alignment can significantly impact this. Equally important, the restoring dentist must understand the surgical treatment options and the procedural limitations in terms of tissue regeneration and implant placement . The goal of this presentation is to sensitize the participant to the changing treatment concepts and methodologies used today in both the surgical and restorative phases of edentulous treatment. The principle areas of treatment explored include: emerging hard tissue management of procedures and materials; enhancing the gingival biotype and gingival volume; implant placement space management and restoration strategies that may impact soft and hard tissue stability; and the impact of implant and abutment designs on hard- and soft-tissue volume and post-restoration stability.</p>
 <p><b>Wei-Je Ting</b> GICICHLSR1705053</p>	<p style="text-align: center;"><b>The identification and differentiation ability of amniotic membrane stem cells</b></p> <p style="text-align: center;"><b>Wei-Je Ting</b> Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p style="text-align: center;"><b>Tzu-Yun Hsiang</b> Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p style="text-align: center;"><b>Yun-Jie Wang</b> Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p style="text-align: center;"><b>Shao-Yu Peng</b> Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p>



**Abstract**

A common problem with Holstein in Taiwan is mastitis and reproductive disorders. Most of the current treatment is antibiotics and hormones, but there is an issue of residue. We are intended to use stem cells to resolve this problem. First we need to prove the differentiation ability of stem cells. Amniotic membrane derived stem cells (AMSCs) are belonging to multipotent cells with low immunogenicity and anti-inflammatory properties. There is no ethical problem and teratoma formation of AMSCs. Thus, this report aims to explore the identification of stem cells and endodermal, mesodermal and ectodermal differentiation capabilities of the stem cells for the future clinical application. The results of stem cells identification were verified by flow cytometry and RT-PCR. AMSCs are capable of expressing the marker of CD44 whereas not the CD105 and CD4. The results of RT-PCR showed that AMSCs can express CD73, CD166 and  $\beta$ -integrin. AMSC hold the promise to differentiate into adipocytes, chondrocytes, osteocytes, myocytes and islet like cells. After the differentiation, the adipocytes were stained with oil red O. The chondrocytes were stained with toluidine blue. The osteocytes were stained with Alizarin red S. The myocytes were detected with the Met Activating Genetically Improved Chimeric Factor 1 (Magic-F1) to prove the presence of Myosin Heavy Chain. The islet like cells were detected with the Nestin, Insulin, Glucagon, Pax-4, Pax-6, NKx6.1 and FOX by RT-PCR. In summary, the AMSC has the ability of differentiation into several lineages of the cells. Therefore, we look forward to using the AMSCs for the application on mastitis and reproductive disorders of Holstein.

**Keywords:** amniotic membrane, differentiation, Holstein, stem cells



**Wu Tsung-Hsin**  
GICICHLRSR1705054

**Hormonal therapy of follicular cysts of cow and the therapeutic potential of stem cells treatment**

**Tsung-Hsin Wu**

**Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan**


**Shao-Yu Peng**

**Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan**

**Abstract**


The major factor of causing lactating cows having poor reproductive efficiency is cyst ovarian Disease (COD). The hormones imbalance mainly results in COD. Placenta stem cells have the characteristics of differentiating into ectodermal, mesodermal and endodermal. We will use Placenta stem cells to replace the hormone treatment in the future to reduce the food security problem which hormones may left in milk. Thus the purpose of this study is to compare the hormones treatment of dairy follicular cysts and the therapeutic potential of stem cells treatment. The control group in this study was intramuscular injection of saline. The experiment groups are distinguished into intramuscular injection of hormones (Estrus synchronization GnRH- PGF2 $\alpha$ -GnRH) and ovarian injection of Placenta stem cells. Serum hormones and ultrasonographic images are analyzed during the experiment period. The results show that higher estradiol concentration and lower progesterone concentration in serum hormone of control group. The follicular cysts are continued presented by ultrasonographic images detection. Lower estradiol


	<p>concentration and higher progesterone concentration were observed after the hormone treatment group. The follicular cysts were mostly turned into corpus luteum at the seventh day by ultrasonographic images detection. The level of estradiol concentration was decreased and the follicle was significantly shrunk on the third day in the Placenta stem cells treatment group. The concentration of estradiol and progesterone were increased on the seventh day due to the follicle was turned into corpus and appeared more small follicles. In summary, there showed a better effect toward using exogenous hormones or placental stem cells for the treatment of dairy cows with ovarian follicular cysts. We will increase the experimental animals for placental stem cell treatment group and continue to explore the feasibility of using placenta stem cells on ovarian follicular cyst for taking place of hormone treatment.</p> <p><b>Keywords:</b> follicular cyst, hormone, placenta, stem cells, ultrasonographic image</p>
 <p><b>Tzu-Yun Hsiang</b> GICICHLSR1705056</p>	<p>The identification and differentiation ability of amniotic membrane stem cells</p> <p><b>Wei-Je Ting</b> Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p><b>Tzu-Yun Hsiang</b> Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p><b>Yun-Jie Wang</b> Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p><b>Shao-Yu Peng</b> Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p><b>Abstract</b></p> <p>A common problem with Holstein in Taiwan is mastitis and reproductive disorders. Most of the current treatment is antibiotics and hormones, but there is an issue of residue. We are intended to use stem cells to resolve this problem. First we need to prove the differentiation ability of stem cells. Amniotic membrane derived stem cells (AMSCs) are belonging to multipotent cells with low immunogenicity and anti-inflammatory properties. There is no ethical problem and teratoma formation of AMSCs. Thus, this report aims to explore the identification of stem cells and endodermal, mesodermal and ectodermal differentiation capabilities of the stem cells for the future clinical application. The results of stem cells identification were verified by flow cytometry and RT-PCR. AMSCs are capable of expressing the marker of CD44 whereas not the CD105 and CD4. The results of RT-PCR showed that AMSCs can express CD73, CD166 and <math>\beta</math>-integrin. AMSC hold the promise to differentiate into adipocytes, chondrocytes, osteocytes, myocytes and islet like cells. After the differentiation, the adipocytes were stained with oil red O. The chondrocytes were stained with toluidine blue. The osteocytes were stained with Alizarin red S. The myocytes were detected with the Met Activating Genetically Improved Chimeric Factor 1 (Magic-F1) to prove the presence of Myosin Heavy Chain. The islet like cells were detected with the Nestin, Insulin, Glucagon, Pax-4, Pax-</p>

	<p>6,NKx6.1 and FOX by RT-PCR. In summary, the AMSC has the ability of differentiation into several lineages of the cells. Therefore, we look forward to using the AMSCs for the application on mastitis and reproductive disorders of Holstein.</p> <p><b>Keywords:</b> amniotic membrane, differentiation, Holstein, stem cells</p>
 <p><b>Yun-Jie Wang</b> GICICHLSR1705057</p>	<p><b>The identification and differentiation ability of amniotic membrane stem cells</b></p> <p><b>Wei-Je Ting</b> Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p><b>Tzu-Yun Hsiang</b> Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p><b>Yun-Jie Wang</b> Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p><b>Shao-Yu Peng</b> Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p><b>Abstract</b></p> <p>A common problem with Holstein in Taiwan is mastitis and reproductive disorders. Most of the current treatment is antibiotics and hormones, but there is an issue of residue. We are intended to use stem cells to resolve this problem. First we need to prove the differentiation ability of stem cells. Amniotic membrane derived stem cells (AMSCs) are belonging to multipotent cells with low immunogenicity and anti-inflammatory properties. There is no ethical problem and teratoma formation of AMSCs. Thus, this report aims to explore the identification of stem cells and endodermal, mesodermal and ectodermal differentiation capabilities of the stem cells for the future clinical application. The results of stem cells identification were verified by flow cytometry and RT-PCR. AMSCs are capable of expressing the marker of CD44 whereas not the CD105 and CD4. The results of RT-PCR showed that AMSCs can express CD73,CD166 and <math>\beta</math>-integrin. AMSC hold the promise to differentiate into adipocytes, chondrocytes, osteocytes, myocytes and islet like cells. After the differentiation, the adipocytes were stained with oil red O. The chondrocytes were stained with toluidine blue. The osteocytes were stained with Alizarin red S. The myocytes were detected with the Met Activating Genetically Improved Chimeric Factor 1(Magic-F1) to prove the presence of Myosin Heavy Chain. The islet like cells were detected with the Nestin, Insulin, Glucagon,Pax-4,Pax-6,NKx6.1 and FOX by RT-PCR. In summary, the AMSC has the ability of differentiation into several lineages of the cells. Therefore, we look forward to using the AMSCs for the application on mastitis and reproductive disorders of Holstein.</p> <p><b>Keywords:</b> amniotic membrane, differentiation, Holstein, stem cells</p>

<p><b>Wen-Hsien Tsai</b> GICICHLSR1705058</p>	<p><b>Effects of Water Extract of <i>Hylocereus costaricensis</i> containing Anthocyanin on Cryopreservation Semen Quality</b></p> <p><b>Wen-Hsien Tsai</b> Department of Tropical Agriculture and International Cooperation, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p><b>Yu-Ting Lai</b> Department of Tropical Agriculture and International Cooperation, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p><b>Shao-Yu Peng</b> Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p><b>Abstract</b></p> <p>The usage rate of cryopreservation semen is lower than fresh semen, because its fertilization rate is about 50% lower. In cryopreservation, the sperm is killed due to the destruction of the membrane by the low temperature. The sperm amount is the main effective factor for fertilization rate. The addition of an antifreeze agent can reduce sperm death in low temperatures. Due to the large amount of unsaturated fatty acids in the sperm's cell membrane; during defrosting, lipid peroxidation occurs causing the destruction of the cell membrane and sperm death. The addition of antioxidants can reduce this problem and increase the survival rate of sperm. Anthocyanin is well known because of its good antioxidant capacity. This study uses the water extracted from <i>Hylocereus costaricensis</i> boiled at different temperatures (40°C, 60°C, 80°C) as a means of anthocyanin extraction, in order to increase the quality of cryopreservation semen. 50 grams of fruit were placed into 100 grams of saline solution in a beaker. The beaker was then placed into a thermostatic water bath for 30 minutes. The solution was then filtered to remove any solid pieces of fruit. The concentration was determined by using the pH differential method. It was seen that the concentration of anthocyanin increases as the temperature increases. The water extract containing the anthocyanin will be then added to the diluted semen sample before freezing. After defrosting, the quality of the semen will be observed and assessed, and compare with the control group.</p> <p><b>Keywords:</b> cryopreservation semen, anthocyanin, antioxidant, <i>Hylocereus costaricensis</i></p>
<p><b>Yu-Ting Lai</b> GICICHLSR1705059</p>	<p><b>Effects of Water Extract of <i>Hylocereus costaricensis</i> containing Anthocyanin on Cryopreservation Semen Quality</b></p> <p><b>Wen-Hsien Tsai</b> Department of Tropical Agriculture and International Cooperation, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p><b>Yu-Ting Lai</b> Department of Tropical Agriculture and International Cooperation, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p><b>Shao-Yu Peng</b> Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p>

