

**CONFERENCE PROCEEDINGS**



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Nanyang Technological University, Nanyang Executive Centre,  
Singapore

## **Keynote Speaker**



**Dr. Deepak L. Waikar**

**Managing Partner, EduEnergy Consultants, Singapore and Senior Consultants Tacstra Solutions Pte Ltd, Singapore**

**Dr. Deepak L. Waikar** is Managing Partner, EduEnergy Consultants, Singapore and Senior Consultants Tacstra Solutions Pte Ltd, Singapore. He has been involved in education, training, research & management fields for almost three decades. He has been Associate/Adjunct faculty member for the premier institutions & academies in India, Singapore, Australia and UK. He has authored/co-authored book chapters, research articles and policy papers on power, energy, management & education related topics. He has served on various committees in **professional** bodies such as **Chairman** of IEEE, Power Engineering Chapter, Singapore. He is a recipient of IEEE-PES **Outstanding Power Engineers' Award** 2003 and SP Green Buddy Award 2004. Dr. Waikar has been a member of Board of Examiners of Singapore Certified Energy Manager's programme. He has delivered invited presentations on power, energy, education, management & leadership related topics at the international conferences seminars and forums in North America, Australia-New Zealand, Europe & Asia. He is a Fellow of the International Energy Foundation, Senior Member of IEEE USA and a Life Member of the Institution of Engineers, India with **Ph.D.** from National University of **Singapore** & **M.S.** from University of Saskatchewan, **Canada**. He obtained PG-DBM, M.Tech. & B.E. from **Nagpur** University, **Banaras Hindu** University and **Marathwada** University in **India**, respectively. His interests include **Sustainable Energy Leadership**, **Rethinking** Teaching, Learning & Academic **Leadership**, Re-inventing & **Transforming** Higher Education, **SMART Model** for Talent & Leadership Development, **Innovative** Project **Design** & Management, cricket & chess.

## **Keynote Speaker**



**El kebir abdelkader**

**Lecturer at Mustapha Stamboli University, Département of Electrical Engineering,  
Faculty of Technology, Mascara Alegria**

Abdelkader El kebir was born in Sidi-Belabbes (Algeria) in 1964. He obtained a diploma of engineer in Electrotechnic in 1991 from the University of ENSET Oran (Algeria). He received his master at University of ENSET Oran (Algeria) from 2006 to 2008. He is now Lecturer at University of Mascara. His main research interests are in the field of the analysis and intelligent control of electrical machines, multimachines multiconverters systems, modelling and simulation of Fuzzy controllers Neural Networks Genetic Algorithm

<p><b>Yuchen Gu</b> GICICHLSR1804053</p>	<p style="text-align: center;"><b>Predicative Models to Detect Undiagnosed Diabetes Using Big Health Data in US: Logistic Regression versus Artificial Neural Network</b></p> <p style="text-align: center;"><b>Yuchen Gu</b> The Second High School Attached To Beijing Normal University, Beijing, China</p> <p style="text-align: center;"><b>Abstract</b></p> <p><b>Backgrounds:</b> Artificial neural networks (ANN) are new methodological tools based on nonlinear models. They appear to be better at prediction and classification than traditional strategies such as logistic regression. This paper compared both approaches to predict undiagnosed diabetes in US.</p> <p><b>Methods:</b> The study population comprised patients in National Health and Nutrition Examination Survey (NHANES), which is a series of stratified, multistage probability surveys designed to obtain information on the health and nutritional status of the civilian, US population. We used NHANES 2013-2014, NHANES 2011-2012, NHANES 2009-2010, NHANES 2007-2008, NHANES 2005-2006 data. The network had three layers: 8 neurones in the input layer, 3 in the hidden layer and 1 in the output layer. Discrimination was determined using receiver operating characteristic curves.</p> <p><b>Results:</b> A total of 11474 patients were recruited and 4.27% had undiagnosed diabetes. A random sample of 5500 was chosen as the testing sample and the rest was used as the training sample. The significant factors in the logistic regression were as follows: age, gender, education level, and with pre-diabetes diagnosis. The network included all variables, namely, age, gender, education level, with diabetes risk factors, and with pre-diabetes diagnosis, race, marital status, and under poverty line or not. After logistic regression and network analysis were conducted in the training sample, we used the outputs from both models to predict the likelihood in the testing sample (N=5500). The areas under the receiver operating characteristic curves were 0.742 and 0.744 for the logistic model and the neural network, respectively. There were no significant differences in predictive ability between the approaches.</p> <p><b>Conclusions:</b> Our proposed model and the specific development method – either logistic regression or neural networks – represent a good opportunity for clinicians to better detect undiagnosed diabetes patients.</p>
<p><b>Bello Malami Tambawal</b> GICICHLSR1804056</p>	<p style="text-align: center;"><b>Antifungal activity and phytochemical screening of leaf extracts from guiera senegalensis lam. On some fungal isolates</b></p> <p style="text-align: center;"><b>Bello Malami Tambawal</b> Department of Science Laboratory Technology, Umaru Ali Shinkafi Polytechnic, Sokoto, Nigeria</p> <p style="text-align: center;"><b>Malami Shuaibu</b> Department of Science Laboratory Technology, Umaru Ali Shinkafi Polytechnic, Sokoto, Nigeria</p> <p style="text-align: center;"><b>Abstract</b></p> <p>The aim was to investigate the in vitro antifungal activity of crude ethanolic, methanolic and water extracts of the leaf of one of the popular Nigerian medicinal plants, Guiera senegalensis to reveal the possible presence of highly active phytochemicals. The minimum inhibitory concentration (MIC) observed of the ethanol and methanol extracts were between 5.0 and 7.5mgml<sup>-1</sup> while that of water extract ranged from 7.5 to 10 mgml<sup>-1</sup>. It was shown that all the extracts exhibited observed activity against all the fungal species investigated. The zones of inhibition exhibited</p>

