2015 APCBEES BANGKOK CONFERENCES ABSTRACT

2015 4th International Conference on Bioinformatics and Biomedical Science (ICBBS 2015)
2015 International Conference on Water Technology (ICWT 2015)
2015 4th International Conference on Nutrition and Food Sciences (ICNFS 2015)
2015 2nd Journal Conference on Chemical Engineering and Applications (JCCEA 2015 2nd)

Bangkok, Thailand

June 25-26, 2015

Hotel ibis Bangkok Riverside

Sponsored and Published by

www.cbees.org

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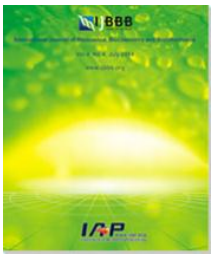
2015 APCBEES Bangkok Conferences Introduction

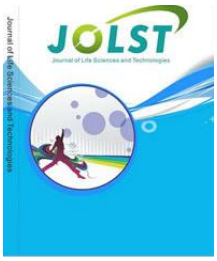
Welcome to CBEES 2015 conferences in Bangkok, Thailand. The objective of the Bangkok, Thailand conferences is to provide a platform for researchers, engineers, academicians as well as industrial professionals from all over the world to present their research results and development activities in Bioinformatics and Biomedical Science, Water Technology, Nutrition and Food Sciences, and Chemical Engineering and Applications.

2015 4th International Conference on Bioinformatics and Biomedical Science (ICBBS 2015)

❄ **Paper publishing and index:** ICBBS 2015 papers will be published in one of the following journals:



International Journal of Bioscience, Biochemistry and Bioinformatics (IJBBB, ISSN: 2010-3638), and all papers will be included in the Engineering & Technology Digital Library, and indexed by WorldCat, Google Scholar,Cross ref, ProQuest.



Journal of Life Sciences and Technologies (JOLST, ISSN: 2301-3672) as one volume, and will be included in the Engineering & Technology Digital Library, and indexed by Ulrich's Periodicals Directory, Google Scholar and Electronic Journals Digital Library.

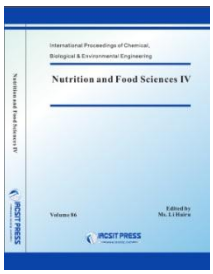
❄ **Conference website and email:** http://www.icbbs.org/; icbbs@cbees.org

2015 International Conference on Water Technology (ICWT 2015)

❄ **Paper publishing and index:** ICWT 2015 papers will be published in the Journal of Environmental Science and Development (IJESD, ISSN:2010-0264), and all papers will be included in the Engineering & Technology Digital Library, and indexed by WorldCat, Google Scholar, Cross ref, ProQuest, CABI and sent to be reviewed by EI Compendex and ISI Proceedings.

❄ **Conference website and email:** http://www.icwt.org/; icwt@cbees.net

2015 4th International Conference on Nutrition and Food Sciences (ICNFS 2015)



❄ **Paper publishing and index:** ICNFS 2015 papers will be be published in the Volume of Journal (IPCBEE, ISSN: 2010-4618), and all papers will be included in the Engineering & Technology Digital Library, and indexed by Ei Geobase(Elsevier), Ulrich's Periodicals Directory, CNKI, WorldCat, Google Scholar, Cross ref and sent to be reviewed by Compendex and ISI Proceedings.

❄ **Conference website and email:** http://www.icnfs.org/; icnfs@cbees.org

2015 2nd Journal Conference on Chemical Engineering and Applications (JCCEA 2015 2nd)

❄ **Paper publishing and index:** JCCEA 2015 2nd papers will be published in International Journal of Chemical Engineering and Applications (IJCEA ISSN: 2010-0221), and all papers will be indexed by CAS, DOAJ, Ulrich's Periodicals Directory, CABI, Google Scholar, Engineering & Technology Digital Library, ProQuest, and Crossref.

❄ **Conference website and email:** http://www.ijcea.org/jccea/2nd/; ijcea@vip.163.com

Presentation Instruction

Instructions for Oral Presentations

Devices Provided by the Conference Organizer:

Laptop Computer (MS Windows Operating System with MS PowerPoint and Adobe Acrobat Reader)
Digital Projectors and Screen
Laser Sticks

Materials Provided by the Presenters:

PowerPoint or PDF files (Files shall be copied to the Conference Computer at the beginning of each Session)

Duration of each Presentation (Tentatively):

Regular Oral Presentation: about **10** Minutes of Presentation and **2** Minutes of Question and Answer
Keynote Speech: **25** Minutes of Presentation and **5** Minutes of Question and Answer

Instructions for Poster Presentation

Materials Provided by the Conference Organizer:

The wall to put poster

Materials Provided by the Presenters:

Home-made Posters
Maximum poster size is A1
Load Capacity: Holds up to 0.5 kg

Best Paper Award

One best paper will be selected from each oral presentation sessions, and the Certificate for Best Papers will be awarded at the end of each session on June 26, 2015.

Dress code

Please wear formal clothes or national representative of clothing.

Keynote Speaker Introduction

Keynote I

Prof. Manoj R. Tarambale

Marathwada Mitra Mandal's College of Engineering, Pune, India

Topic: "Use of Digital Image Processing Methodology for Early Detection of Cancer - An Engineering Approach"

Prof. Manoj R. Tarambale has received Bachelor's Degree (B.E.) in Electrical Engineering from BVCOE, Pune-43, University of Pune, India, in 1992 and Master of Engineering Degree (M.E.) in Control System (specialization in Instrumentation) from WCOE, Sangli, Shivaji University, Kolhapur, India in 2002. Currently, he is pursuing his Ph.D. degree from PACIFIC University, Udaipur, India in the field of Biomedical Engineering. He has one year industrial experience and twenty one years teaching experience. At present, he is working as a Head of Electrical Engineering Department of Marathwada Mitra Mandal's College of Engineering, University of Pune, Pune-52, India.

He has published fifteen papers in prestigious International Journals and in International Conferences. He has got "Most Excellent Paper Award" and "Inter Science Scholastic Young Investigator Award" for his technical papers published. His main research interests are in the field of Bio-Medical Image Processing, Bio-Medical Instrumentation, Bio-sensors, Green Environment, Computer Applications in Bio-Medical Analysis, Artificial Intelligence in Disease Detection and Electrical Engineering. He is giving an important contribution in implementing various early detection cancer technique projects through Bio-Medical Image Processing. He has also done two consultation projects for the reputed industries. Prof. Tarambale is a member of Institute of Engineers (India) and Indian Society for Technical Education (ISTE).

Keynote II

Prof. Orawan Siriratpiriya

Environmental Research Institute of Chulaongkorn University, Thailand

Topic: "Applicable Technology to Manage Nutrients, Heavy Metals, and Pathogenic Organisms in Polluted Water: Fertilizer from Polluted Water"

PRESENT POSITION

Expert in Environmental Impact Assessment (License) of
Chulalongkorn University (1991-present).