	<p style="text-align: center;"><b>Abstract</b></p> <p>The usage rate of cryopreservation semen is lower than fresh semen, because its fertilization rate is about 50% lower. In cryopreservation, the sperm is killed due to the destruction of the membrane by the low temperature. The sperm amount is the main effective factor for fertilization rate. The addition of an antifreeze agent can reduce sperm death in low temperatures. Due to the large amount of unsaturated fatty acids in the sperm's cell membrane; during defrosting, lipid peroxidation occurs causing the destruction of the cell membrane and sperm death. The addition of antioxidants can reduce this problem and increase the survival rate of sperm. Anthocyanin is well known because of its good antioxidant capacity. This study uses the water extracted from <i>Hylocereus costaricensis</i> boiled at different temperatures (40 °C, 60 °C, 80 °C) as a means of anthocyanin extraction, in order to increase the quality of cryopreservation semen. 50 grams of fruit were placed into 100 grams of saline solution in a beaker. The beaker was then placed into a thermostatic water bath for 30 minutes. The solution was then filtered to remove any solid pieces of fruit. The concentration was determined by using the pH differential method. It was seen that the concentration of anthocyanin increases as the temperature increases. The water extract containing the anthocyanin will be then added to the diluted semen sample before freezing. After defrosting, the quality of the semen will be observed and assessed, and compare with the control group. <b>Keywords:</b> cryopreservation semen, anthocyanin, antioxidant, <i>Hylocereus costaricensis</i></p>
 <p style="text-align: center;"><b>Hsiu-Wen Liu</b> GICICHLR1705060</p>	<p style="text-align: center;"><b>The Renal and neuronal differentiation capability of bovine fetal stem cells</b></p> <p style="text-align: center;"><b>Hsiu-Wen Liu</b> Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p style="text-align: center;"><b>Hui-Chuan Chang</b> Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p style="text-align: center;"><b>Yi-Ting Lin</b> Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p style="text-align: center;"><b>Shao-Yu Peng</b> Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p style="text-align: center;"><b>Abstract</b></p> <p>Holstein are economic animals which are widely farmed. The stem cells were non-invasively derived from the placenta and amnion after the delivery of Holstein without ethical and moral concern. To explore the renal and neuronal differentiation capability of fetal stem cells, two texts were discussed. In terms of renal lineage differentiation part, there are large populations of end-stage renal failure in many developed countries. Kidney transplantation or hemodialysis is the most common method of treatment at present. Whereas, the scarce of organ donation often caused many patients passed away due to delay transplantation. With the differentiation potentiality of stem cells hold the promise to treat the kidney disease. The aim of this study is to investigate the renal progenitor cells differentiation potentiality of bovine fetal stem cells. In</p>

	<p>our experiment, Bone morphogenetic protein 7 (BMP7), Basic fibroblast growth factor (bFGF), RhoA Inhibitor (CCG1423), PI3K inhibitor (LY294002), Retinoic Acid, Activin A, and Glial cell line-derived neurotrophic factor (GDNF) are added to survey the renal progenitor cells differentiation capability. Referring to neuronal lineage differentiation part, sonic hedgehog (SHH), fibroblast growth factor 8 (FGF8), basic fibroblast growth factor (bFGF) and brain-derived neurotrophic factor (BDNF) were added to induce the stem cells differentiating into neural like cells for the future neuron related disease treatment. In summary, with the differentiation capabilities of these stem cells may apply to the regenerative medicine research.</p> <p><b>Keywords:</b> amnion, Holstein, neural like cells, placenta, renal progenitor, stem cells</p>
 <p><b>Yi-Ting Lin</b> GICICHLSR1705061</p>	<p><b>The Renal and neuronal differentiation capability of bovine fetal stem cells</b></p> <p><b>Hsiu-Wen Liu</b> Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p><b>Hui-Chuan Chang</b> Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p><b>Yi-Ting Lin</b> Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p><b>Shao-Yu Peng</b> Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p><b>Abstract</b></p> <p>Holstein are economic animals which are widely farmed. The stem cells were non-invasively derived from the placenta and amnion after the delivery of Holstein without ethical and moral concern. To explore the renal and neuronal differentiation capability of fetal stem cells, two texts were discussed. In terms of renal lineage differentiation part, there are large populations of end-stage renal failure in many developed countries. Kidney transplantation or hemodialysis is the most common method of treatment at present. Whereas, the scarce of organ donation often caused many patients passed away due to delay transplantation. With the differentiation potentiality of stem cells hold the promise to treat the kidney disease. The aim of this study is to investigate the renal progenitor cells differentiation potentiality of bovine fetal stem cells. In our experiment, Bone morphogenetic protein 7 (BMP7), Basic fibroblast growth factor (bFGF), RhoA Inhibitor (CCG1423), PI3K inhibitor (LY294002), Retinoic Acid, Activin A, and Glial cell line-derived neurotrophic factor (GDNF) are added to survey the renal progenitor cells differentiation capability. Referring to neuronal lineage differentiation part, sonic hedgehog (SHH), fibroblast growth factor 8 (FGF8), basic fibroblast growth factor (bFGF) and brain-derived neurotrophic factor (BDNF) were added to induce the stem cells differentiating into neural like cells for the future neuron related disease treatment. In summary, with the differentiation capabilities of these stem cells may apply to the regenerative medicine research.</p>

	<p><b>Keywords:</b> amnion, Holstein, neural like cells, placenta, renal progenitor, stem cells</p>
 <p><b>Chi-Yu Juan</b> GICICHLSR1705062</p>	<p><b>The germ cells differentiation potentiality of cattle placenta and amniotic membrane derived stem cells</b></p> <p><b>Chi-Yu Juan</b> Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p><b>Guan-Yin Chen</b> Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p><b>Wei-Chih Wang</b> Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p><b>Yi-Ting Hsieh</b> Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p><b>Shao-Yu Peng</b> Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p><b>Abstract</b></p> <p>According to the World Health Organization (WHO) statistics, there are 8% to 12% of infertility ratio in the world, and occupy 10% to 15% population in Taiwan. Hence, we are intended to explore the possibility of taking advantage stem cells to solve the problem. In this research, cattle placenta and amniotic membrane derived stem cells are employed to investigate the germ cells differentiation capability as preclinical trial exploration. In terms of female germ cells differentiation, pig follicular fluid was added as an induction medium. Referring to giving rise to male germ cells, Bone Morphogenetic Protein 4 (BMP4), retinoic acid (RA) and pig seminal plasma were added to induce the differentiation. The results illustrated that agglomerate structures were observed under female germ cells induction, and sperm like structures were found under male germ cells induction. In the future study, reverse transcription PCR (RT-PCR) was conducted to verify the male and female germ cells differentiation capability. Taken together, the outcomes may hold the promise to the infertility preclinical trial and shed light to the animal and human reproduction problem.</p> <p><b>Keywords:</b> differentiation, follicular fluid, infertility, seminal plasma, stem cells</p>



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GICICHLSR1705063

The germ cells differentiation potentiality of cattle placenta and amniotic membrane derived stem cells

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**Abstract**

According to the World Health Organization (WHO) statistics, there are 8% to 12% of infertility ratio in the world, and occupy 10% to 15% population in Taiwan. Hence, we are intended to explore the possibility of taking advantage stem cells to solve the problem. In this research, cattle placenta and amniotic membrane derived stem cells are employed to investigate the germ cells differentiation capability as preclinical trial exploration. In terms of female germ cells differentiation, pig follicular fluid was added as an induction medium. Referring to giving rise to male germ cells, Bone Morphogenetic Protein 4 (BMP4), retinoic acid (RA) and pig seminal plasma were added to induce the differentiation. The results illustrated that agglomerate structures were observed under female germ cells induction, and sperm like structures were found under male germ cells induction. In the future study, reverse transcription PCR (RT-PCR) was conducted to verify the male and female germ cells differentiation capability. Taken together, the outcomes may hold the promise to the infertility preclinical trial and shed light to the animal and human reproduction problem.