	<p>by the extracts against the test fungal species ranged between 15 and 18, 15 and 20 and 5 and 10 mm for ethanol, methanol and water extracts respectively. Indicating the high activity in methanolic extract and the least recorded in water extract. The effect of the extract on fungal isolates was highest <i>Candida rugosa</i> with (<math>19 \pm 0.5\text{mm}</math>), (<math>16 \pm 0.5\text{mm}</math>) and (<math>10 \pm 0\text{mm}</math>) followed by <i>Microsporum audouinii</i> with (<math>18 \pm 1.2\text{mm}</math>), (<math>15 \pm 0.5\text{mm}</math>) and (<math>5 \pm 0\text{mm}</math>) and the least was <i>Trichophyton rubrum</i> with (<math>14 \pm 2.0\text{mm}</math>), (<math>13 \pm 0.1\text{mm}</math>) and (<math>8 \pm 0\text{mm}</math>) for methanol, ethanol and water extracts. <i>Fusarium oxysporum</i> showed no activity in water extracts (<math>0 \pm 0\text{mm}</math>) and all was compared with amphotericin B and ketoconazole at a concentration of 1 mg/ml. Phytochemicals screening of the leaves conducted revealed the presence of higher concentrations of alkaloids and flavonoids, moderate concentration of steroids, Terpenoids, proteins, and carbohydrates and low concentration of saponins and tannins in the extracts. The ability of the crude leaf extracts of <i>G. senegalensis</i> to inhibit the growth of keratinophilic dermatophytes, yeasts and saprophytic fungi, is an indication of its broad spectrum antimicrobial potential which may be employed in the management of fungal infections. This could also serve as alternative potential source of antifungal agents for treatment and control measures. <b>Keywords:</b> <i>Guiera senegalensis</i>, antifungal activity, phytochemicals.</p>
<p style="text-align: center;"><b>Jinesh Jain</b> GICICHLSR1804057</p>	<p style="text-align: center;"><b>An integrated approach towards avoiding deaths due to blood unavailability and its wastage in INDIA</b></p> <p style="text-align: center;"><b>Jinesh Jain</b> Pandit Deendayal Petroleum University, Gandhinagar-382007 , Gujarat, India</p> <p style="text-align: center;"><b>Abstract</b></p> <p>The paper would redounds to the understanding of the problem of blood unavailability and it's wastage in India and how with the help of technology it can be solved. The core focus of the paper is "How to deal with these problems in India using technology?". One of the most pressing concern in India today is alarming high number of death due to shortage of blood units. According to Report published by Sumitra Debroy  TNN   Updated: Apr 24, 2017, 16:41 IST ". In 2016-17 alone, over 6.57 lakh units of blood and its products were discarded. According to recent World Health Organisation, "There is a shortage of 3 million blood units in india on average" . These two report purely concludes of the inefficiency in the system in the demand and supply of blood units. The paper throws the light on the most possible reason for a problem of blood shortage , why there is wastage of blood units in blood bank , how does this problem affects the quality of life , at the same abiding us to get a knowledge about the solution which can solve the problem of blood shortage and wastage of blood at the same time, which is just a simple technology's algorithm with is easily understood by the flow chart prepared and has been explained in detail. If this helps in cutting down the problem by any amount, there's a huge impact on society. The paper include the primary individual surveys to understand their behaviour on blood donation and interview with a blood bank owner in Gandhinagar city, Gujarat. It sheds light on the difficulties faced by blood banks and provides an impactful solution to these difficulties. <b>Keyword:</b> technology's algorithm, flowchart, blood unavailability, wastage, society, blood donation</p>



Tadesse Hailu  
GICICHLSR1804058

**Efficacy of single dose Albendazole and Praziquantel drugs among helminth infected school children at Rural Bahir Dar, Northwest Ethiopia**

**Tadesse Hailu**

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**Endalew Yizengaw Ashenafi Genanew**

**Abstract**

**Background:** Geo-helminthic and *Schistosoma mansoni* infections are the major causes of mortality and morbidity in Sub Saharan countries. Periodic administration of anti-helminthic drugs is the most widely implemented controlling method though resistance of antihelminthic drugs makes helminth control difficult.