EDUCATION

1990 Cert. in Environmental Management Specialized in Risk Assessment and Analysis, UNEP/Tufts University, USA.

1989 D.Sc. (Soil Management-Waste Disposal/Utilization) The Agricultural University of Norway, NORWAY.

1984 Research Dip. in Environmental Science, The Agricultural University of Norway, NORWAY.

1979 M.Sc. (Environmental Science-Soil) Kasetsart University, Bangkok, THAILAND

1976 B.Ed. (Chemistry-Biology) Chulalongkorn University, Bangkok, THAILAND

Keynote III

Prof. Haja Kadarmideen
Faculty of Health and Medical Sciences, University of Copenhagen in Denmark
Topic: "Systems genomics using next-generation sequencing methods"

Prof. Haja Kadarmideen (DVM, MVSc, PhD) born in India in 1967. He is an Australian citizen. He obtained his PhD degree in Quantitative and Statistical Genetics from The University of Guelph, Ontario in Canada (1994-1998) and his MVSc (in Veterinary Genetics) and DVM degrees from Madras Veterinary College, TANUVAS, Chennai, India (1992 and 1989, respectively).

He is currently a Full professor and Leader of Animal Breeding, Quantitative Genetics and Systems Biology group (www.qsg.dk) at the Faculty of Health and Medical Sciences, University of Copenhagen in Denmark. He is also the director of the Danish-Indian BioChild Consortium (www.biochild.ku.dk) and the Danish-Brazilian GIFT Consortium (www.gift.ku.dk). Prior to current position, he was a principal scientist and leader of quantitative genetics and systems biology group at the Commonwealth Scientific and Industrial Research Organisation (CSIRO) from 2006 until 2010, Head of statistical animal genetics group at the Swiss Federal Institute of Technology (ETH) Zurich in Switzerland (2001-2006), and a Dairy cattle geneticist at the Scottish Agricultural College, Edinburgh, UK (1998-2001).

His research interests are in 1) quantitative genetics, bioinformatics and systems biology of animal health, welfare, production and reproduction, 2) genomic selection, conservation and breeding programs of livestock and 3) genomics, epigenomics and systems biology of obesity, metabolic and auto-immune diseases in humans and in use of animal models to study these areas.

Keynote IV

Associate Prof. GAUTAM SETHI

Department of Pharmacology, Yong Loo Lin School of Medicine, National University of Singapore, Clinical Research Centre, Singapore

Topic: "Targeting Oncogenic Transcription Factors by Natural Agents for Cancer Therapy"

EDUCATION/TRAINING

B. S. 1998 Banaras Hindu University, Varanasi, India Chemistry (Honours)

M. S. 2000 Banaras Hindu University, Varanasi, India Biochemistry

Ph.D 2004 Banaras Hindu University, Varanasi, India Biotechnology

PDF 2004-07 UTMDACC Houston, Texas, USA. Cancer biology.

Asst Prof. 2008-14 National University of Singapore Pharmacology

Associate Prof. 2014- Now National University of Singapore

POSITIONS AND EMPLOYMENT

Sept. 2000 to Aug. 2002 Junior Research Fellow, School of Biotechnology, Banaras Hindu University, Varanasi, India.

Sept. 2002 to March 2004 Senior Research Fellow, School of Biotechnology, Banaras Hindu University, Varanasi, India

2004-2007 Postdoctoral Fellow, The University of Texas MD Anderson Cancer Center.

2008-2014 Assistant Professor, Dept. of Pharmacology, NUS.

2014-Now Associate Professor with tenure, Dept. of Pharmacology, NUS.

Brief Schedule for Conferences

June 25, 2015 (Thursday) 9:30~18:00 Arrival and Registration, Academic visit
Morning **Venue: Lobby** Arrival and Registration 9:30~12:30
Afternoon **Venue: Lobby** **Depart time: 13:30** Academic visit in Chulaongkorn University, Thailand
June 26, 2015 (Friday) 8:00~18:40 Arrival and Registration, Keynote Speeches, and Conference Presentations
Morning **Venue: Chatuchak Meeting Room** Opening Remarks (Prof. Orawan Siriratpiriya) 8:00~8:10 Keynote Speech I 8:10~8:40 Keynote Speech II 8:40~9:10 Coffee Break & Photo Taking: 9:10~9:30 Keynote Speech III 9:30~10:00 Keynote Speech IV 10:00~10:30 **Session 1**: 10:30~12:20 (9 presentations—"Food Science" Topic---ICNFS 2015)
Lunch 12:20~13:20 **Venue: Hotel Restaurant**
Afternoon **Venue: Chatuchak Meeting room** **Session 2**: 13:20~16:00 (13 presentations—"Chemical and Environmental Science" Topic---ICBBS&ICWT&JCCEA 2015) Coffee Break & Photo Taking 16:00~16:20 **Session 3**: 16:20~18:40 (11 presentations—"Biomedical" Topic---ICBBS&ICNFS 2015)
Dinner: 18:40 **Venue: Hotel Restaurant**

Tips:
Please arrive at conference room around 10 minutes before the session beginning to copy the PPT into the conference laptop.

Detailed Schedule for Conferences

Morning, June 25, 2015 (Thursday)

Venue: Chatuchak Meeting Room

9:30-12:30	**Arrival and Registration**

Note: (1) You can also register at any time during the conference.
(2) The organizer doesn't provide accommodation, and we suggest you make an early reservation.
(3) One best paper will be selected from each oral presentation sessions, and the certificate for best papers will be awarded at the end of each session on June 26, 2015.

Afternoon, June 25, 2015 (Thursday)

Academic Visit (Chulaongkorn University, Thailand)	
13:30	**Depart from Hotel ibis Bangkok Riverside (Gather at Lobby)**

Morning, June 26, 2015 (Friday)

Venue: Chatuchak Meeting Room

8:00-8:10		**Opening Remarks** Prof. Orawan Siriratpiriya Orawan Siriratpiriya
8:10-8:40		**Keynote Speech I** Prof. Manoj R. Tarambale Marathwada Mitra Mandal's College of Engineering, Pune, India Topic: "Use of Digital Image Processing Methodology For Early Detection of Cancer - An Engineering Approach"
8:40-9:10		**Keynote Speech II** Prof. Orawan Siriratpiriya Environmental Research Institute of Chulaongkorn University, Thailand Topic: "Applicable Technology to Manage Nutrients, Heavy Metals, and Pathogenic Organisms in Polluted Water: Fertilizer from Polluted Water"
9:10-9:30	**Coffee Break & Photo Taking**	
9:30~10:00		**Keynote Speech III** Prof. Haja Kadarmideen Faculty of Health and Medical Sciences, University of Copenhagen in Denmark Topic: "Systems genomics using next-generation sequencing methods"
10:00~10:30		**Keynote Speech IV** Associate Prof. GAUTAM SETHI Department of Pharmacology, Yong Loo Lin School of Medicine, National University of Singapore, Clinical Research Centre, Singapore Topic: "Targeting Oncogenic Transcription Factors by Natural Agents for Cancer Therapy"

Morning, June 26, 2015 (Friday)

SESSION–1 (ICNFS 2015)
Session Chair: Prof. GAUTAM SETHI
Time: 10:30-12:20 (9 presentations)
Venue: Chatuchak Meeting Room