**Keywords:** differentiation, follicular fluid, infertility, seminal plasma, stem cells



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The germ cells differentiation potentiality of cattle placenta and amniotic membrane derived stem cells

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 <p><b>Yi-Ting Hsieh</b> GICICHLRSR1705065</p>	<p><b>The germ cells differentiation potentiality of cattle placenta and amniotic membrane derived stem cells</b></p> <p><b>Chi-Yu Juan</b> Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p><b>Guan-Yin Chen</b> Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p><b>Wei-Chih Wang</b> Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p><b>Yi-Ting Hsieh</b> Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p><b>Shao-Yu Peng</b> Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p>

	<p style="text-align: center;"><b>Abstract</b></p> <p>According to the World Health Organization (WHO) statistics, there are 8% to 12% of infertility ratio in the world, and occupy 10% to 15% population in Taiwan. Hence, we are intended to explore the possibility of taking advantage stem cells to solve the problem. In this research, cattle placenta and amniotic membrane derived stem cells are employed to investigate the germ cells differentiation capability as preclinical trial exploration. In terms of female germ cells differentiation, pig follicular fluid was added as an induction medium. Referring to giving rise to male germ cells, Bone Morphogenetic Protein 4 (BMP4), retinoic acid (RA) and pig seminal plasma were added to induce the differentiation. The results illustrated that agglomerate structures were observed under female germ cells induction, and sperm like structures were found under male germ cells induction. In the future study, reverse transcription PCR (RT-PCR) was conducted to verify the male and female germ cells differentiation capability. Taken together, the outcomes may hold the promise to the infertility preclinical trial and shed light to the animal and human reproduction problem.</p> <p><b>Keywords:</b> differentiation, follicular fluid, infertility, seminal plasma, stem cells</p>
 <p style="text-align: center;"><b>Shao-Yu Peng</b> GICICHLSR1705066</p>	<p style="text-align: center;"><b>Hormonal therapy of follicular cysts of cow and the therapeutic potential of stem cells treatment.</b></p> <p style="text-align: center;"><b>Tsung-Hsin Wu</b> Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p style="text-align: center;"><b>Shao-Yu Peng</b> Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p style="text-align: center;"><b>Abstract</b></p> <p>The major factor of causing lactating cows having poor reproductive efficiency is cyst ovarian Disease (COD). The hormones imbalance mainly results in COD. Placenta stem cells have the characteristics of differentiating into ectodermal, mesodermal and endodermal. We will use Placenta stem cells to replace the hormone treatment in the future to reduce the food security problem which hormones may left in milk. Thus the purpose of this study is to compare the hormones treatment of dairy follicular cysts and the therapeutic potential of stem cells treatment. The control group in this study was intramuscular injection of saline. The experiment groups are distinguished into intramuscular injection of hormones (Estrus synchronization GnRH- PGF2<math>\alpha</math>-GnRH) and ovarian injection of Placenta stem cells. Serum hormones and ultrasonographic images are analyzed during the experiment period. The results show that higher estradiol concentration and lower progesterone concentration in serum hormone of control group. The follicular cysts are continued presented by ultrasonographic images detection. Lower estradiol concentration and higher progesterone concentration were observed after the hormone treatment group. The follicular cysts were mostly turned into corpus luteum at the seventh day by ultrasonographic images detection. The level of estradiol concentration was decreased and the follicle was significantly shrunk on the third day in the Placenta stem cells treatment group. The concentration of estradiol and progesterone were increased on the seventh day due to the</p>

	<p>follicle was turned into corpus and appeared more small follicles. In summary, there showed a better effect toward using exogenous hormones or placental stem cells for the treatment of dairy cows with ovarian follicular cysts. We will increase the experimental animals for placental stem cell treatment group and continue to explore the feasibility of using placenta stem cells on ovarian follicular cyst for taking place of hormone treatment.</p> <p><b>Keywords:</b> follicular cyst, hormone, placenta, stem cells, ultrasonographic image</p>
 <p><b>Hui-Chuan Chang</b> GICICHLSR1705067</p>	<p><b>The Renal and neuronal differentiation capability of bovine fetal stem cells</b></p> <p><b>Hsiu-Wen Liu</b> Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p><b>Hui-Chuan Chang</b> Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p><b>Yi-Ting Lin</b> Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p><b>Shao-Yu Peng</b> Department of Animal Science, National Pingtung University of Science and Technology, Pingtung, Taiwan</p> <p><b>Abstract</b></p> <p>Holstein are economic animals which are widely farmed. The stem cells were non-invasively derived from the placenta and amnion after the delivery of Holstein without ethical and moral concern. To explore the renal and neuronal differentiation capability of fetal stem cells, two texts were discussed. In terms of renal lineage differentiation part, there are large populations of end-stage renal failure in many developed countries. Kidney transplantation or hemodialysis is the most common method of treatment at present. Whereas, the scarce of organ donation often caused many patients passed away due to delay transplantation. With the differentiation potentiality of stem cells hold the promise to treat the kidney disease. The aim of this study is to investigate the renal progenitor cells differentiation potentiality of bovine fetal stem cells. In our experiment, Bone morphogenetic protein 7 (BMP7), Basic fibroblast growth factor (bFGF), RhoA Inhibitor (CCG1423), PI3K inhibitor (LY294002), Retinoic Acid, Activin A, and Glial cell line-derived neurotrophic factor (GDNF) are added to survey the renal progenitor cells differentiation capability. Referring to neuronal lineage differentiation part, sonic hedgehog (SHH), fibroblast growth factor 8 (FGF8), basic fibroblast growth factor (bFGF) and brain-derived neurotrophic factor (BDNF) were added to induce the stem cells differentiating into neural like cells for the future neuron related disease treatment. In summary, with the differentiation capabilities of these stem cells may apply to the regenerative medicine research.</p> <p><b>Keywords:</b> amnion, Holstein, neural like cells, placenta, renal progenitor, stem cells</p>



**Hajime Hirao**  
GICICHLSR1705069

**Computational Studies of Enzymes and Enzyme-like Inorganic Systems**

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**Abstract**

We use computational chemistry techniques such as quantum chemistry, multiscale QM/MM and QM/QM approaches, and many other advanced computational chemistry techniques to study biological (metallo)enzymes. Despite the complexity of biological systems, we show that computational chemistry is capable of providing valuable atomic-level insights into their chemical reactions. By applying computational chemistry techniques to other non-biological systems, we are also trying to understand the differences between biological and non-biological systems. In addition to applying computational chemistry to specific problems, we are developing efficient computational methods and algorithms, in the hope that our new computational methods will expand the capability of computational chemistry and thereby enable one to simulate the behavior of complex molecular systems with higher reliability and predictability in the future.

**Shobha K.L**  
GICICHLSR1705082

**Antimicrobial susceptibility of uropathogenic Enterobacter species : A retrospective study from a tertiary care hospital**

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**Abstract**

**Objectives:** The aim of this study was to determine the current antimicrobial susceptibility of uropathogenic Enterobacter species isolated from patients at a tertiary care hospital.

**Materials and methods:** A retrospective study was carried out, covering a period of one year from January to December 2016. Enterobacter strains with significant bacteriuria isolated from the urine samples were analyzed at the microbiology laboratory at a tertiary care hospital. MALD (Biomerio, ElToile, France) was used for speciation and Vitex automated system (Biomerio, ElToile, France) was used for antibacterial sensitivity testing. Antibiotics used were trimethoprim-sulfamethoxazole, amoxicillin/clavulanic acid, gentamicin, amikacin, cefuroxime, norfloxacin and imipenem.

**Results:** Enterobacter species isolated from urinary tract infection were 57 strains during the study period. Isolation from female patients were in 34(59.14%) and in male patients were 23(40.35%). Enterobacter causing urinary tract infection was common in the age group of below 10 years and more than 60 years. Results of the bacterial susceptibility tests were as follows: trimethoprim-sulfamethoxazole (73.68%), amoxicillin/clavulanic acid (15.78%), gentamicin (78.94%) and amikacin (91.22%), cefuroxime (21.05%),



	<p>norfloxacin (92.98%) .Imipenem resistant strains accounted for only 1.7% of all the urinary Enterobacter species isolated. Antimicrobial susceptibility testing of uropathogenic Enterobacter species showed a significantly high resistance to commonly used antimicrobial agents like amoxiclav and cefuroxime (<math>P &lt; 0.05</math>) Trimethoprim-sulfamethoxazole can be used as empiric drug for the treatment of urinary tract infections due to Enterobacter species infection.</p> <p>Conclusions: Updates of trends in the use of antimicrobial agents in hospitals are crucial for clinical care management and for improving the habits of antibiotic prescribing.</p> <p>Key words: Enterobacter species, UTI</p>
<p><b>Amita Shobha Rao</b> GICICHLSR1705083</p>	<p>Relationship between head circumference, intelligence quotient (IQ) and academic performance.</p> <p style="text-align: center;"><b>Amita Shobha Rao</b> Department of Microbiology</p> <p style="text-align: center;"><b>Foo Chuan Jie</b> Melaka Manipal Medical College, Manipal Campus, Manipal University, Manipal, India</p> <p style="text-align: center;"><b>Khor Khai Seong</b> MBBS Students, Melaka Manipal Medical College, Manipal Campus, Manipal University, Manipal, India</p> <p style="text-align: center;"><b>Jason Chong Wee Shen</b> MBBS Students, Melaka Manipal Medical College, Manipal Campus, Manipal University, Manipal, India</p> <p style="text-align: center;"><b>ABSTRACT</b></p> <p><b>Introduction:</b> Intelligence Quotient, denoted as IQ is a score obtained from standardized tests in order to assess human intelligence. IQ score is considered having high statistical reliability and sufficient validity by psychologists in various clinical purposes. The correlations between head circumference, brain development and intelligence have been studied since the time of Broca and Galton (1985). They suggested that variations in brain size (estimated indirectly by measuring head circumference) are related with intelligence. Studies imply that occipitofrontal circumference of neonates and children correspond to brain growth and development.</p> <p><b>Objective:</b> To investigate the relationship between head circumference and IQ and to determine the relationship between head circumference and academic performance.</p> <p><b>Method:</b></p> <p>All the participants were MBBS students with sample size of 200 students above 18 yrs from batch 34 and 35 who had volunteered for the study. Participants were administered a questionnaire having 20 questions for IQ test.</p> <p>Among the 200 volunteers, 95 were males and 105 were females. Occipitofrontal circumference was measured using a measuring tape. IQ test score were obtained and the academic performance was compared between the gender</p>