**Objective:** The aim of this study was to assess the efficacy of single dose Albendazole and Praziquantel drugs among helminth infected children.

**Methods:** A cross sectional study was conducted from May, 2017 to June, 2017. Stool examination was done by Formol-Ether Concentration Technique. Students infected with Geohelminths and *Schistosoma mansoni* were treated with single dose of Albendazole and Praziquantel, respectively. Post treatment stool examination was done after two weeks. The data was analyzed using SPSS version 20 statistical software. The magnitude of parasite infection, percentage of egg count reduction and cure rate following treatment were calculated using descriptive statistics.

**Results:** A total of 409 Sebatamet primary school students were included. The total prevalence of intestinal parasitosis was 232 (56.7%). Hookworm (41.3%) was highly prevalent followed by *Schistosoma mansoni* (12.2%) and *E. histolytica* (10.3%). The cure rate of Albendazole against hookworm was 76.8%. Praziquantile had a cure rate of 91.4% against *Schistosoma mansoni* among school children. The cure rate of both Albendazole and Praziquantile drugs among hookworm-*Schistosoma mansoni* co-infected cases was 81.3%. Albendazole had low cure rate among hookworm infected children but Praziquantil had a very good cure rate among *S. mansoni* infected children. The cure rate of both drugs is good. Therefore, period evaluation of the efficacy of antihelminthic drugs should be done.

**Keywords:** Efficacy, Albendazole, Praziquantel, Hookworm, *Schistosoma mansoni*

Nayomi Dissanayake  
GICICHLSR1804059

**Knowledge and Attitudes towards suicidal behavior among people in Kahatagasdigiliya**

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**Abstract**

**Introduction:** Increasing suicide rate is a vital global health issue and there has been a significant increase in some developing countries including Sri Lanka. Knowledge and Attitudes are major determinants which linked with this issue. Health promotion approach to address determinants of suicide is significant. Purpose of this study was to determine the current status of knowledge and attitudes towards suicidal behavior among people in Kahatagasdigiliya

**Methods:** Design of this study was descriptive cross sectional study. Data were collected by using a well-structured Interviewer-administered

	<p>questionnaire with open ended questions and an attitudinal scale. This was completed from randomly selected people over 18 years of age in Kahatagasdigiliya by principal investigator. Descriptive statistical methods were used for analysis and it was performed by using SPSS software.</p> <p><b>Results:</b> 23% of the respondents had a good knowledge on suicide. Only 30% of the respondents had a good awareness on legal aspects of suicide. A majority (90%) had identified youth as the most risk group for suicide. Almost 90% of the respondents had an attitude, suicide as a crime. And 63% were perceived that person who committing suicide never reveals the intention, with the most (80%) perceived that no need to bother about saved person from suicide. Only 66% had an attitude on suicide runs in families.</p> <p><b>Conclusion:</b> People over 18 years of age in Kahatagasdigiliya had poor knowledge and negative attitudes towards suicidal behavior.</p> <p><b>Keywords:</b> suicide, knowledge, attitudes, health promotion</p>
<p style="text-align: center;"><b>Dalyal Alosaimi</b> <b>GICICHLR1804060</b></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;"><b>Dalyal N. Alosaimi, PhD, RN</b> College of Nursing, King Saud University, Riyadh, Saudi Arabia</p> <p style="text-align: center;"><b>Muayyad M. Ahmad, PhD, RN</b> Department of Clinical Nursing, The University of Jordan</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.</p> <p>This study aimed, 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 comparing different views from different cultural backgrounds as well as comparing patients' views with non-Muslim nurses' viewpoints.</p> <p>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 summarized in the bullet point below:</p>