N0006 (ICNFS 2015)

Food Expenditure of *Pantawid Pamilyang Pilipino* Program Beneficiary and Non-beneficiary Households in Selected Barangays in San Pablo City, Laguna, Philippines

Kristine R. Vigilla, Wilma A. Hurtada, Normahitta P. Gordoncillo, and Dinah Pura T. Depositario
UNIVERSITY OF THE PHILIPPINES LOS BANOS

Abstract—The study aimed to analyze the food expenditure of Pantawid Pamilyang Pilipino Program (4Ps) of the 270 beneficiary and non-beneficiary households in selected barangays in San Pablo City, Laguna, Philippines. Focus group discussion (FGD) was done to investigate the practices of the beneficiary households in terms of cash transfer management. Food expenditure of the households through a survey was also determined. Based on the findings, the beneficiary households mainly allotted the cash transfers for school, health and nutrition of their children. On the other hand, survey results revealed that beneficiary households spent more on food (absolute value) compared to non-beneficiary households using T-test for independent samples. However, there was no significant difference in terms of food expenditure per capita. Furthermore, the results of the correlation analysis suggest that beneficiary households spend more on food with higher household size and income. Findings also imply that those who live in urban areas tend to have higher food expenditure compared to those who live in rural areas.

Morning, June 26, 2015 (Friday)

SESSION–1 (ICNFS 2015)
Session Chair: Prof. GAUTAM SETHI
Time: 10:30-12:20 (9 presentations)
Venue: Chatuchak Meeting Room

N0007 (ICNFS 2015)

Nutritional Status of Children and Maternal Knowledge, Attitudes, and Practices of Conditional Cash Transfer (CCT) Beneficiaries in Lucena City, Quezon, Philippines

Ma-Ann Zarsuelo, Wilma Hurtada, Madeline Suva, and Clarissa Juanico
University of the Philippines Los Baños

Abstract—The study evaluated the impact of Philippine CCT adopted as Pantawid Pamilyang Pilipino Program (4Ps) on health key outcomes focused on maternal knowledge, attitudes, and practices and maternal and child's (6 mos. to 5 y/o) nutritional status. Data from 91 respondents in each group of 4Ps and non beneficiaries showed that 4Ps had significantly higher maternal education. In knowledge score, non beneficiaries were 3.3% significantly lower than the 4Ps average score of 73.1%. Main source of information was health center lectures. In attitude items, both groups had positive perceptions on health and nutrition. The 4Ps mothers/guardians had better practices on maternal and child care. Nutritional status of non beneficiary children had higher prevalence of underweight, stunting, wasting, and overweight. The same applies to non beneficiary mothers/guardians having higher prevalence of CED, overweight, and obesity. Findings showed that the program is successful in investing in human capital through good health. However, malnutrition prevalence is still high.

Morning, June 26, 2015 (Friday)

SESSION–1 (ICNFS 2015)
Session Chair: Prof. GAUTAM SETHI
Time: 10:30-12:20 (9 presentations)
Venue: Chatuchak Meeting Room

N0008 (ICNFS 2015)

Modification of Biscuits for Children under Five Years Old with *Spirulina* Fortification as a Complementary Food during Disaster Response

Sasanti Ayu Ningrum, Riana Harumi Putri, **Iftita Rakhma Ikrima**, and Monika Nanda G.W.
University of Indonesia

Abstract—This study finds out about the best formula of *Spirulina* biscuits that meets the characteristics and Recommended Daily Allowances of children 1-5 years old to help meeting their nutrition requirements, thus improving children's nutritional status and preventing diseases in disaster response. The formula selection considered the biscuit's chemical component analysis, organoleptic, difference, and hedonic test. The total of 44 panelists participated in the first and second tests. Using Kruskall-Wallis nonparametric analysis, the result showed that the fat ingredients (100% unsalted butter or 50% unsalted butter-50% margarine) and the amount of *Spirulina* addition (10g, 15g, or 20g) gives no significant difference in biscuits appearance, taste, texture, color, flavor, and aroma ($P>0.05$). Hence, combined with the result of chemical component analysis of biscuits, we concluded that the composition of 50%:50% unsalted butter-margarine and addition of 15g *Spirulina* is the most ideal formula as it meets the RDA and preferred by panelists.

Morning, June 26, 2015 (Friday)

SESSION–1 (ICNFS 2015)
Session Chair: Prof. GAUTAM SETHI
Time: 10:30-12:20 (9 presentations)
Venue: Chatuchak Meeting Room

N0010 (ICNFS 2015)

Effect of Honey Addition on Flowability and Solubility of Spray Dried Low Fat Milk Powder
Vikas Bansal, H.K. Sharma, and **Vikas Nanda**
Sant Longowal Institute of Engg. and Tech. Longowal, Pb, INDIA

Abstract—Milk and honey in combination can play a vital role in fulfilling the requirement of food product having nutritional as well as functional properties. This becomes more necessary in today's scenario because of increasing people awareness for food functionality and safety. The present study involves the production of spray dried honey enriched at four levels (5, 10, 15 and 20%) milk powder from buffalo, cow and mixed milk samples and investigated their flow and reconstitution properties. Bulk density remains unaffected while in tapped and particle densities significant difference was recorded. The results of flow properties i.e. Angle of repose, Carr index, and Hausner ratio indicated free flowing nature of prepared powder samples. Wettability and Dispersibility values of all three types of powders indicated good reconstitution properties.

Morning, June 26, 2015 (Friday)

SESSION–1 (ICNFS 2015)
Session Chair: Prof. GAUTAM SETHI
Time: 10:30-12:20 (9 presentations)
Venue: Chatuchak Meeting Room

N0012 (ICNFS 2015)

Using Sensory Stimulation to Analyze the Effect that Contact Frequency and Categories of Toy Vegetables Have on Young Children's Vegetable Preferences

J. H. Chang and S. M. Chang
Graduate Institute of Innovation and Design, National Taipei University of Technology

Abstract—This study explores whether children's experience and possession of toy vegetables have influence on their preference for vegetables by the frequencies of toys' visual and tactile stimulation. We also discuss the difference between different toys types of play. Furthermore, this study includes two stages of questionnaire. The first stage is about exploration of representative vegetables that children reject and the sensory cause of their rejection. The second stage points out identification of children's preference for vegetables. It even shows the experience and possession status of different types of toy vegetables. ANOVA and MANOVA are used for statistic. The research indicates as follows: (a) Visual stimulation can enhance preference. (b) High-frequency tactile contact has great influence on vegetables preference and main rejecting reason is the tactile sense. (c) Children possessing fluid-construction toy vegetables have highest preference, whereas children who don't have toys of sensor motor vegetables have the least preference.