	<p>groups. <b>Results:</b> The mean value of male head circumference obtained was 59.19 cm and the mean value of female head circumference obtained was 55.78 cm. The highest IQ scorings are from group with higher head circumference measurements in both males and females. However, students with higher IQ and head circumference did not perform well in academics. <b>Conclusion:</b> In conclusion, the results obtained showed that MBBS students who had larger head circumference had higher IQ. However, students with larger head circumference did not perform well in academics. Thus, head circumference can be used to indicate individual's IQ but not their academic performance.</p>
	<p style="text-align: center;"><b>The role of klotho protein in LPS-challenged wound healing process</b></p> <p style="text-align: center;"><b>Jennifer Mytych</b> Institute of Biotechnology, University of Rzeszow, Werynia 502, 36-100 Kolbuszowa, Poland</p> <p style="text-align: center;"><b>Przemyslaw Solek</b> Institute of Biotechnology, University of Rzeszow, Werynia 502, 36-100 Kolbuszowa, Poland</p> <p style="text-align: center;"><b>Maria Romerowicz-Misielak</b> Institute of Biotechnology, University of Rzeszow, Werynia 502, 36-100 Kolbuszowa, Poland</p> <p style="text-align: center;"><b>Marek Koziowski</b> Institute of Biotechnology, University of Rzeszow, Werynia 502, 36-100 Kolbuszowa, Poland</p> <p style="text-align: center;"><b>Abstract</b></p> <p>Bacterial infections are often reason of impaired wound healing and recognition of factors influencing this process, in the absence of comprehensive data, is still needed. In this study we provide evidence for klotho protein role in modulating wound healing process challenged with bacterial endotoxin, lipopolysaccharide. In normal human fibroblasts, LPS treatment resulted in increased levels of reactive oxygen/nitrogen species, followed by upregulated secretion of pro- and anti-inflammatory cytokines. As cytoprotective response, cells activated prosurvival autophagy, enhanced proliferation rate and in vitro wound healing process was not affected. Further, to evaluate the effect of klotho protein, we used siRNA strategy to silence its expression. Klotho depletion intensified LPS-induced oxidative stress and inflammatory response as well as led to aberrant activation of NF-<math>\kappa</math>B signaling pathway and enhanced protein O-GlcNAcylation. Accumulation of misfolded proteins in ER lumen activated PERK/eIF2<math>\alpha</math> branches of unfolded protein response and genomic instability. However, accumulated damage was too severe and ER stress-mediated cell cycle arrest and apoptosis were initiated. In consequence, in vitro wound healing process was significantly inhibited. Therefore, these results indicate new, important role of klotho protein in modulating ER-signaling crosstalk between autophagy and apoptosis induced by LPS during wound healing process.</p> <p><b>Keywords:</b> klotho; fibroblasts; wound healing; ER stress; autophagy; LPS</p>

**Genotoxic effects of antidepressants treatment in hippocampal cells**

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**Abstract**

According to the World Health Organization, depression is one of the most widespread diseases in the world. It belongs to affective disorders that periodically affect mood, emotions and psychomotor activity. Proper diagnosis and treatment are crucial due to the high risk of suicide. One hypothesis assumes that the deficiency of neurotrophic factors essential for the proper functioning of the human brain contributes to the development of hippocampal pathology. Currently, it is recognized that the use of antidepressants with different mechanisms of action restores the normal activity of neurotransmitters resulting in the resolution of symptoms of depression. On the other hand, there is available data suggesting negative impact of antidepressants on neuronal system functionality, however the exact mechanism is still unknown. Therefore, the aim of the present study was to investigate stress-related effects on cellular and biochemical features of hippocampal cells (HT-22). After 48 h incubation with drugs (Amitriptyline, Imipramine, Fluoxetine), we noted an increase in reactive oxygen and nitrogen species pools which in consequence led to oxidative and nitrosative stress development and enzymatic pathways of anti-oxidative protection (glutathione reduction) were activated as a cellular response in HT-22 cells. Also, an increase in DNA damage (H2A.X phosphorylation) that could result from free radicals overproduction and lack of sufficient antioxidant protection was observed. Subsequent analysis of the cell cycle profile showed G0/G1 arrest likely to activate DDR pathways and attempt to repair damaged DNA. In conclusion, antidepressants caused negative side effects at the cellular level, therefore the protection of HT-22 cells results from the activation of classical and cell-specific nerve cell signaling pathways.

**Keywords: hippocampal cells, antidepressants, oxidative stress, DNA damage**



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**VEGF-A and FGF-2 as potent regulators of seasonal reproductive processes in male European bison (*Bison bonasus*, Linnaeus 1758)**

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**Abstract**


The presence of growth factors: vascular endothelial growth factor A (VEGF-A) and fibroblast growth factor (FGF-2) was found in many tissues, including the male reproductive organs. A number of studies investigating their role in maintaining normal physiological reproductive processes in humans, domestic as well as free living animals was presented. Moreover, some reports suggest that VEGF-A and FGF-2 may be directly involved in the control of the annual reproductive cycle of seasonally breeding animals but detailed knowledge is still missing. Our study aimed to demonstrate the expression of mRNA and protein synthesis for both factors in the tissues of the testis and epididymis (caput, corpus, cauda) at different periods of the year (March, June, November, December) in European bison as a model of seasonally breeding animal. VEGF-A expression was more pronounced in testis than in epididymis and the highest expression was noted in December and June. Surprisingly, the protein accumulation was observed in June at the same level in all analyzed tissues. On the other hand, the highest FGF-2 mRNA expression was noted in testis in June and in epididymis in March, while analysis of protein levels revealed decrease in November. The results indicate that both factors are necessary for proper functioning of the reproductive system and their levels differ seasonally. It is linked to increased need of these factors in the testis as well as epididymis during preparation for the reproductive functions. Moreover, VEGF-A and FGF-2 not only regulate reproductive functions by affecting vascularization and cell nutrition, but also possess protective functions by stabilizing the reproductive cells. Therefore, obtained results provide new insight into mechanisms underlying seasonal breeding of the male European bison.





	<p><b>Keywords:</b> growth factors, testis, epididymis, seasonal reproduction, European bison</p>
 <p><b>Ilknur Aydin Avci</b> GICICNM1705051</p>	<p style="text-align: center;"><b>FUNCTIONAL STATUS AND HOME CARE NEEDS OF CANCER PATIENTS TAKING RADIOTHERAPY</b></p> <p style="text-align: center;"><b>PhD. Prof. Ilknur AYDIN AVCI</b> <b>Tugce CILINGIR, Home Care Nurse</b> <b>Ondokuz Mayıs University, Faculty of Health Sciences, Department of Public Health Nursing, Samsun /TURKEY</b></p> <p style="text-align: center;"><b>Abstract</b></p> <p><b>Aim:</b> This researched was aimed to assesment home care needs and functional status of cancer patients taking radiotherapy.</p> <p><b>Method:</b> This research was made as descriptive correlational research at an oncology unit in Turkey. Sampling included 115 cancer patients taking radiotherapy. Inclusion criterias in this research were to be a cancer patient, taking radiotherapy, don't have metastasis, be voluntery. Data collecting tools were questionnaire form including questions deal with descriptive features, home care needs, and some functional status and "Functional Living Index (Cancer)". Data evaluated by SPSS 20 statistical programme. It was used descriptive statistics, t test, and regression analysis. Cronbach alphas coefficient values of scale in this research was 0.86.</p> <p><b>Results:</b> In this research, age mean of participants was 61.3±11.2 (min 28 max 80), 55.7% of them was male, and 96.5% of them was married. 58.5% of cancer patients were living with their wife or husband. All of them explained to be their home care needs. Participants said that most of them needs usually with daily life activities. Functional living index scores of cancer patients were 95.4±22.6. There is no different between gender and functional status. It was found that there was a negatively relationship between age and funtional status.</p> <p><b>Conclusions:</b> In this research, it was found that young cancer patients need to home care more than older patients.</p>
<p><b>Prof. Dr. Ram Sharan Mehta</b> GICICNM1705052</p>	<p style="text-align: center;"><b>Cardiovascular Health Risk Behavior among the Faculties of B.P. Koirala Institute of Health Sciences Nepal</b></p> <p style="text-align: center;"><b>Sharma B, Rai A, Mehta RS</b> <b>Department of Medical-Surgical Nursing, B. P. Koirala Institute of Health Sciences</b></p> <p style="text-align: center;"><b>Abstract</b></p> <p><b>Background and Objectives:</b> Cardiovascular disease is a class of disease that involves heart, the blood vessels or both. The most important behavioral risk factors of heart disease and stroke are unhealthy diet, physical inactivity, tobacco use and harmful use of alcohol. The objectives of the study were to assess the cardiovascular health risk behavior among the faculties of BPKIHS Nepal and to find out the association between the cardiovascular health risk behaviors with selected demographic variables.</p>

	<p><b>Materials and Methods:</b> A descriptive cross-sectional study design was conducted to find out the cardiovascular health risk behavior among the faculties of B. P. Koirala Institute of Health Sciences. A total of ninety nine samples meeting the eligibility criteria were included by purposive sampling method. Data was collected by using self-administered questionnaire method. SPSS-11.5 software was used for data analysis.</p> <p><b>Result:</b> Majority of the respondents (77.8%) were of age group &lt;40 years, maximum of the respondents (70.7%) were male. Among ninety nine respondents, 13.1% were light smoker, 54.5% consumed alcohol sometimes, 73.3% consumed high fat food sometime, 48.5 % consumed extra salt in their diet, 86.9 % felt stress sometimes. The study showed that there is significant association between cardiovascular health risk behaviors with cardiovascular disease in family of the respondents.</p> <p><b>Conclusion:</b> Based on the study result it concludes that alcohol consumption, high fat food consumption and stress felt usually are the cardiovascular health risk behaviour commonly found among the respondents but there is no significant association between cardiovascular health risk behaviour with discipline, highest educational degree, designation, socio-demographic variables, health problems in the respondents, problems faced by the respondents within last 3 months and BMI of the respondents.</p> <p><b>Key words:</b> Cardiovascular Health Risk Behaviour, Faculties.</p>
<p>Dalyal N. Alosaimi GICICNM1705055</p>	<p style="text-align: center;"><b>The Challenges of Cultural Competency among Expatriate Nurses Working in Kingdom of Saudi Arabia</b></p> <p style="text-align: center;">Dalyal N. Alosaimi, PhD, RN College of Nursing, King Saud University, Riyadh, Saudi Arabia</p> <p style="text-align: center;"><b>Abstract</b></p> <p>There are thousands of expatriate nurses who work for the public and private health sectors in Saudi Arabia. These nurses have come to Saudi Arabia from different countries with different cultures. This has affected positively or negatively the provision of health care services to Saudi patients. The majority of nurses have not developed sufficient competence in understanding the sensitivity of Saudi culture, lack of training and orientation. Therefore, both Saudi patients and non-Muslim nurses face problems such as communication in Arabic, religious practices (i.e. prayer, fasting) and interference of Saudi families members in treatment plans of patients. This study aimed to address To understand, from the perspective of non-Muslim nurses what it is like to care for Muslim patients in Saudi Arabia in terms of religion and culture, To explore from the perspective of the Muslim patients what it is like being cared for by non -Muslim nurses in terms of religion and culture ,In order to address these objectives, the study used qualitative approach represented in hermeneutic phenomenology. The target groups in this study were Muslim patients and non-Muslim nurses who were interviewed using interview and focus group discussion approaches. The sample of patients accounted for 20 nurses and 20 patients. In addition to the interviews with nurses, four focus group discussions were conducted with them. The main purpose of that was to back up the results of interviews and enhance the reliability and validity of results. The results of the study were subjected to all reliability and validity measurements which comprised of credibility, transferability, dependability, confirmability, subjectivity and reflexivity. In relation to data analysis, the study used thematic analysis and constant comparative approach that helped in</p>