	<p>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.</p> <p>It is found that non-Muslim nurses still mix between Islam as a religion and local culture and do not distinguish between them. It is showed that non-Muslim nurses are not significantly confident in communication with Muslim patients due to language barrier.</p> <p>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</p>
 <p><b>Renata Komalasari</b> GICICHLSR1804061</p>	<p><b>A review of the Rowland Universal Dementia Assessment Scale</b></p> <p><b>Renata Komalasari</b> Faculty of Nursing, University of Pelita Harapan, Tangerang, Banten, Indonesia</p> <p><b>Abstract</b></p> <p><b>Objectives:</b> To explore the application, diagnostic accuracy and predictors affecting the test performance of the Rowland Universal Dementia Assessment Scale (RUDAS), which was developed for older populations in Culturally and Linguistically Diverse communities in Australia, in older populations living outside Australia and Aboriginal and Torres Strait Islander peoples in Australia.</p> <p><b>Design:</b> A literature review was conducted using a simplified approach of thematic analysis. Inclusion criteria consisted of studies with older populations assessed with RUDAS, involving face-to-face RUDAS administration, and written in English. The search terms used was the Rowland Universal Dementia Assessment Scale, sensitivity and specificity. Search was done in Academic Search Complete (EBSCO), Medline with Full-text, Pubmed and Google Scholar.</p> <p><b>Results:</b> Overall, 289 papers were identified through searching databases and one (1) paper from manual searching. A total of 13 articles were included in this review. Outside the target populations of Australian Culturally and Linguistically Diverse Communities, the RUDAS has been tested in Asia, Europe, Africa and Aboriginal and Torres Strait Islander peoples in Australia. The mean sensitivity and specificity respectively across these communities were 81.01 (SD ±8.49; 95% CI) and 80.38 (SD ±11.3; 95% CI). The RUDAS-MMSE mean correlation was 0.62 (SD ±0.14; 95%CI) and mean AUC (Area under curve) was 0.81 (SD ±0.09; 95%CI).</p> <p><b>Conclusions:</b> Owing to its good psychometric properties, findings from this literature review indicated that the RUDAS can replace the MMSE for assessment of general cognitive function in in older populations living outside Australia and Aboriginal and Torres Strait Islander peoples in Australia. Research is needed to evaluate the use of the RUDAS in other non-English speaking countries, and to develop and test RUDAS measures that can identify known risks for dementia.</p> <p><b>KEYWORDS:</b> Rowland Universal Dementia Assessment Scale, dementia screening, cognitive function, Mini Mental State Examination</p>
<p><b>Leia Erica Serrano</b> GICICHLSR1804064</p>	<p><b>Teenage Mothers: Ensuring Health and Well-being Through Equal Access to Services Through Online Platform</b></p> <p><b>Amira Zoe T. De La Cuesta</b> Student Researchers, Lorma Colleges Senior High School</p> <p><b>Leia Erica R. Serrano</b></p>

	<p><b>Student Researchers, Lorma Colleges Senior High School</b></p> <p><b>Katrina Zen Alviar</b> <b>Student Researchers, Lorma Colleges Senior High School</b></p> <p><b>Venus Mae P. Medina</b> <b>Student Researchers, Lorma Colleges Senior High School</b></p> <p><b>Fernando Oringo</b> <b>Research Advisers, Lorma Colleges Senior High School</b></p> <p><b>Abstract</b></p> <p>The third Sustainable Development Goal (SDG) which is to “Ensure healthy lives and promote well-being for all at all ages.” states that by the year 2030 every human on the planet has an access to healthy lives not only in good mental and physical health but also maternal health for it also proposes to end preventable maternal mortality. The target for universal maternal health access has been elevated. Although suggested targets may change as a result of the consultation process, they give us a good sense of the specific areas in which public and private investment will need to be channeled. According to Philippine Statistics Authority, while under-five mortality has declined slightly in recent years from 54 deaths per 1,000 births in 1988-92 to 48 deaths for the period 1993-1997, infant mortality rates have remained unchanged at about 35 deaths per 1,000 births. This study aimed to solve the problems: a) What are the existing programs and services that caters the health and well-being of teenage moms?, b) How do teenage moms acquire information and services from their locale?, and c) How can an online platform help teenage moms in ensuring good health and well-being? This action research made use of interview to the teenage moms of San Juan, La Union. As a result, the researchers came up with an action plan on addressing the third SDG that focuses on the health and well-being of teenage moms. With the said program, the teenage moms will be able to acquire the necessary information and support with the aid of technology. Teenage moms requires a huge amount of support from the society in order to stay away from the stigma and allow them to explore further opportunities and raise their own children.</p>
<p><b>Jikun Wang</b> <b>GICICHLR1804065</b></p>	<p><b>Predicting Risk of Heart Attack using Artificial Neural Network and Logistic Regression in Big Health Data</b></p> <p><b>Jikun Wang</b> <b>Cushing Academy, MA, USA</b></p> <p><b>Abstract</b></p> <p><b>Objective:</b> This study aims to 1) examine the predictors of heart attack 2) build a predictive model for victims of heart attack using artificial neural network and compare its performance to logistic regression model.</p> <p><b>Data and Methods:</b> National Health and Nutrition Examination Survey (NHANES) 2013-2014 data was used in this study. NHANES is a program of studies designed to assess the health and nutritional status of adults and children in the United States.</p> <p>All the participants who were eligible were randomly assigned into 2 groups: training sample and testing sample. Two models were built using training sample: artificial neural network and logistic regression. We used these two models to predict the risk of heart attack in the testing sample. Receiver operating characteristic (ROC) were calculated and compared for these two models for their discrimination capability and a curve using predicted probability versus observed probability were plotted to demonstrate the calibration measure for these two models.</p> <p><b>Results:</b> About 6.15% of 2440 participants experienced heart attack, about</p>