Morning, June 26, 2015 (Friday)

SESSION–1 (ICNFS 2015)
Session Chair: Prof. GAUTAM SETHI
Time: 10:30-12:20 (9 presentations)
Venue: Chatuchak Meeting Room

N0013 (ICNFS 2015)

Exploitation of Health Promoting Potentials of Edible Sea Cucumber *(Holothuria Edulis)*: Search of New Bioactive Components as Functional Ingredients

W. A. J. P. Wijesinghe, Charles S. Vairappan, and You Jin Jeon
Department of Export Agriculture, Faculty of Animal Science and Export Agriculture, Uva Wellassa University, Badulla, Sri Lanka

Abstract—Though sea cucumbers have been a dietary delicacy and a medicinal cure for Asians over many centuries, biological properties of the edible sea cucumber *Holothuria edulis* were not revealed yet. In this study, edible sea cucumber *H. edulis* was evaluated for its *in vitro* anti-inflammatory potential via the determination of pro-inflammatory mediators. Ethyl acetate fraction (EtOAc) of the edible sea cucumber (ESC-EA) exhibited profound anti-inflammatory potentials in lipopolysaccharide (LPS)-stimulated RAW 264.7 macrophages. ESC-EA dose-dependently inhibited the nitric oxide (NO) production, and showed significant down regulation of the inducible nitric oxide synthase (iNOS) and cyclooxygenase-2 (COX-2) expression in LPS-stimulated RAW 264.7 cells. ESC-EA significantly suppressed prostaglandin E_2 (PGE_2) release in addition to pro inflammatory cytokines tumor necrosis factor (TNF)-α, interleukin (IL)-1β and IL-6. Due to the profound anti-inflammatory activity, ESC-EA appears as economically important biomass fractions that can be exploited in numerous industrial applications as a source of functional ingredients.

Morning, June 26, 2015 (Friday)

SESSION–1 (ICNFS 2015)
Session Chair: Prof. GAUTAM SETHI
Time: 10:30-12:20 (9 presentations)
Venue: Chatuchak Meeting Room

N0015 (ICNFS 2015)

Temperature Profile Prediction on Three Shapes of Banana Slices During Microwave Heating
Wisara Thuto and Kittichai Banjong
King Mongkut's Institute of Technology Ladkrabang

Abstract—This study focused on the influence of shape of banana slices on temperature profiles during microwave heating. In this regards COMSOL Multiphysics was used to simulate the three-dimensional computer model based on FEM and it satisfactorily predicted the temperature distributions inside banana slices, models were validated by comparing with temperature data obtained by an infrared thermometer. Three different shape of banana slices (transversal, longitudinal, and diagonal) was investigated, banana samples were heated by microwave at 800 W, 1 min. The most of heating occurs at the center of the samples were obtained in all cases, it can also be observed that temperature distribution is non-uniform within the sample throughout the process. The temperature in the center of the samples during heating were observed to increase faster than other region, that the hot spot was generated and it is evident from the profiles that the edges of sample happens to be slowest heating zone. A fairly good agreement was observed between the experimental and the simulated temperature profiles.

Morning, June 26, 2015 (Friday)

SESSION–1 (ICNFS 2015)
Session Chair: Prof. GAUTAM SETHI
Time: 10:30-12:20 (9 presentations)
Venue: Chatuchak Meeting Room

N1004 (ICNFS 2015)

The Correlation between Placental Weight and Birth Weight
Sitti Patimah, Yasmin Syauqi, and A. Razak Thaha
Nutrition Department, Faculty of Public Health, Muslim University of Indonesia

Abstract—Fetal growth is influenced by the interaction between mother, placenta and fetus. This study aims to assess the correlation between maternal factors and placental weight and the corelation between placental weight and birth weight. This was a longitudinal study which was carried out at maternal and children hospital Siti Fatimah Makassar from June to October 2011. The subject were 100 pregnant women selected by quota sampling. The study was tested using multiple linear regression test and Pearson correlation test. The average of placental weight and birth weight was 587±109 g vs 3114±410 g, 12% of placental weight was in mild category (<500 g) and 3% of the babies had low birth weight. The multiple linear regression test showed that maternal age, antenatal care (ANC) utilization and intake of vitamin C contributed to 10,5% of the placental weight (adjusted R^2=0.105), but only two factors that significantly related to placental weight were maternal age (p=0.005) and ANC utilization (p=0.039). There was a significant correlation between placental weight and birth weight (r=0.36, p=0.000). In conclusions, the maternal age and the utilization of ANC were significantly correlated with placental weight, and the placental weight was positively correlated to the birth weight.

Morning, June 26, 2015 (Friday)

SESSION–1 (ICNFS 2015)
Session Chair: Prof. GAUTAM SETHI
Time: 10:30-12:20 (9 presentations)
Venue: Chatuchak Meeting Room

N2001 (ICNFS 2015)

The Effectiveness of Counseling and Posters in Improving Maternal Nutrition Knowledge and Nutritional Status of Children Aged 24-35 Months in District Buloa Tallo Makassar

Andi Nurlinda, Andi Zainal, and Awaluddin
Nutrition Department, Faculty of Public Health, Universitas Muslim Indonesia

Abstract—Nutrition is a main pillar of the health and well-being of life. Malnutrition in early life will cause interference physical growth, intelligence and productivity. [1] According to Unicef, 2013 children who experienced growth inhibition was 165 million, while in Indonesia there are 5.4% with malnourished children, and in Sulawesi Malnutrition in 2011 reached 286 cases. [2]
The purpose of this research is to analyze the effectiveness of counseling and posters in improving maternal nutrition knowledge and nutritional status of children aged 24-35 months. The research method is a pure experiment that will test the effectiveness of the groups using the difference-posters and group counseling using posters only. The population is all children aged 24-35 months, they are 410 children. The sampling technique was conducted randomly by dividing the sample into two groups: group counseling-poster are 33 children and 33 groups poster children. The result were processed using SPSS 16.0 and analyzed using Wilcoxson signed rank test and Mann-Whitney test.
The results showed that the groups were given counseling-poster increased nutritional knowledge but does not give effect to increase weight and height in children. In the group given the poster only, look no increase knowledge about nutrition and weight and height in children. Counseling and posters were given simultaneously effectively improve maternal nutrition knowledge compared to only give the poster, but the is not successful in improving the nutritional status of children.

12:20-13:20	**Lunch**
Hotel Restaurant	

Afternoon, June 26, 2015 (Friday)

SESSION–2 (ICBBS&ICWT&JCCEA 2015)
Session Chair: Prof. Orawan Siriratpiriya
Time: 13:20-16:00 (13 presentations)
Venue: Chatuchak Meeting Room

B3003 (ICBBS 2015)

Development of Fluorescent Phycocyanin-Cu^{2+} Chemosensor for Detection of Homocysteine
Premsak Puangploy, Sukunya Oaew, Werasak Surareungchai
King Mongkut's University of Technology Thonburi, Thailand

Abstract—A simple optical chemosensor from phycocyanin (**L1**), a protein-pigment complex extracted from cyanobacterium *Spirulina platensis*, has been developed. The **L1** shows high selectivity toward Cu^{2+} by exhibiting spectral shift and quenching of fluorescence intensity. This **L1**-Cu^{2+} complex, so called ensemble probe, can be used to detect mercapto biomolecules, and has superior affinity toward homocysteine (Hcy). Upon binding to mercapto biomolecules, the color change from colorless-to-blue and the fluorescence emission change from colorless to pink were observed. This chemosensor could detect Hcy at concentration as low as 4.71 μM (S/N = 3) with a linear range of 10-100 μM (R^2 = 0.9903). This sensing approach may have found applications in clinical diagnostics.