	<p>comparing different views from different cultural backgrounds as well as comparing patients' views with non-Muslim nurses' viewpoints. There are several themes emerged from the transcripts of the interviews. These included understanding Islam, providing religiously congruent care, religious barriers, family members and people around patients, language barriers, lack of translation, lack of training and orientation on Saudi culture and workload. These main themes were used as a base of data analysis. The results of the study are summarised in the bullet point below:</p> <ul style="list-style-type: none"><li>□ It is indicated that non-Muslim nurses, to some extent, understood different aspects and practices of Islamic religion such as praying, fasting and spirituality. However, they did not understand the importance of religion and spirituality to Muslims in general and patients in particular.</li><li>□ It is found that non-Muslim nurses still mix between Islam as a religion and local culture and do not distinguish between them.</li><li>□ It is showed that non-Muslim nurses are not significantly confident in communication with Muslim patients due to language barrier.</li><li>□ There was a lack of understanding of the main principles of transcultural care but they understood that from their local culture viewpoint which are not applicable to the Saudi context. Nurses were not subjected to sufficient training and orientation neither in their own countries nor when they joined the Saudi hospitals.</li><li>□ The study found that family members and relatives are involved in all aspects pertaining patients such as diagnosis of diseases, medication, sleep, timing for treatments and visits.</li><li>□ The study results also demonstrated gender issues in the provision of health care to patients. It was shown that some male patients preferred to be cared for by male nurses. Consequently, female nurses then had to spend additional time looking for male nurses.</li><li>□ The study results indicated that female patients could not make any decision related to medical procedures: one of their relatives was responsible for all procedures. This, in fact, made women rely on their husbands or any other relative in all problems. It could be concluded that women were not socially or economically independent.</li></ul> <p>The results of this study showed a direct relationship between practicing Islamic duties by Muslim patients (e.g. prayer and fasting) and the workload of nurses. Nurses in this study reported a number of features that were related specifically to the context of caring for Muslim patients in Saudi Arabia, which the nurses felt made their working routine much busier and placed them under additional pressure in terms of their workload and scheduling.</p>
 <p>Nejla Canbulat Şahiner GICICNM1705056</p>	<p style="text-align: center;"><b>Situations That Affect Child's Health: The Fact of Turkey</b></p> <p style="text-align: center;">Nejla Canbulat Şahiner Assoc. Prof. Karamanoglu Mehmetbey University, Health Science Faculty, Karaman, Turkey</p> <p style="text-align: center;">Selda Beşirik Research Assis. Karamanoglu Mehmetbey University, Health Science Faculty, Karaman, Turkey</p> <p style="text-align: center;">Sevil İnal Assoc. Prof. Istanbul University, Faculty of Health Science, Istanbul, Turkey</p>

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**ABSTRACT**

The status of child health is one of the most important indicators of the development of an country. Indicators such as postneonatal Infant Mortality Rate (IMR), Infant Mortality Rate (IMR), Child Mortality Rate (CMR), diseases, immunization are included among pediatric health indicators. Within this context, according to Turkish Population and Health Research Report 2013 (TPHR-2013); although Infant Mortality Rate (IMR) decreased by years, postneonatal IMR increased by 50% compared to previous period. As immunization which is another crucial indicator of pediatric health was evaluated, it was determined that vaccination was lower especially in rural area compared to urban areas, a close correlation was determined particularly between educational background of mother and status of children to be completely vaccinated. According to TPHR-2013 report, while the ratio of completely vaccinated children was 74.1%, the rate of completely immunized children was 80.5% in TPHR 2008. The fact that TPHR-2013 report decreased by 8% compared to 2008 confront us as a very important result. Besides, another indicator is diseases. In 2014 data of Turkish Statistical Institution (TSI); when the most common disease types in 0-6 year old children were examined, the distribution in terms of diseases in the last 6 months was determined. According to 2014 data of TSI; upper respiratory tract infections (URTI) took place on the top with 41.9%. This was followed by diarrhea with 33.2%, anemia with 10.8%, lower respiratory tract infections (LRTI) with 10.1%, and oral and dental health problems with 9.3%; respectively.

**Key words:** child healths, Turkey, child health indicators



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**Nutritional Status of Children in Turkey**

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**ABSTRACT**

After birth, especially the first two years and childhood, adequate and balanced nutrition for growth-development is very important. In these periods, malnutrition is a major cause of mortality and morbidity. The World Health Organization (WHO) and the American Academy of Pediatrics (AAP) recommend that babies should only be breastfed for 0-6 months, followed by additional feeding in the sixth month, and breastfeeding for 2 years and beyond.

	<p>Nutritional status of children in Turkey According to the Turkish Demographic and Health Survey 2013 Report (TDHS-2013), 30.1% of children younger than 6 months are fed only with breast milk. Nevertheless, in TDHS-2013, infants start to breastfeed after birth; Was 49.9% in the first hour and 70.2% in the first day. According to this report, 12% of babies are starting to receive supplementary food before six months. Both the weight and height measurements of all children under 5 years of age were interviewed with their mothers in the TDHS-2013 to examine the nutritional status of the children. In this respect, both malnourished and overweight are calculated with standard indications: height by age, weight by weight and age by weight. One out of every 10 children under five shows stunted (short in age), and more than one in three of these children is seriously stunted. Few children in Turkey are weak; 1.8% of children under the age of five are below the weight z-scores by -2SD. The proportion of children who are underweight according to age is close to the proportion of children who are weak by height (2%). According to the report, 11% of children under 5 years old are overweight. This percentage is 11.7% in urban areas and 7.7% in rural areas.</p> <p><b>Key words:</b> feeding, Turkey, child</p>
 <p>Sevil Inal GICICNM1705058</p>	<p><b>The Effectiveness of Using Lullaby and Massage Alone and Together in Assisting Kindergarten Students to Fall Asleep</b></p> <p><b>Sevil Inal</b> Assoc. Prof. Istanbul University, Faculty of Health Science, Istanbul, Turkey</p> <p><b>Ayşe Sonay Turkmen</b> Assistant Prof. Karamanoglu Mehmetbey University, Health Science Faculty, Karaman, Turkey</p> <p><b>Nejla Canbulat Sahiner</b> Assoc. Prof. Karamanoglu Mehmetbey University, Health Science Faculty, Karaman, Turkey</p> <p><b>ABSTRACT</b></p> <p>The research was performed semi-experimentally in order to determine the effectiveness of using lullaby and massage alone and together in assisting kindergarten students to fall asleep for their noon sleep in. In total, 30 children aged four years who were enrolled in kindergartens were included in the study. Data were obtained by the researchers through a data collection form prepared in the literature. The researcher was interviewed four times in total. Interviews are for gathering verbal information, either face-to-face or on the telephone. The experimental sessions were held over 4 weeks. No techniques were used in the first meeting before noon sleep. During the second interview, all children listened to lullabies before noon sleep; massage was applied in the third interview before noon sleep; and massage was performed while listening to a lullaby before noon sleep in the fourth interview. After the application, the children were evaluated for their transition to sleep, sleep duration, and participation in post-sleep activities. There was a statistically significant difference (<math>p&lt;0.01</math>) in terms of sleep transition periods, sleeping times, and participation during post-sleep activities of children in the study. When massage was applied, the duration of transition to sleep was shorter when massage and lullaby were used both separately and together, which produced longer sleeping times and higher participation rates in after-sleep activities (<math>p&lt;0.01</math>).</p>