	<p>7.58% among the female and 4.67% among the male. According to the logistic regression, the likelihood of being a victim of heart attack increased when the participants aged. Male were more likely to be a victim of heart attack than female. The risk of heart attack decreased as the household income increased. High blood pressure diagnosis, high cholesterol level, and diabetes diagnosis were associated with higher risk for heart attack. Non-smoker had lower risk for heart attack. According to this neural network, the top 5 most important predictors were alq120q (How often drink alcohol over past 12 mos), bpq080 (Doctor told you - high cholesterol level), diq010 (Doctor told you have diabetes), riagendr (gender), mcq300a (Close relative had heart attack). For training sample, the ROC was 0.84 for the Logistic regression and 0.87 for the artificial neural network. Artificial neural network performed better clearly. However in testing sample, the ROC was 0.74 for the Logistic regression and 0.72 for the artificial neural network. Artificial neural network had worse performance. As to calibration measure, predictions made by the neural network are (in general) less concentrated around the 45-degree line (a perfect alignment with the line would indicate an ideal perfect calibration) than those made by the Logistic model. Conclusions: In this study, we identified several important predictors for being a victim of heart attack e.g., high blood pressure, diabetes, alcohol use in the past 12-months, family history of heart attack. This provided important information for patients and physicians to provide timely care for prevention. We built a predictive model using artificial neural network as well as logistic regression to provide a tool for early detection. As to performance of these two models, logistic regression had a similar discriminating capability as well as a better calibration between predicted probability and observed probability.</p>
<p style="text-align: center;">Chenrui Zhu GICICHLSR1804067</p>	<p style="text-align: center;"><b>Predicting Risk of Heart Attack using Artificial Neural Network and Logistic Regression in Big Health Data</b></p> <p style="text-align: center;"><b>Chenrui Zhu</b> Cambridge International Centre of Hangzhou Yulan School, Zhejiang, China</p> <p style="text-align: center;"><b>Jikun Wang</b> Cushing Academy, MA, USA</p> <p style="text-align: center;"><b>Abstract</b></p> <p><b>Objective:</b> This study aims to 1) examine the predictors of heart attack 2) build a predictive model for victims of heart attack using artificial neural network and compare its performance to logistic regression model. <b>Data and Methods:</b> National Health and Nutrition Examination Survey (NHANES) 2013-2014 data was used in this study. NHANES is a program of studies designed to assess the health and nutritional status of adults and children in the United States. All the participants who were eligible were randomly assigned into 2 groups: training sample and testing sample. Two models were built using training sample: artificial neural network and logistic regression. We used these two models to predict the risk of heart attack in the testing sample. Receiver operating characteristic (ROC) were calculated and compared for these two models for their discrimination capability and a curve using predicted probability versus observed probability were plotted to demonstrate the calibration measure for these two models. <b>Results:</b> About 6.15% of 2440 participants experienced heart attack, about 7.58% among the female and 4.67% among the male. According to the logistic regression, the likelihood of being a victim of heart attack increased when the participants aged. Male were more likely to be a</p>

	<p>victim of heart attack than female. The risk of heart attack decreased as the household income increased. High blood pressure diagnosis, high cholesterol level, and diabetes diagnosis were associated with higher risk for heart attack. Non-smoker had lower risk for heart attack.</p> <p>According to this neural network, the top 5 most important predictors were alq120q (How often drink alcohol over past 12 mos), bpq080 (Doctor told you - high cholesterol level), diq010 (Doctor told you have diabetes), riagendr (gender), mcq300a (Close relative had heart attack).</p> <p>For training sample, the ROC was 0.84 for the Logistic regression and 0.87 for the artificial neural network. Artificial neural network performed better clearly. However in testing sample, the ROC was 0.74 for the Logistic regression and 0.72 for the artificial neural network. Artificial neural network had worse performance.</p> <p>As to calibration measure, predictions made by the neural network are (in general) less concentrated around the 45-degree line (a perfect alignment with the line would indicate an ideal perfect calibration) than those made by the Logistic model.</p> <p><b>Conclusions:</b> In this study, we identified several important predictors for being a victim of heart attack e.g., high blood pressure, diabetes, alcohol use in the past 12-months, family history of heart attack. This provided important information for patients and physicians to provide timely care for prevention. We built a predictive model using artificial neural network as well as logistic regression to provide a tool for early detection. As to performance of these two models, logistic regression had a similar discriminating capability as well as a better calibration between predicted probability and observed probability.</p>
<p style="text-align: center;"><b>Chun Lin Lee</b> GICICHLRSR1804070</p>	<p style="text-align: center;">Taiwan red quinoa (<i>Chenopodium formosanum</i> Koidz) and its extracts protected against carbon tetrachloride-induced liver injury and fibrosis in mouse</p> <p style="text-align: center;">Ting-An Lin, Bo-Jun Ke Chun-Lin Lee Department of Life Science, National Taitung University, Taitung, Taiwan, ROC</p> <p style="text-align: center;"><b>Abstract</b></p> <p>In 2016, chronic liver diseases and cirrhosis ranked 10th in the 10 leading causes of death in Taiwan. Late stage of liver fibrosis and cirrhosis are considered to be irreversible. Taiwan red quinoa (<i>Chenopodium formosanum</i> Koidz) contains several anti-oxidative agents, including polyphenols. Rutin, the main bioactive compound in red quinoa, has a beneficial effect on liver protection. In this study, we explored the effect of red quinoa extracts and rutin on the prevention against carbon tetrachloride (CCl<sub>4</sub>)-induced liver injury. BALB/c mice were intraperitoneal injected CCl<sub>4</sub> to induce liver fibrosis and treated with Taiwan red quinoa whole seed powder, red quinoa bran-ethanol extracts, red quinoa bran-water extracts, and rutin, respectively. Red quinoa extracts and rutin improved liver function, protected kidney, decreased lipid peroxidation and increased anti-oxidative enzymes activities. They also reduced matrix accumulation in the liver through blocking TNF-<math>\alpha</math>/IL-6 pathway and TGF-<math>\beta</math>1 pathway. Rutin could be the main bioactive compound on the prevention of liver injury.</p> <p><b>Keywords:</b> <i>Chenopodium formosanum</i> Koidz, Taiwan red quinoa, rutin, liver injury, liver fibrosis</p>