Afternoon, June 26, 2015 (Friday)

SESSION–2 (ICBBS&ICWT&JCCEA 2015)
Session Chair: Prof. Orawan Siriratpiriya
Time: 13:20-16:00 (13 presentations)
Venue: Chatuchak Meeting Room

B2001 (ICBBS 2015)

Exploring Pressure-induced Unfolding of a Thermoenzyme Using Computational Simulation
Roghayeh Abedi Karjiban, Wui Zhuan Lim, Mahiran Basri, Mohd Basyaruddin Abdul Rahman
Universiti Putra Malaysia, Malaysia

Abstract—L1 lipase is a thermoenzyme derived from *Geobacillus stearothermophilus* L1. It has a globular shape with overall topology of α/ß-hydrolase fold. It carries unique activity along with stability conservation at high temperature because of the existence a zinc-binding site which constituted of two aspartate and two histidine residues linked to Zn^{2+} ion in a tetrahedral arrangement. Coordination among these residues and Zn^{2+} is essential for thermostability of enzyme. High pressure can denature protein, alongside with high temperature. However, protein unfolding studies using high pressure are limited due to the difficulties in characterizing intermediates. Here, pressure-induced unfolding was performed using Molecular Dynamics (MD) simulation technique. From our simulations calculations, it was found that L1 lipase lost its compactness and globular shape under 10 kbar pressure. Helix-coil transition was observed and the number of hydrogen bonds was decreased. Solvent accessible surface area (SASA) results revealed the existence of water penetration into the protein hydrophobic region which indicated the presence of a favourable interaction between lipase and water molecules at high pressure.

Afternoon, June 26, 2015 (Friday)

SESSION–2 (ICBBS&ICWT&JCCEA 2015)
Session Chair: Prof. Orawan Siriratpiriya
Time: 13:20-16:00 (13 presentations)
Venue: Chatuchak Meeting Room

CA217 (JCCEA 2015 2nd)

Synthesis and Visible-Light Photochromism of a Donor-Acceptor Type of Dimethyl 2, 3-bis (arylethynyl)fumarate

Ryota Sakamoto
Assistant Professor, Tokyo University of Science, Japan

Abstract—Herein, the author synthesized a donor-acceptor type of photochromic dimethyl 2, 3-bis(arylethynyl)fumarate, (E)-2, where ferrocene and 4-nitrobenzene were employed as donor and acceptor arenes, respectively. Compared to parent dimethyl 2,3-bis(ferrocenylethynyl)fumarate, (E)-2 enjoyed more profound donor-acceptor interaction, leading to a red-shifted intramolecular charge transfer band. (E)-2 underwent visible-light photochromism upon excitation with the intramolecular charge transfer band.

Afternoon, June 26, 2015 (Friday)

SESSION–2 (ICBBS&ICWT&JCCEA 2015)
Session Chair: Prof. Orawan Siriratpiriya
Time: 13:20-16:00 (13 presentations)
Venue: Chatuchak Meeting Room

CA218 (JCCEA 2015 2nd)

A Study of Microcapsules Containing *Psidium Guajava* Leaf Extract for Antibacterial Agent on Cotton Fabric

Jiraphorn Katewaraphorn and Arunee Kongdee Aldred
PhD student, Chiang Mai University, Chiang Mai, Thailand

Abstract—Psidium Guajava Linn. leaf extract containing phenolic compounds are known for antimicrobial activity. This study's objective was to prepare antibacterial cotton fabric by using microcapsules containing *Psidium guajava* Linn. leaf extract. Microcapsules containing *Psidium guajava* Linn. leaf extract were prepared by *in situ* polymerization using urea and formaldehyde for encapsulation. Both *Psidium guajava* Linn. leaf extract and microcapsules containing *Psidium guajava* Linn. leaf extract have been applied to cotton fabric by direct printing with a binder. The qualitative antibacterial assessment of the fabric was performed according to AATCC 147-2004 against *Escherichia coli* and *Staphlococcus aureus* as test organisms. The antibacterial tests proved that the cotton fabric finished with microcapsules containing *Psidium guajava* Linn. leaf extract showed antibacterial activity against *Staphlococcus aureus*, but was not effective against *Escherichia coli*.

Afternoon, June 26, 2015 (Friday)

SESSION–2 (ICBBS&ICWT&JCCEA 2015)
Session Chair: Prof. Orawan Siriratpiriya
Time: 13:20-16:00 (13 presentations)
Venue: Chatuchak Meeting Room

CA219 (JCCEA 2015 2nd)

Liquid-Phase Biodeodorization Treatment: MEC *vs.* MFC Bioreactor Configurations

Alfredo J. Anceno, Yang You Low, Haoran Zhu, and Richard M. Stuetz
Lecturer (Postdoctoral Fellow), UNSW Water Research Centre, School of Civil and Environmental Engineering, The University of New South Wales, Sydney 2052, Australia

Abstract—Biodeodorization treatment of liquid-phase model odorants in simulated wastewater as fed into microbial electrolysis cells (MECs) or microbial fuel cells (MFCs) seeded with activated sludge derived from settled sewage was attempted. Removal efficiencies of low-molecular weight volatile acids (propionic, butyric, and isobutyric acids) were higher with membraneless MECs in controlled temperature experiment (30°C). Removal efficiencies of phenolic (*p*-cresol, phenol, 4-ethylphenol) and indolic (skatole, indole) odorants were higher with air-cathode MFCs operated at ambient temperature (17.1 ± 1.1°C). Whereas odorant degradation rates with MECs (294–335 μM/d) and MFCs (279–339 μM/d) were comparable, treatment with MFCs yielded substantial power output (4.6–6.8 W/m^3) and treatment with MECs resulted in nil H_2 productivity. H_2 non-accumulation in MECs was attributed to co-occurrence methanogenesis and unfavourable pH while high current density (1.3–1.4 kA/m^3) was suggestive of significant levels of underlying electrogens. Although further studies are warranted in order to achieve the desired outcomes with MECs, considerable MFC power output at ambient temperature highlights the feasibility of bioelectrochemical wastewater deodorization with energy savings.

Afternoon, June 26, 2015 (Friday)

SESSION–2 (ICBBS&ICWT&JCCEA 2015)
Session Chair: Prof. Orawan Siriratpiriya
Time: 13:20-16:00 (13 presentations)
Venue: Chatuchak Meeting Room

M0001 (ICWT 2015)

Analysis On LID for Highly Urbanized Areas' Waterlogging Control by Long-Term Simulation: Demonstrated on the Example of the New Campus of Tianjin University in China

Shuai Niu, Lei Cao, Yu Li, and Jinhui Huang
Tianjin University, China

Abstract—For areas that are urbanized rapidly, the practice of Low Impact Development (LID) has gained an important place in stormwater management and urban planning due to its capability and beneficial effects in restoring the original hydrological cycle. The performances of LID alternatives can vary substantially due to different climate conditions. This study investigated the performances of three LID alternatives under a semi-arid climate in northern China on water balance. A numerical model, the storm water management model (SWMM), was employed to run 10 years' rainfall events for these objectives. The efficiency index for water balance (Iw) is also introduced in this study and three LID alternatives are evaluated by using the above methodology. According to the research results, LID facilities have remarkable effects on water balance.