	<p>In conclusion, applying massage to kindergarten children makes sleeping easier, and massage and lullaby both prolong sleep duration when used alone or in combination, and increase participation rates in post-sleep activities. Both methods can be used to enhance sleep quality and support participation in activities of kindergarten children.</p>
<p>Serife Zehra Altunkurek GICICNM1705060</p>	<p style="text-align: center;"><b>The effects of wellness coaching applied to the 8th grade students on their wellbeing and health improvements</b> <b>Zehra Altunkurek</b> <b>Department Of Public Health Nursing, University Of Health Science, Ankara, Turkey</b></p> <p style="text-align: center;"><b>Abstract</b></p> <p>This study was conducted in a randomized and controlled way with the purpose of evaluating the effectiveness of wellness coaching in terms of wellbeing and health improvements. After the first evaluations, control and research groups were determined. Research sample consisted of 132 adolescents who were the 8th grade students from December 2015 to January 2017 (and Wellness coaching group=33, health training group n= 33 control group n=66). Before the intervention, descriptive features, 5 Likert well-being scale- teenage forms (5F-WELLBEING-EF) and adolescent life style scale were applied. Wellness coaching program including group coaching, individual consultancy and physical exercises were given for 12 weeks. A significant change was observed in terms of total and all sub items of 5F-WELLBEING-EF scale and healthy life behaviors of the students who participated wellness coaching after the study (p&lt;0.05). A significant change was not observed in health education group in terms of total amount of both scales (p&gt;0.05). On the other hand, at the end of the 12 weeks, in the control group, a negative increase was seen in the 5F-WELLBEING-EF scale (-1.51). A significant change was observed in thr control group in terms of total amount of adolescent life style scale scales (p&lt;0.05). Overweighed students taking part in the wellness coaching decreased from %15.2(n=5) to %9.1 (n=3) at the end of the study It is concluded that wellness coaching nursing practices supplied an important contribution to increase the well-being of the adolescents and to improve healthy life style behaviors of the adolescents.</p>
<p>Chien-Lung Hsu GICICNM1705061</p>	<p style="text-align: center;"><b>Usability Assessment of a Mobile Health Self-Management System for Patients with Esophageal Cancer after Surgery</b></p> <p style="text-align: center;"><b>Yen-I Chiang</b> <b>Department of Information Management, Chang Gung University, Taiwan</b></p> <p style="text-align: center;"><b>Chien-Lung Hsu</b> <b>Department of Information Management, Chang Gung University, Taiwan</b> <b>Graduate Institute of Business and Management, Chang Gung University, Taiwan</b></p> <p style="text-align: center;"><b>Department of Visual Communication Design, Ming-Chi University of Technology, Taiwan</b> <b>Administration, Chang-Gung Memorial Hospital, Taiwan</b></p> <p style="text-align: center;"><b>Ying-Ju Lin</b></p>

Department of Information Management, Chang Gung University

**Abstract**

Esophageal cancer is a poor prognosis of cancer. Due to disease and treatment after esophagus surgery, the survivors will have some feeding problems and lead to postoperative nutritional deficiency. Regular tracking for patients with esophageal cancer after surgery is pretty important. For patients after esophagus surgery, exercise can improve physical functions, and improve the poor appetite. Educational guidance can also help them to improve their life quality. Hence, a mobile health self-management system with above functions or services should be designed for the patients with esophageal cancer after surgery.

In this paper, we designed and implemented a user-centered mobile health self-management App for patients with esophageal cancer after surgery based on clinical knowledge. Main characteristics of this App are as follows: (1) It provides electronic health information about esophageal cancer to improve their life quality and health literacy; (2) It provides diet and weight management for patients after esophagus surgery, and gives some exercises suggestions; (3) It provides electronic inventory for health self-test. We use mixed research method to evaluate the usability of this APP. This research recruits patients to use this App, gain feedbacks by thinking aloud method together with in-depth interview, and test the usability of this App by SUS scale. According to the patients' feedbacks, they indicated that our functions meet their requirements well and have intention to continue to use. The patients also thought the information provided in this App helpful and useful. On the other hand, they expected our App's interface style and font should be consistent and more concise. Based on the assessment results, this App is refined to a user-centered App.

**Keywords:** Esophageal cancer, Mobile, Healthcare, Postoperative Tracking, Usability Assessment



Saedah Muda  
GICICNM1705062

**Title:** The Challenges of Implementing Open and Distance Learning (ODL) in Higher Nursing Education

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**Abstract**

**Introduction**

Distance education, a structured learning in which the student and instructor are separated by time and place, is currently the fastest growing form of domestic and international education. From the perspective of higher nursing education, it must be made accessible, affordable and flexible to allow the nurse to cope with the demands and pressure of busy work and family commitments.

**Objective**

To identify challenging factors that influence the implementation of ODL in higher nursing education, and to determine to what extent does the learning outcomes achieved by open and distance education differ from conventional education.

**Method**

A range of 12 research studies were analyzed (2008 – 2015) with the majority




	<p>were qualitative research using interview and survey techniques.</p> <p><b>Result</b> It seems to have consensus view as the authors had identified several significant and challenging factors emerged from different aspects of ODL in higher nursing education; including support system from students' workplaces, technological and infrastructure organization, communication system, staffing, and creating a sense of community among students. However, substantially, it supports the notion of distance education and conventional education are equally effective in teaching and learning nursing; and that distance learners and campus learners have no significant different in their learning outcomes.</p> <p><b>Conclusion</b> The evidences collated from the review demonstrate several challenging factors materialized from different aspects of higher nursing education. Overall, this review of articles supports the premise that there is no difference between ODL and traditional campus-based teaching for nurses in terms of efficiency, knowledge attainment and skill performance.</p> <p><b>Future Scope</b> A clearer understanding of ODL in nursing will foster more discussion and research about intentional, active inclusion of ODL behaviors in nursing curricula.</p> <p><b>Key Words:</b> Open distance learning, Higher nursing education, Campus-based teaching.</p>
<p>Dewi Setya Paramitha GICICNM1705063</p>	<p style="text-align: center;"><b>PROBLEM SOLVING BY THE HEAD NURSE THROUGH SUPERVISION</b></p> <p style="text-align: center;">Dewi Setya Paramitha University of Muhammadiyah Banjarmasin Yati Afyanti University of Muhammadiyah Banjarmasin Yuliani Budiarti University of Muhammadiyah Banjarmasin</p> <p style="text-align: center;"><b>Abstract</b></p> <p>The diversity of nurses characteristics in the hospital and nursing care that cannot be separated from the multidisciplinary profession can lead to various problems. Supervision activities as part of the function of directing in nursing management, providing direction and guidance to nurses in performing nursing care to solve problems in the process of nursing care. This study aims to explore the various experiences of the head nurse in resolving the problems experienced through supervision activities. This study used a qualitative method with phenomenological approach. Data was collected in December 2016 through in-depth interviews with six participants who were taken by purposive sampling technique. Participants are head nurses at Ratu Zalecha Hospital Martapura. The result is there are seven themes identified in this study, namely the perception of self-performance as a head nurse, the process of supervision, obstacles faced in implementing the supervision, the multiple conflicts that often occurs in the ward, the steps taken to solve problems/conflicts, obstacles faced in problem solving/conflict and desired expectations of supervision activities. Based on the results of this study, the conclusion is that the head nurse was not easy to perform supervision activities, many factors affect that role which made them to deal with various problems and conflicts in the ward.</p> <p><b>Keywords:</b> problem solving, supervision</p>



<p>Mansour Al Yami GICICNM1705067</p>	<p style="text-align: center;"><b>The association of leadership Style and Organizational Commitment among Nurses in Saudi Arabia.</b></p> <p style="text-align: center;"><b>Mansour Al Yami</b> General Director ,Academic Affairs and Training of the Ministry,Riyadh, Saudi Arabia</p> <p style="text-align: center;"><b>Abstract</b></p> <p>This presentation explores and investigates the relationship between the leadership styles of nurse managers and nurses 'organizational commitment among nursing staff in Saudi Arabia (SA). Nurses make up the largest proportion of the health team in most healthcare systems; The contribution that they make to healthcare systems is fundamental to meeting the goals of the organization in providing safe and high quality health care services. Quality of care can thus be jeopardized by a shortage of nurses: a problem of increasing concern in Saudi Arabia.</p> <p>Indeed, the World Health Organization (WHO) has reported the negative impact that shortages in human resources were having on global health care, and concluded that the shortage crisis has the potential to worsen in the coming years (WHO, 2006a). Achieving and maintaining a stable nursing workforce in SA is one of the main concerns of Saudi nursing leaders (Almalki et al., 2011b). This presentation contributes substantive knowledge to the topic of leadership style and organizational commitment, as it provides information on a non-Western healthcare system in a society that differs from western cultures.</p> <p><b>Keywords:</b> leadership, managers, nursing, Saudi Arabia, organizational commitment</p>
<p>Shyfany Krismarestuti GICICNM1705069</p>	<p style="text-align: center;"><b>AMOBA Application of Mother and Baby as Maternal Education During Pregnancy up to Two Years Old</b></p> <p style="text-align: center;"><b>Savitri Citra Budi</b> Department of Health Service, Vocational Collage, Universitas Gadjah Mada, Yogyakarta, Indonesia</p> <p style="text-align: center;"><b>Yuni Rahmawati</b> Department of Health Service, Vocational Collage, Universitas Gadjah Mada, Yogyakarta, Indonesia</p> <p style="text-align: center;"><b>Abidurrahman Alfaruq</b> Department of Electrical Engineering and informatics, Vocational Collage, Universitas Gadjah Mada, Yogyakarta, Indonesia</p> <p style="text-align: center;"><b>Ana Amirotn Solihah</b> Department of Health Service, Vocational Collage, Universitas Gadjah Mada, Yogyakarta, Indonesia</p> <p style="text-align: center;"><b>Rizky Puspa Dewi</b> Department of Health Service, Vocational Collage, Universitas Gadjah Mada, Yogyakarta, Indonesia</p> <p style="text-align: center;"><b>Shyfany Krismarestuti</b> Department of Health Service, Vocational Collage, Universitas Gadjah Mada, Yogyakarta, Indonesia</p> <p style="text-align: center;"><b>ABSTRACT</b></p>