**Atefeh Aghaei**  
GICICHLRSR1804071

**Comparing of discursive construction of HIV/AIDS in the first Iranian and American movies about HIV**

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**Niloufar Kianchehr**  
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**Abstract**

The purpose of this paper is to compare the construction of a discourse on HIV / AIDS in the first films made in Iran and the United States. For this purpose, the Philadelphia film from the United States of America in 1993 and the film Paradise Hidden from Iran were compared with each other in 1963. The analysis of these films used Lacla and Mouffe's method and theory of discourse. The media play an important role in developing the social meaning of HIV / AIDS, because they are seeking to highlight a specific meaning and marginalize other meanings. This constructed meaning is in fact a story that power sources tell us. The semantic development of this disease is carried out by various social factors, and local mass media are used for discursive oppositions and semantic constructs. So it's important to see what discourses are in the first Iranian and American cinematic films? What does the meaning of these discourses make and what is dominant? This discursive construction gives us the knowledge of the social status of these two societies.

The results of the research showed that the main discourse in the first Iranian cinema film was the Westernization discourse that opposes the discourse of patriotism. In West Africa, HIV / AIDS is a disease that is specific to Western countries, and Iranians who travel to Western countries may be infected with the disease. Ultimately, this disease is associated with the West and Western values. In Iran, another hot heart disease is a Western one. But in a Philadelphia film, in a patient discourse, he is referred to as "sexual distraction," and in another discourse the patient is referred to as the "citizen" of the central slab. The opposition between these two discourses represents other discursive oppositions in American society, including the confrontation between white and black, and insider and outsiders. In fact, this discursive quarrel is a historical issue.

As a result, HIV / AIDS is just one disease caused by immune deficiency, which has provided a platform for semantic and discourse struggles because of the transmission of disease. Different semantic construction in the two different societies shows that being different is shaped by the culture of each society and the structure that the media have shaped to serve its ideological power. So what really is the disease is a hot kidney, not a defect in the immune system, but a concept that is developed in every society and forms the other in every society.

**Keywords:** AIDS, American and Iranian movies, Construct, discourse.

**A Study on the Labeling Process for HIV-positive Women in Tehran and its Consequences in 1396**

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**Abstract**

Since the spread of HIV in Iran, People with HIV have experienced discrimination. The stigma of the HIV-related disgrace in Iran is related to

	<p>cultural, social, and especially religious issues. HIV is also associated with the sex of an HIV positive person. Because one way of transmitting this virus is through sex, it seems that women with the virus experience a special type of stigma. Therefore, the purpose of this article is to study the experience of HIV-Positive women living in Iran. The study seeks to answer the question of how women with HIV have experienced the process of labeling, and what consequences did these tagging women have for them? To answer this question, interviews were initially conducted with HIV infected women, then the texts of these interviews were implemented and qualitative content analysis was performed. The sampling was purposeful and the interviews continued to theoretical saturation, and interviewed with 18 women.</p> <p>The findings showed that diverting HIV positive women, HIV transplantation with high-risk behaviors, and especially non-religious behaviors and moral inadequacy, and their responsibility in HIV infection, led to the exclusion and removal of HIV-infected women from the family and society, the destruction of their identities, the creation of guilty feelings for women with HIV. This tagging process has led to the hiding of the HIV status of the family, the community and even the medical staff, the enduring of economic pressures and unemployment and the elimination of civil and social rights among HIV-positive women.</p> <p>From the findings of this study, it can be concluded that the prevalence of this virus is increasing by sex, and if women suffering from social exclusion and discrimination are provided with the necessary information to prevent transmission of the virus to them. They can play a role in its prevalence. Another important point in the research is the high power of the AIDS disorder in the community, especially in the case of women, which even affects health and treatment institutions, so that HIV positive people in Iran also face medical and medical exclusions. .</p> <p><b>Keywords:</b> Tagging, HIV, Affected Women, Hot Stigma</p>
<p><b>Dita Anggraini Oktaviana</b> GICICHLSR1804074</p>	<p style="text-align: center;"><b>The Factors Correlating To Self Safe Action Of Elementary School Students Towards Electrical Danger In Kecamatan Kayuagung</b></p> <p style="text-align: center;"><b>Dita Anggraini Oktaviana</b> Fakultas Kesehatan Masyarakat Universitas Sriwijaya</p> <p style="text-align: center;"><b>Novrikasari</b> Bagian Kesehatan dan Keselamatan Kerja Fakultas Kesehatan Masyarakat Universitas Sriwijaya</p> <p style="text-align: center;"><b>Mona Lestari</b> Bagian Kesehatan dan Keselamatan Kerja Fakultas Kesehatan Masyarakat Universitas Sriwijaya</p> <p style="text-align: center;"><b>Abstract</b></p> <p><b>In this modern era highly advanced electronic appliances such as mobile phones, tablet, iPad and others are familiar not only to us, but also to children. Electricity can certainly be harmful to children if not equipped with self-safe action against electrical danger. Self safeaction against electrical danger includes actions or activities of personal safety from electrical hazards which include the safe use of electrical appliances. This study aims to determine the factors that relate to the Personal safety behavior of elementary school students against electrical hazard In Kecamatan Kayuagung. This study uses a cross-sectional study design. The study population is elementary school students in Kecamatan Kayuagung. The sample in this study is 178 samples. The data analysis is univariate and bivariate with chi-square statistic test. Based on the result of univariate analysis there were 50,6% respondents had personal safety behavior againts electrical hazard well. Based on the result of bivariate analysis there</b></p>