Afternoon, June 26, 2015 (Friday)

SESSION–2 (ICBBS&ICWT&JCCEA 2015)
Session Chair: Prof. Orawan Siriratpiriya
Time: 13:20-16:00 (13 presentations)
Venue: Chatuchak Meeting Room

M0003 (ICWT 2015)

Optimization of Life Cycle Assessment-Based Eco-Efficiency
Kevin Fong-Rey Liu, Jong-Yih Kuo, Yuan-Hua Chang, and Han-Hsi Liang
Ming Chi University of Technology, Taiwan

Abstract—Eco-efficiency (EE) is a concept for quantifying the relationship between economic value creation and environmental impacts. In other words, to be eco-efficient is to add value to goods or services while reducing adverse environmental impacts. In this study, the Eco-indicator 99 was used as a life cycle impact assessment (LCIA) tool to assess environmental impacts. The optimization of EE refers to the maximization of environmental improvement, the minimization of the cost of environmental improvement, or both. Linear programming (LP) was used as an environmental improvement strategy tool to facilitate the optimization of EE. Finally, the optimal strategy for reducing environmental impact in an environmental impact assessment (EIA) was used as a case study.

Afternoon, June 26, 2015 (Friday)

SESSION–2 (ICBBS&ICWT&JCCEA 2015)
Session Chair: Prof. Orawan Siriratpiriya
Time: 13:20-16:00 (13 presentations)
Venue: Chatuchak Meeting Room

M0004 (ICWT 2015)

Industrial Water Mass Balance Analysis
Pham Thi Thuy, Pham Thanh Tuan, Nguyen Manh Khai
Hanoi University of Science, Vietnam

Abstract—Industry is demanding ever-greater volumes of water, while at the same time producing wastes and effluents, which in many places taint and damage the quality of this precious resource on which all life depends. The water balance of industrial parks is not well known. This article formalizes a systematic water mass balance framework to quantify water flows into, water flows inside and effluents out of the industrial park. Using the method, Long Thanh industrial park in Dong Nai province, Vietnam was evaluated. The approach makes visible large flows of water that have previously been unaccounted and ignored. In 2012-2014, the industrial parks varied 28 to 53% for water consumption for production, 40 to 45% for effluent discharge. The approach demonstrates how the principles of water balance can help robust water accounting, monitoring, optimum operating and management in industrial park.

Afternoon, June 26, 2015 (Friday)

SESSION–2 (ICBBS&ICWT&JCCEA 2015)
Session Chair: Prof. Orawan Siriratpiriya
Time: 13:20-16:00 (13 presentations)
Venue: Chatuchak Meeting Room

M0009 (ICWT 2015)

Flow Pattern and Stress Distribution around Three Spur Dike in Ninety Degree Bend
Salamatian, S.A., Forghani, M. and Karimaee Tabarestani, M.
Shahb Danesh Institute of Higher education, Iran

Abstract— Spur dikes are structures that often be utilized for three main purposes, such as increasing water level, river bank protection, and sedimentation. This type of construction's use for a long time shows its usefulness and good features. Experimental investigation on flow pattern around 3 spur dikes in clear water with 2-D velocimeter has been achieved. These experiments have been accomplished in 3 different occasions of series of spur dikes (the first spur dike at 30 degrees, 45 degrees, and 90 degrees). In each experiment, flow pattern has been measured from 20 degrees before and 20 degrees after spur dike. Also bed topography has been determined in all cases and in obvious distance. In this paper bed shear stress, exist vortexes and flow pattern has been surveyed and analyzed, furthermore interaction between flow pattern and bed variations has been mentioned. Results showed that by increasing the position of spur dikes to the downstream the length of separation zone decreases, and also the width of separation zone remain almost constant.

Afternoon, June 26, 2015 (Friday)

SESSION–2 (ICBBS&ICWT&JCCEA 2015)
Session Chair: Prof. Orawan Siriratpiriya
Time: 13:20-16:00 (13 presentations)
Venue: Chatuchak Meeting Room

M0010 (ICWT 2015)

Photocatalytic Degradation of Methylene Blue by Magnetite+H_2O_2+UV Process

Khan M. Reza, ASW Kurny and **Fahmida Gulshan**
Bangladesh University of Engineering and Technology, Bangladesh

Abstract—The photocatalytic degradation of Methylene Blue (MB) dye has been investigated by locally available Magnetite with H_2O_2. Parameters such as Magnetite dosage, concentration of dye and oxidizing agent (H_2O_2) were used to study the degradation of MB. The degradation rates were found to be strongly influenced by all the above parameters. The Magnetite/ H_2O_2/UV process proved to be capable of decolorizing Methylene Blue.

Afternoon, June 26, 2015 (Friday)

SESSION–2 (ICBBS&ICWT&JCCEA 2015)
Session Chair: Prof. Orawan Siriratpiriya
Time: 13:20-16:00 (13 presentations)
Venue: Chatuchak Meeting Room

M1003 (ICWT 2015)

Reuse of Carbon Paste from Used Zinc-Carbon Battery for Biogas Desulfurizer with Clay as a Binder

Tjokorda Gde Tirta Nindhia, I Wayan Surata, I Dewa Gede Putra Swastika, I Made Wahyudi
Udayana University, Indonesia

Abstract—The batteries containing materials which are dangerous for health and safety of environment. In some type of battery, its application should be replaced when the power get lost. The waste of used battery should be well manage or even reused again for other useful purpose to reduce dangerous risk for heal and environment. The zinc-carbon battery is a type of battery that can be used only one time, consist of carbon rod as positive terminal, zinc case as negative terminal, and mixture of carbon powder, ammonium chloride, and MnO_2 as electrolyte. Hydrogen sulfide (H_2S) is impurities found in the biogas and should be purified before further application as fuel for engine. Hydrogen Sulfide (H2S) is rising problem for the engine since will caused acidity to lubricant and corrosive to metal part of the engine. In this research the carbon powder of electrolyte part of the used zinc-carbon battery is reused as desulfurizer. Clay is added as a binder to make possible to create a pellet. It is found that the carbon powder from used zinc carbon battery is excellent as desulfurizer by adding clay as binder.