	<p><b>Introduction.</b> Maternal and infant health is matter of concern in Indonesia by reducing maternal mortality. In an effort to emphasize the mortality rate and the improvement of maternal and child health, is needed innovation in the form of information technology as means of education for pregnant women.</p> <p><b>Aims.</b> Creating innovation in form of information technology aims as one form of innovation for educational facilities in an effort to reduce maternal mortality and improve maternal and child health.</p> <p><b>Method.</b> This research used descriptive qualitative research with phenomenological approach. Subjects in the study were Head of Puskesmas Jetiš Yogyakarta, 37 health cadres, 45 mothers including pregnant women and new mothers. Sampling is done by interview and observation. For data validation we used source triangulation.</p> <p><b>Results.</b> AMOBA Application of Mother and Baby is one form of innovation that can be used as a means of education of mother and child health that can be used on android smart phone. We made cooperation with Puskesmas Jetiš Yogyakarta to assist in AMOBA socialization.</p> <p>This Application gets good response from the Head of Pusesmas Jetiš Yogyakarta, health cadres, and the community as users. Therefore, the public gets education so that the maternal mortality rate is reduced and the maternal and child health status increases.</p> <p><b>Conclusion.</b> Application of Mother and Baby is the latest innovation that can be used as an educative means of mother and child, to increase knowledge about mother and child health and can suppress maternal mortality rate at Puskesmas Jetiš Yogyakarta.</p> <p><b>Keywords.</b> AMOBA, Mother and Baby health, Maternal education</p>
<p>Muhamad Jauhar GICICNM1705070</p>	<p style="text-align: center;"><b>PHYSICAL HEALTH STATUS AMONG PULMONARY TUBERCULOSIS OUTPATIENTS AT A HOSPITAL IN CISARUA BOGOR</b></p> <p style="text-align: center;"><b>Muhamad Jauhar</b> Post Graduated Nursing Science Program, Faculty of Nursing, Universitas Indonesia, Depok</p> <p style="text-align: center;"><b>Astuti Yuni Nursasi</b> Community Nursing Department, Faculty of Nursing, Universitas Indonesia, Depok</p> <p style="text-align: center;"><b>Wiwin Wiarsih</b> Community Nursing Department, Faculty of Nursing, Universitas Indonesia, Depok</p> <p style="text-align: center;"><b>ABSTRACT</b></p> <p><b>Background:</b> There are 10.4 million pulmonary TB cases (WHO, 2015). There were 330.910 cases (10%) in Indonesia (MoH RI, 2016), 59.446 cases (38%) in West Java (SCB West Java, 2016), 8.271 cases in Bogor, and 2.107 cases in Dr. M. Goenawan Partowidigdo (DMGP) Hospital (HD Bogor, 2016). The increasing number of cases makes pulmonary TB clients become a vulnerable group (Stanhope &amp; Lancaster, 2014). One of vulnerable indicator is physical changes that affect physical health status such as symptom, self-care, fatigue, decreased physical activities (Kastien-Hilka, 2016).</p> <p><b>Objectives:</b> This study aims to describe physical health status on pulmonary tuberculosis outpatients at DMGP Hospital.</p>

	<p><b>Method:</b> This study was a descriptive quantitative methods using cross sectional design with 94 pulmonary tuberculosis outpatients samples which were selected based on inclusion criteria. Data was collected using Functional Assessment of Chronic Illness Therapy-Tuberculosis (FACIT-TB) questionnaire that was developed by Abdullellah et al (2015). The validity score was 0,376-0,737 and reliability 0,787. Univariate was applied to analyzed data.</p> <p><b>Result:</b> The result showed respondents' characteristics were 64.9% aged 18-40 years old (young adult), 52.1% man, 63.8% married, 56.4% high school, 57.4% unemployment, 521% has no income, 36.2% active or passive smoker, and 50% have poor physical health status. Health workers need to maintain and improve pulmonary TB outpatients' physical health status. Health education and counseling were delivered at early treatment. It is expected that clients can manage their TB symptoms and able to improve their physical health status.</p> <p><b>Keyword:</b> physical health status, pulmonary TB, outpatients, clients</p>
<p style="text-align: center;">Sonto Maputle GICICNM1705054</p>	<p style="text-align: center;"><b>Parents' perceptions of disclosing their HIV positive status to their children at Vhembe district, South Africa</b></p> <p style="text-align: center;">M S. Maputle, University of Venda, School of Health Sciences, Department of Advanced Nursing Science Thohoyandou, South Africa</p> <p style="text-align: center;"><b>Abstract</b></p> <p>Children whose parents have disclosed their HIV/AIDS status at different health centers found in the country, were often troubled by more stresses and worry while at schools or in other institutions. The study explored and described parents' perceptions of disclosing their HIV positive status to their children at selected villages in Vhembe district, South Africa. Qualitative and explorative research design was used. HIV positive patients who were having children of above 10 years constituted the study population. Non-probability, purposive sampling was used to select 20 female patients during April – November 2014. An in-depth face-to-face, unstructured interview was used to collect data. Data were analysed using open coding method. Measures to ensure trustworthiness and ethical considerations were adhered to.</p> <p><b>Findings:</b> Findings indicated that parents had challenge with regard to preparation for the disclosure as they feared rejection. Outcome of disclosure resulted in negative than the positive reactions.</p> <p><b>Family-centered counselling</b> was recommended, to involve all family members to promote support when living with HIV.</p> <p><b>Keywords:</b> Disclosure, HIV positive, perceptions, positive and negative reactions</p>
<p style="text-align: center;">Yuka Hirai GICICNM1705059</p>	<p style="text-align: center;"><b>The relationship between eating alone and stress in middle school students</b></p> <p style="text-align: center;">Yuka Hirai RN, M.N. Junior associate professor</p> <p style="text-align: center;">Yuri Hashimoto Ph.D. Associate professor, The University of Shimane, Faculty of Nursing, Shimane, Japan</p> <p style="text-align: center;"><b>Abstract</b></p> <p><b>Purpose:</b> Over the past few years, households with a nuclear family, both parents working, and a single parent have increased, and children increasingly</p>

	<p>eat alone. Here, the Public Health Research Foundation Stress Inventory (PSI) for Middle School Students was used to examine differences in the stress response, stressors, and social support (the 3 scales of the PSI) of middle school students.</p> <p><b>Methods</b></p> <p>From July-September 2016, a breakfast questionnaire and the PSI were distributed to 442 middle school students in the 6th-8th grades at 4 middle schools. Scores for the 3 scales of the PSI were calculated based on the PSI Manual. Students' mean scores were compared based on who they ate breakfast with.</p> <p><b>Results</b></p> <p>Responses from 372 students were analyzed. Of those, 94 "eat breakfast alone," 188 "eat breakfast with a family member," and 76 "eat breakfast as a family." Students who "eat breakfast alone" had significantly higher mean scores on all 4 stress responses subscales (physical response, depression &amp; anxiety, moodiness &amp; irritability, and a feeling of helplessness) than did students who "eat breakfast as a family." Students who "eat breakfast alone" had significantly higher mean scores on all 3 stressor subscales (relationships with teachers, friendships, and academic performance) than did students who "eat breakfast as a family." Students who "eat breakfast alone" had significantly lower mean scores on the 4 support from others subscales (one's father, one's mother, one's homeroom teacher, and friends) than did students who "eat breakfast as a family" and students who "eat breakfast with a family member."</p> <p><b>Discussion:</b> Students who ate breakfast alone lacked support from others and their stress was not adequately alleviated or dealt with since they were unable to talk with others over a meal. This study examined breakfast, but eating dinner alone also needs to be studied.</p> <p><b>Keywords:</b> eating alone, PSI, stress, breakfast, social support</p>
 <p>Sungkwon Park GICICNM1705066</p>	<p><b>Changes in bacterial community of pig feces treated with fermentable carbohydrates in vitro</b></p> <p><b>Sungkwon Park</b> Sejong University, 209 Neungdong-ro, Gwangjin-gu, Seoul 05006, Korea</p> <p><b>Kihyun Kim</b> National Institute of Animal Science, RDA, Jeonju 55365, Korea</p> <p><b>Younghwa Kim</b> National Institute of Animal Science, RDA, Jeonju 55365, Korea</p> <p><b>Duwan Kim</b> National Institute of Animal Science, RDA, Jeonju 55365, Korea</p> <p><b>Kyuho Cho</b> National Institute of Animal Science, RDA, Jeonju 55365, Korea</p> <p><b>Juncheol Park</b> National Institute of Animal Science, RDA, Jeonju 55365, Korea</p> <p><b>Prof. Dr. Sungkwon Park</b></p> <p><b>Abstract</b></p>

It is crucial to understand the effect of administration of fermentable carbohydrates on changes in gut environment for better productivity and healthiness of piglets. To this end, various fermentable fibers, including rice bran (RB), soybean hull (SH), wheat gluten (WG), oatmeal (OM), and Italian rye grass (IRG) were incubated with pig feces combined with intestinal enzymes, pepsin and pancreatin. Gas production was recorded for 48 h and incubated samples then analyzed for odorous compounds and fatty acid composition. Bacterial community was analyzed by the multiplex bar-coded pyrosequencing technique based on 16s rRNA gene sequence. Levels of odorous compounds were not different among samples except IRG group, which showed decreased levels of phenols and short chain fatty acids. IRG group was further analyzed for its bacterial community and showed increase in bacterial genera including Lachnospiraceae and Lactobacillaceae when compared with control group. In conclusion, IRG reduces odorous chemicals in pig feces by changing the microbial society shifting towards carbohydrate utilizing community.