	<p>were related between knowledge (p-value=0,000; PR=1,7; 95% CI), behavior (p-value=0,000; PR=2,9; 95% CI), infrastucture (p-value=0,004; PR=1,5 95% CI), family's support ((p-value=0,000; PR=1,9; 95% CI), and teacher's support (p-value=0,036; PR=1,4; 95% CI) with student personal safety behavior of elementary school to the electrical hazard. Knowledge, action, appliances, family support and teacher support had related with student personal safety of elementary school to electrical hazard in Kayuagung District. Advice for parents and teachers in order to increase the role of supervision to children about the use of electrical appliance and provide information to children about: Personal Safety Behavior of electrical hazard.</p> <p><b>Keywords:</b> Electrical hazard, elementary school, personal safety behavior.</p>
<p style="text-align: center;"><b>Taishun Li</b> <b>GICICHLR1804069</b></p>	<p style="text-align: center;"><b>Estimation of diagnostic test characteristics and prevalence of Tuberculosis using a Bayesian approach</b></p> <p style="text-align: center;"><b>Taishun Li</b> Department of Epidemiology &amp; Biostatistics, School of Public Health, Southeast University,87 Ding Jiaqiao Rd., Nanjing 210009, China</p> <p style="text-align: center;"><b>Pei Liu</b> Department of Epidemiology &amp; Biostatistics, School of Public Health, Southeast University,87 Ding Jiaqiao Rd., Nanjing 210009, China</p> <p style="text-align: center;"><b>Abstract</b></p> <p><b>Background:</b> Bayesian model plays an important role in diagnostic test evaluation in the absence of gold standard, which used external prior distribution of parameter combined with sample data to yield the posterior distribution of the test characteristics. However, the correlation between diagnostic tests has always been a problem that can not be ignored in Bayesian model evaluation, this study will discuss how different Bayesian model, correlation scenarios, prior distribution affect the outcome.</p> <p><b>Method:</b> The data analyzed in this study was gathered during studies of patients presenting to the Nanjing Chest Hospital with suspected Tuberculosis. Diagnostic character of T-SPOT.TB and Anti-mycobacterium tuberculosis antibody test were evaluated in different Bayesian model, and discharge diagnosis as a gold standard were used to verify and compare the model results in the end.</p> <p><b>Result:</b> The comparison of four models under conditional independence situation found that Bayesian probabilistic constraints model was consistent with Bayesian traditional model, the results was mainly affected by prior information, the sensitivity and specificity for the two tests in model PT were considerably higher than was predicted in model PP. The tuberculosis prevalence was estimated to be 63.6% (95% credible interval 58.8%-69.7%) in model PT, were considerably higher than model PP (53.4%, 95% credible interval 50.6 %-56.2%). The result of the four model under conditional dependence situation were similar to the conditional independence situation, <math>p_D</math> is also negative with no prior constraints in both model NP and NT. The DIC of model PP are close to model PT, but <math>p_D</math> of model PT (<math>p_D=2.40</math>) were higher than model PP (<math>p_D=1.66</math>).</p> <p><b>Conclusion:</b> The result of model PT in conditional independence situation was closest to the result of gold standard evaluation in our data, some factors, such as model difference, prior distribution, correlation coefficient, should be considered in the method selection, the accuracy of results depending on the realistic resources and practical operability.</p> <p><b>Keywords:</b> Bayesian, diagnostic test, Tuberculosis</p>