Afternoon, June 26, 2015 (Friday)

SESSION–2 (ICBBS&ICWT&JCCEA 2015)
Session Chair: Prof. Orawan Siriratpiriya
Time: 13:20-16:00 (13 presentations)
Venue: Chatuchak Meeting Room

M3001 (ICWT 2015)

MF as Pretreatment of RO for Tertiary Treatment of Biologically Treated Distillery Spentwash

Pinki Sharma and Himanshu Joshi
Indian Institute of Technology Roorkee, India

Abstract—Biologically treated spentwash from distillery usually contains high chemical oxygen demand (COD), biological oxygen demand (BOD), color, total dissolved solids (TDS) and other contaminants. In India, reverse osmosis (RO) treatment plants have been installed in many of the distilleries at tertiary treatment, but are not properly working due to fouling problem. To make the membrane process proven and reliable technology, proper pre-treatment is mandatory which not only improve quality of RO permeate but also increase life of RO. In the present study, use of micro-filtration (MF) for pre-treatment of RO has been evaluated at the tertiary treatment stage. Experiments were optimized in terms of different operating parameters viz. initial pH (pH_o: 2–10), trans-membrane pressure (1-5 bars) and temperature (15- 43 ℃). Experimental data revealed that the MF could be an effective pre-treatment in removing the pollutants (COD, color and TOC) and improving performance and water recovery (permeate flux) in comparison to RO alone. Removal efficiency for COD, color, TDS and TOC was observed as 31.5%, 42.7% and 27.6% with MF, respectively at optimized conditions with increased permeate flux from 17.5 LPH (RO) to 32 LPH (MF-RO).

Afternoon, June 26, 2015 (Friday)

SESSION–2 (ICBBS&ICWT&JCCEA 2015)
Session Chair: Prof. Orawan Siriratpiriya
Time: 13:20-16:00 (13 presentations)
Venue: Chatuchak Meeting Room

CA220 (JCCEA 2015 2nd)

Liquid-Phase Persistence of Model Odorants in $FeCl_3$ and $Mg(OH)_2$ Dosed Synthetic Wastewater: Studies with GC-MS and GC-FID

Alfredo J. Anceno, Anne-Mette Brigitte Nielsen, Xinguang Wang, and Richard M. Stuetz
Lecturer (Postdoctoral Fellow), UNSW Water Research Centre, School of Civil and Environmental Engineering, The University of New South Wales, Sydney 2052, Australia

Abstract—The impact of dosing $FeCl_3$ and $Mg(OH)_2$ on the prevention of release of model odorants from synthetic wastewater was evaluated using an approach whereby phase transformation of odorants from liquid to gas and subsequent release is simulated under controlled conditions. Levels of gas-phase transformed odorants were determined by gas chromatography-mass spectrometry (GC-MS); odorants remaining in aqueous matrix were determined using a GC equipped with flame ionization detector (FID). Assayed concentrations were correlated to intended effects of chemical dosing with respect to odorant groups, dosant levels and treatment duration. Time-wise concentrations of model odorants in both liquid and gas phases following the simulated emission procedure were found to relate well to the hypothesized effects of dosing in relation to Henry's law solubility constants of each odorant. The tendency of odorants of low liquid-phase solubility to be released more quickly despite the chemical dosing treatment was noted. The presently developed technique was seen suitable as an alternative tool in assessing the effectiveness of liquid-phase odor control strategy and/or developing novel design criteria for odor abatement.

16:00-16:20	**Coffee Break**

Afternoon, June 26, 2015 (Friday)

SESSION–3 (ICBBS&ICNFS 2015)
Session Chair: Prof. Haja Kadarmideen
Time: 16:20-18:40 (11 presentations)
Venue: Chatuchak Meeting Room

B0003 (ICBBS 2015)

Evaluation of Immunohistochemistry (IHC) Biomarkers in Breast Cancer Using Digital Image Processing

Prasanna Gopal Shete
PVG's College of Engineering and Technology, Pune, India

Abstract—The paper discusses an approach involving digital image processing for estimating the extent of cancer in a breast tissue sample. The process aims at providing a reliable, repeatable, fast and cost effective method that could replace the traditional method of manual examination and subsequent estimation. The markers discussed in the paper are the Human Epidermal Growth Factor Receptor (HER2) and the Estrogen Receptor (ER) that give clear indications of the presence of cancer cells in the tissue sample. For ER evaluation, a modified watershed algorithm designed for eliminating errors arising due to over-segmentation in traditional watershed algorithm is proposed to provide comparatively more accurate results. Further, intensity based thresholding is performed for identifying and categorizing the cancerous cells into levels of severity of damage done to cells due to cancer. For HER2 evaluation, the ratio of extent of staining to the total size of image gives an estimate of the extent of cancer cell spread. The implementation of the algorithm is done on the MATLAB tool it is cost effective and user friendly as compared to the equipments available for the detection of breast cancer.

Afternoon, June 26, 2015 (Friday)

SESSION–3 (ICBBS&ICNFS 2015)
Session Chair: Prof. Haja Kadarmideen
Time: 16:20-18:40 (11 presentations)
Venue: Chatuchak Meeting Room

B0005 (ICBBS 2015)

Large Causal Gene Regulatory Network Inference by Decomposition into Subnetworks
Leung-Yau Lo, Man-Leung Wong, Kin-Hong Lee, Kwong-Sak Leung
The Chinese University of Hong Kong, China

Abstract—Inferring the gene regulatory network is an important first step toward understanding the working of the cell and consequently curing diseases related to malfunctioning of the cell. One thorny problem in gene regulatory network inference is that even with high throughput technology, the available time series expression data is still very limited compared to the network size.
To alleviate this problem, we propose to decompose large network into small subnetworks *without* prior knowledge of the decomposition. Our algorithm first infers an initial GRN using CLINDE, then decomposes it into possibly overlapping subnetworks, then infers each subnetwork by either CLINDE or DD-lasso and finally merges the subnetworks. We have tested this algorithm on synthetic data of networks with 500 and 1000 genes. Results show that our proposed algorithm does improve the GRN inference performance of using either CLINDE or DD-lasso alone on the large network, with statistical significance, and is robust to different variances and slight deviation from Gaussian distribution in error terms.

Afternoon, June 26, 2015 (Friday)

SESSION–3 (ICBBS&ICNFS 2015)
Session Chair: Prof. Haja Kadarmideen
Time: 16:20-18:40 (11 presentations)
Venue: Chatuchak Meeting Room

B0006 (ICBBS 2015)

Analysis of Human miRNAs, Gene Targets and Diseases Network
Kwan-Yau Cheung, Kin-Hong Lee, Kwong-Sak Leung
The Chinese University of Hong Kong, China

Abstract—Micro-RNAs are small non-coding RNAs having important biological functions such as gene regulation and disease causality. Network analysis on miRNA-related network can help understanding gene regulation mechanism and propose cures for miRNAs related diseases. In this paper, we integrated miRNA-related data from three state of the art databases, miRTarBase, miRBase and HMDDv2.0 to construct a human miRNAs, gene targets and diseases network. We then performed network statistics analysis, disease cluster analysis and gene-disease association analysis on the network. The results show that there exists community structures in the network, similar disease are associated with similar miRNAs with enriched biological functions and gene-disease pairs connected by multiple paths in the network are more likely to have biological association.