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GICICNM1705068

**Effects of Secondhand Smoke and Breastfeeding in Nonsmoking Pregnant Women: A Meta-Analysis**

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**Abstract**



	<p>Maternal secondhand smoke (SHS) exposure who are non-smoker associate with adverse birth outcomes such as low birthweight, stillbirth and preterm birth. The negative effect of maternal smoking on breastfeeding has been a risk to reduction of exclusive breastfeeding duration described previously. However, the available evidence is limited for the association between SHS and breastfeeding. Therefore, the purpose of this review is to clarify the association of SHS in nonsmoking women during pregnancy with breastfeeding. SHS expose included to contact with any places. Control participants is women who are not exposed to SHS, and women who smoked during pregnancy is excluded. We included case-control, cross-sectional, and cohort studies with a comparison control group. The comprehensive electronic databases, CINAHL, EMBASE, and Medline were searched. The number of 5539 records identified through database searching and 2762 duplicates removed. Two review authors independently screened the titles and abstracts of 2777 records and 2663 were excluded because they were irrelevant to our research question. 114 studies selected for full text assessment using inclusion and exclusion criteria, and finally eight studies were included in the review for data extraction. Included studies were reported between 1997 and 2014. Two studies were conducted in Poland, and one study each was conducted in the United States, Brazil, Iran, Egypt, Taiwan, and Singapore. The result of our meta-analysis showed that the risk of discontinuation of any breastfeeding before 6 months significantly increased in SHS-exposed women (OR 1.07 [1.01, 1.14], two studies). Our findings suggested that SHS can affect breastfeeding duration, and further research and public health strategies are required to prevent adverse effect of SHS on maternal and child health.</p>
<p><b>Chennet Phonphet</b> GICICNM1705072</p>	<p style="text-align: center;"><b>The Reasoning and Selecting Modified Behavior for Health Maintenance in Thai older Southern Rural Women with Diabetes/Hypertension</b></p> <p style="text-align: center;"><b>Chennet Phonphet RN, Ph.D</b> School of Nursing, Walailak University, Tasala, Nakhon Si Thammarat, Thailand</p> <p style="text-align: center;"><b>Rewwadee Petsirason RN, Ph.D</b> School of Nursing, Walailak University, Tasala, Nakhon Si Thammarat, Thailand</p> <p style="text-align: center;"><b>Naiyana Noonil RN, Ph.D</b> School of Nursing, Walailak University, Tasala, Nakhon Si Thammarat, Thailand</p> <p style="text-align: center;"><b>Saifon Akvarangkul RN, Ph.D</b> School of Nursing, Walailak University, Tasala, Nakhon Si Thammarat, Thailand</p> <p style="text-align: center;"><b>Pornpon Thamrongrat MSc.</b> School of Informatics, Walailak University, Tasala, Nakhon Si Thammarat, Thailand</p> <p style="text-align: center;"><b>Ladda Thiamwong RN, Ph.D</b> College of Nursing, University of Central Florida, Orlando, FL, USA</p> <p style="text-align: center;">Abstract</p>

	<p><b>Purpose of the Study:</b> This qualitative study was explored to gain understanding of the perspectives of Thai older southern rural women with diabetes and/or hypertension. This study focuses on an achieved target control and the reasoning and selecting modified behavior they used for health maintenance.</p> <p><b>Design and Methods:</b> Thirty-two participants who were characterized by living in rural southern Thailand, woman, 60 or more years old, and diagnosed with diabetes and/or hypertension with achieved target control were enrolled in this study. Focus groups, in depth interviews, and observations were methods of data collection and were analyzed using a content analysis method.</p> <p><b>Result:</b> There were three themes of reasoning of health maintenance including extended time of well-being, self-contained, and contributed to family stability. Selecting modified behavior for health maintenance consisted of two themes involving drug adherence and an exercise program with enjoyment.</p> <p><b>Conclusion:</b> The findings offer an insight into the reasons and chosen method of modified behavior for health maintenance of Thai older southern rural women with diabetes and/or hypertension. They provide basic information and may be used to apply developing care in older women with chronic illness, especially in diabetes and/or hypertension.</p> <p><b>Keywords:</b> diabetes; health maintenance; hypertension; modified behavior; reasoning</p>
<p><b>Kochaporn Singhala</b> GICICNM1705071</p>	<p style="text-align: center;"><b>Application of the Theory of Planned Behavior for Contraceptive Behavior in Adolescence: An Integrative Review</b></p> <p style="text-align: center;"><b>Kochaporn Singhala, PhD, RN</b> Maharakham University Faculty of Nursing</p> <p style="text-align: center;"><b>Choochart Wong-Anuchit, PhD, RN</b> Maharakham University Faculty of Nursing</p> <p style="text-align: center;"><b>Andrew C. Mills, PhD, RN</b> Maharakham University Faculty of Nursing</p> <p><b>Background:</b> Despite various approaches to change behaviors, adolescent pregnancy continues to be a challenging social and health issue. The Theory of Planned Behavior (TPB) has been one approach used to tailor interventions to promote behavior change. Much research focused on adolescents' condom use to prevent sexually transmitted infections. However, a review of TPB's application specifically related to adolescents' contraceptive behaviors has not been done. Greater clarity of one relevant theory could provide applied knowledge of what is entailed to be an effective intervention.</p> <p><b>Objectives:</b> This integrative review aimed to explore the state of the science of TPB and its application for adolescents' contraceptive behaviors with particular attention given to the purpose of the studies, settings and participants, measurement of constructs, interventions, and advantages/limitations.</p> <p><b>Methods:</b> Electronic databases and were searched without limit through December 31, 2016. Inclusion criteria were studies conducted among adolescents and young adults aged 12-25 years, both male and female, with or without sexual experiences, with some or all of the TPB elements, and published in English. The final screening retained 28 primary research articles for review.</p>

	<p><b>Results:</b> The majority of studies used all elements of the TPB. Most studies used a correlational research design. Knowledge, contraceptive beliefs/attitude, subjective norms, perceived behavioral control/self-efficacy, perceived pregnancy risk, parent-adolescent communication, intention to use condom/other contraceptive methods, contraceptive behaviors, and pregnancy were measured. Beliefs about contraceptive and subjective norms of parents and peers were addressed.</p> <p><b>Conclusions:</b> The TPB has been useful to promote contraceptive behavior among adolescents.</p> <p>However, the TPB intervention of contraceptive behavior to prevent repeated pregnancy in adolescents was limited. These findings provide a reference for the development of contraceptive intervention including education and counseling programs to prevent adolescent pregnancy.</p> <p><b>Keywords:</b> Adolescent pregnancy, The Theory of Planned Behavior, contraceptive behavior, integrative review</p>
<p><b>Oliver Emmanuel Yausep</b> GICICHLRSR1705086</p>	<p style="text-align: center;"><b>The Safety of Pembrolizumab as Compared to Standard Chemotherapy in Patients with NSCLC</b></p> <p style="text-align: center;">Oliver Emmanuel Yausep Faculty of Medicine University of Indonesia</p> <p style="text-align: center;">Eric Tjoeng Faculty of Medicine University of Indonesia</p> <p style="text-align: center;"><b>Abstract</b></p> <p><b>Research Objectives:</b> Programmed death-ligand 1 (PD-1) inhibitors are a class of drug that have better safety and efficacy profile for treatment of advanced solid tumours, especially non-small-cell lung cancer (NSCLC), as compared to chemotherapy. One of the drugs under this class is Pembrolizumab. This review aims to evaluate the safety profile of Pembrolizumab as compared to standard chemotherapy regimens in patients with NSCLC.</p> <p><b>Methodology:</b> A literature search was done on search engines Pubmed, Proquest, Scopus, Science Direct, EBSCO and The Cochrane to identify relevant trials. Independent assessment of trials were done by 2 reviewers.</p> <p><b>Outcomes of this review</b> are overall survival (OS), progression free survival (PFS) and grades 3 or higher adverse events (AEs).</p> <p><b>Findings:</b> Literature searching yielded 3 trials, involving a total of 1462 patients; therefore, eligible for review. Results from all trials showed that the group undergoing Pembrolizumab treatment had fewer incidences of adverse events albeit more incidences of immunological related adverse events. Progression Free Survival (PFS) was consistently higher in experiment groups as compared to control groups in all trials, with the greatest improvement observed when Pembrolizumab was combined with standard chemotherapy. Overall survival was also improved with Pembrolizumab use. The safety of Pembrolizumab was enhanced in patients with Tumor Proportion Score (TPS) &gt;50%.</p> <p><b>Research Outcomes:</b> This review demonstrates that pembrolizumab use is associated with better patient survival, disease free progression and safer toxicity profile compared to chemotherapy, when used as monotherapy. Although pembrolizumab administered as a drug combination improved progression free survival, it also greatly increased incidence of adverse events.</p> <p><b>Future Scope:</b> Further studies are required to establish a balance between</p>



	<p>increased efficacy and the safety profile of pembrolizumab and to discover a TPS benchmark for patients' eligibility to undergo pembrolizumab treatment.  <b>Keywords:</b> Pembrolizumab, Non-Small Cell Lung Cancer, Overall Survival, Progression Free Survival, Adverse Events</p>
<p><b>Eric Tjoeng</b> GICICHLSR1705087</p>	<p style="text-align: center;"><b>The Difference in Expression of Gene KLF4 In Adipose Derived Stem Cell (ADSC) And Umbilical Cord Stem Cell (USC)</b></p> <p style="text-align: center;"><b>Eric Tjoeng</b> Faculty of Medicine University of Indonesia</p> <p style="text-align: center;"><b>Oliver Emmanuel Yausep</b> Faculty of Medicine University of Indonesia</p> <p style="text-align: center;"><b>Abstract</b></p> <p><b>Research Objectives:</b> Recently, stem cells have garnered popularity as regenerative therapy to degenerative diseases that are prevalent in the aging population. Based on pluripotency, Embryonic Stem Cells (ESC) are immensely useful for replacement therapies. However, given the ethical issues and immune barriers, the possibilities of using other type of stem cells such as Adipose Derived Stem Cells (ADSC) and Umbilical Cord Stem Cells (USC) are being explored. As the pluripotency of these two cells have yet to be studied thoroughly, this research aims to analyse the pluripotency level of the two type of stem cells through the expression of KLF4 gene, a co-regulator of pluripotency network.</p> <p><b>Methodology:</b> RNA was extracted from both ADSC and USC. One-step real-time RT-PCR was performed to find the relative expression of KLF4 gene which depicts the pluripotency level of each stem cell.</p> <p><b>Findings:</b> Relatively, KLF4 is expressed higher in ADSC as compared to USC.</p> <p><b>Research Outcome:</b> ADSC has higher pluripotency level than USC while USC should have higher pluripotency. This could be due to the roles of other genes that are involved in pluripotency core network.</p> <p><b>Future Scope:</b> Future studies exploring other pluripotency genes (NANOG, OCT4, SOX2) are required to holistically establish the pluripotency of ADSC and USC.</p> <p><b>Keywords:</b> adipose derived stem cell, umbilical cord stem cell, KLF4, gene expression</p>

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- » 16th International Conference on Nursing & Midwifery (ICNM), 15-16 July 2017, Bali, Indonesia
- » 17th International Conference on Healthcare & Life-Science Research (ICHLSR), 22-23 July 2017, Bangkok, Thailand

- » 17th International Conference on Nursing & Midwifery (ICNM), 22-23 July 2017, Bangkok, Thailand
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