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YRSICHLR1804051

**Total Cholesterol As Risk Factor of Prediabetes and Diabetes Incidence in Palembang City**

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**Abstract**

**International Diabetes Federation (IDF) estimate that the number of diabetics will continue to increase. The increasing prevalence of diabetes poses a threat to public health. The highest prevalence in the age range 40 to 79 years. Prediabetes prevalence is much higher than the incidence of type 2 DM but is often undiagnosed compared to type 2 DM. Prediabetes is a "golden period" in preventing diabetes. This study aims to determine the incidence of prediabetes and diabetes with total cholesterol as risk factor for the incidence of prediabetes and diabetes in the Palembang city. The research method with cross-sectional design, the sample of 329 respondents who meet the criteria of inclusion and exclusion in the Palembang city. Data collection was done with home visit and conducted biomedical examination in the form of blood sugar and total cholesterol check. Data analysis using chi-square. The results of the study showed that the incidence of prediabetes 19,8% and the incidence of diabetes 14%. There was a significant relationship between total cholesterol and the incidence of prediabetes and diabetes (P value = 0.006). Increased total cholesterol levels can be an early predictor of pancreatic  $\beta$  cell dysfunction. Prediabetes can increase the absolute risk to DM, by knowing lipid profile as risk factor of prediabetes hence which can be done by early prevention program so that decrease the DM incidence.**

**Keywords: Total cholesterol, Prediabetes, Diabetes**



Payal Bhatnagar  
GICICHLR1804078

**Current Trends Of Patentability Of Stem Cells In Healthcare Sector**

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**Abstract**

**Stem cell therapy ensures advanced and safe for future medical treatments for critical ailments such as cancer. The controversies pertinent to the ethical and legal arena, particularly for the use of human embryonic cell**

	<p>that leads to decline in stem cell research globally. On March 9, 2009, the Obama administration reversed former President George W. Bush's limitation on the use of federal monies to support research on embryonic stem cell lines. This leads to series of stem cell research worldwide. In order to boost research in stem cells, there must be sufficient investment by private and public sectors. A key aspect of obtaining investment in any biotechnology/pharmaceutical field is the availability of patent protection. Moreover, the filing patterns of innovator companies and other stakeholders which are involved in filing patent applications can give valuable information on the state of the industry and clear vision on the economy of a particular country.</p> <p>The present study is based on the patent landscaping of stem cells by retrieving data from the year 2010-2018 by using Espacenet.net databases and critically appraised. Patent searching is perceived as an important tool for access to and exploitation of patent to know how to raise the awareness as well as strategic planning to balance Research &amp; Development (R&amp;D) and public access to affordable therapy, especially for poor population. Using this tool, we sought to identify important or dominant stem cell inventions and map the evolution of the technology. Thereby, we can see the trend of the patent filing throughout these 10 years.</p> <p>We have found that total of 364 patents is being filed during 2010 to 2018. United States is leading in stem cell research as data indicated a record of 173 filed patents which is highest filing rate. The trend shows that most of the patents are process and application based with 251 and 47 patent filed respectively. Public/private category of patent filer is highest with a record of 289 patent filed. From these data analysis, it is observed the United States has been investing in Mesenchymal Stem Cells (MSCs) research for clinical applications with a total of 35 patent filed.</p> <p>In conclusion, the stem cell area is very active, with a prominent role being played by government and private bodies. This role is likely to increase in the near future as national and state governments rush to set up various stem cell institutes and other research centres of excellence for the development of the country.</p>
<p style="text-align: center;">Siyon Xiong GICICHLR1804079</p>	<p style="text-align: center;"><b>To Predict the Risk of Hyperthyroid Using Machine Learning Techniques</b></p> <p style="text-align: center;">Siyon Xiong John F. Kennedy Catholic High School (Burien)</p> <p style="text-align: center;"><b>Abstract</b></p> <p><b>Objective:</b> This study aims to build a predictive model for hyperthyroid using artificial neural network and compare its performance to logistic regression model.</p> <p><b>Methods:</b> A public database was used in this study. All the participants who were eligible were randomly assigned into 2 groups: training sample and testing sample. Two models were built using training sample: artificial neural network and logistic regression. We used these two models to predict the risk of Hyperthyroid in the testing sample. Receiver operating characteristic (ROC) were calculated and compared for these two models for their discrimination capability and a curve using predicted probability versus observed probability were plotted to demonstrate the calibration measure for these two models.</p> <p><b>Results:</b> A total of 597 (7%) individuals out of 8542 had hyperthyroid in the data.</p> <p>According to the logistic regression, the male was less likely to be have hyperthyroid than the female. People who were on thyroxine were less likely to have hyperthyroid. People who were on antithyroid were more likely to have it. Pregnancy increased the likelihood to have hyperthyroid. People who received I131 treatment had increased likelihood for hyperthyroid. Elevated T4u and FTI increased the risk for hyperthyroid.</p>

	<p>According to this neural network, the top 5 most important predictors were query on thyroxine, goiter, on antithyroid agents, tumor and on thyroxine. For training sample, the ROC was 0.71 for the Logistic regression and 0.76 for the artificial neural network. In testing sample, the ROC was 0.68 for the Logistic regression and 0.68 for the artificial neural network. Artificial neural network had worse performance than Logistic regression.</p> <p>Conclusions: In this study, we identified several important predictors for Hyperthyroid e.g., country of residence, behavior screening score and family history. When compared to artificial neural network model, artificial neural network had a similar discriminating capability with logistic regression.</p>
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