Afternoon, June 26, 2015 (Friday)

SESSION–3 (ICBBS&ICNFS 2015)
Session Chair: Prof. Haja Kadarmideen
Time: 16:20-18:40 (11 presentations)
Venue: Chatuchak Meeting Room

B0007 (ICBBS 2015)

Simulating Haptic Feedback of Abdomen Organs on Laparoscopic Surgery Tools
Shirani M. Kannangara, Eranga Fernando, Sumudu K. Kumarage, Nuwan D. Nanayakkara
University of Moratuwa, Sri-Lanka

Abstract—Minimally Invasive Surgeries (MIS) such as laparoscopic procedures are widely used for many types of abdomen surgeries because of its numerous advantages over open surgeries. They require very high levels of skills of surgeons acquired through experience. The best and the safest way of getting hands on experience is the computer simulation or virtual reality (VR). The VR surgical simulators have a great potential to revolutionize the training paradigm of surgical interns. The haptic feedback plays as equally as visual feedback to provide realistic environment to trainees. In this paper, we present a method incorporate hapitics on VR simulator. A software procedure is developed using the Libraries of Open Haptic Toolkit along with the Open GL graphic libraries to implement three basic haptic ranges: soft, mild(firm) and hard into organ models. The feedback of the expert surgeons in the field was obtained to model the organs rather than measuring mechanical properties of soft tissues due to practical limitations. A commercially available six Degrees of Freedom (DoF) position sensing and three DoF force feedback haptic device is used to implement the interface.

Afternoon, June 26, 2015 (Friday)

SESSION–3 (ICBBS&ICNFS 2015)
Session Chair: Prof. Haja Kadarmideen
Time: 16:20-18:40 (11 presentations)
Venue: Chatuchak Meeting Room

B0011 (ICBBS 2015)

A Systematic Study of Functional Regulatory Modules by miRNA–miRNA Functional Synergistic Network in Hepatocellular Carcinoma

Xiangjun Kong, Xiaomei Geng, Junrui Zhao, Yuanjia Hu
University of Macau, China

Abstract—Hepatocellular carcinoma (HCC) is one of the most common cancers worldwide. Poor understanding of the pathogenesis mechanism of HCC makes it difficult to be diagnosed and treated. The role of microRNAs (miRNAs) associated with progress and metastasis of HCC is emerging recently. For the purpose of systematically understanding the functional regulatory modules of miRNAs in HCC, this study constructed the miRNA-miRNA functional synergistic network (MFSN) based on KEGG pathway functional enrichment of co-targets collected from differentially expressed miRNAs related to HCC. To further understand the complex cooperative relations of miRNAs, two different synergistic subnetworks were generated to exhibit the effect of synergistic suppression of up-regulated miRNAs and synergistic enhancement of down-regulated miRNAs. Moreover, subnetworks of Focal adhesion, MAPK signaling pathway, Wnt signaling pathway, and TGF-beta signaling pathway were also extracted from MFSN to demonstrate synergistic influence profile of miRNAs in a specific functional pathway.

Afternoon, June 26, 2015 (Friday)

SESSION–3 (ICBBS&ICNFS 2015)
Session Chair: Prof. Haja Kadarmideen
Time: 16:20-18:40 (11 presentations)
Venue: Chatuchak Meeting Room

B1001 (ICBBS 2015)

Mechanical Properties and Biocompatibility of *Attacus atlas* and *Bombyx mori* Silk Fibers Released from Cocoons by Alkali Treatment

Tjokorda Gde Tirta Nindhia, Zdeněk Knejzlík, Tomáš Ruml, I Wayan Surata and Tjokorda Sari Nindhia
Engineering faculty, Udayana University, Indonesia

Abstract—Natural silks, produced by spiders and insects, represent perspective source of biomaterials for regenerative medicine and biotechnology because of their excellent biocompatibility and physico-chemical properties. It was previously shown that silks produced by several members of *Saturniidae* family have excellent properties in comparison to silk from *B. mori*, the most studied silkworm. Efficient degumming of silk fibers is a critical step for subsequent processing of fibers and/or fibroin. In this study, we describe cheap, environmentally friendly and efficient NaOH-based degumming of *A. atlas* fibers originated from natural cocoon. We found that 100 mM NaOH concentration was efficient for complete *A. atlas* cocoon disintegration to individual fibers; while in case of *B. mori*, near complete hydrolysis was observed at the same concentration as shown SDS-PAGE and weight analysis. EM analysis revealed that 100 mM NaOH treatment lead to complete degumming of *A. atlas* fibers whilst in case of *B. mori* it was observed at 10 mM NaOH. These observations are in agreement with the tensile analysis showing higher tensile strength for NaOH degummed fibers over the fibers obtained by degumming in hot distilled water. Both types of degummed silks fibers are usable for cultivation of human osteosarcoma cells what indicates their prospective biomedical application.

Afternoon, June 26, 2015 (Friday)

SESSION–3 (ICBBS&ICNFS 2015)
Session Chair: Prof. Haja Kadarmideen
Time: 16:20-18:40 (11 presentations)
Venue: Chatuchak Meeting Room

B1002 (ICBBS 2015)

Trend Analysis of HIV Infection Rates amongst Generation X Black African Women in South Africa during the Period 2001 to 2010

Wilbert Sibanda and Philip D. Pretorius
North-West University, Vaal Triangle campus, South Africa

Abstract—This study investigated the changes in HIV and syphilis prevalence rates amongst Generation (Gen) X black African women attending antenatal clinics across the nine provinces of the Republic of South during the years 2001 to 2010. Gen X women were defined to be individuals born during the period 1961 to 1981. In South Africa, the Gen X period was characterized by numerous social protests, academic boycotts and Soweto student uprisings of 1976. A democratic government was elected in 1994, resulting in major changes in social and economic circumstances of most South Africans. The new government promoted free education resulting in a major change in the demographics of the country's public service. Amongst the new working and middle class, sociological literature reports a remarkable increase in materialism and consumerism. However, the social privileges of a few existed hand-in-glove with unprecedented levels of youth unemployment. Youths from impoverished backgrounds found it increasingly difficult to attain a descent education. Most of these youths grew in homes characterized by physical violence and emotional abuse. In view of the widely held tenet that a generation is one of the fundamental social classifications in a society, this research aims to examine trends in HIV and Syphilis amongst Generation X black African women attending antenatal clinics in South Africa.

Afternoon, June 26, 2015 (Friday)

SESSION–3 (ICBBS&ICNFS 2015)
Session Chair: Prof. Haja Kadarmideen
Time: 16:20-18:40 (11 presentations)
Venue: Chatuchak Meeting Room

B1003 (ICBBS 2015)

Systems Genetics of Complex Diseases Using RNA-Sequencing Methods
Gianluca Mazzoni, Lisette JA Kogelman, Prashanth Suravajhala, **Haja N. Kadarmideen**
University of Copenhagen, Denmark

Abstract—Next generation sequencing technologies have enabled the generation of huge quantities of biological data, and nowadays extensive datasets at different 'omics levels have been generated. Systems genetics is a powerful approach that allows to integrate different 'omics level and understand the biological mechanisms behind complex diseases or traits. In the recent past, transcriptomic studies with microarrays have been replaced with the new powerful RNA-seq technologies. This has led to detection of novel gene transcripts, novel regulatory mechanisms, allele specific gene expression and numerous non-coding RNAs (ncRNAs). The integration of transcriptomics data with genomic data in a systems genetics context represents a valuable possibility to go deep into the causal and regulatory mechanisms that generate complex traits and diseases. However RNA-Seq data have to be treated carefully and the choice of the right methodology could have a great impact on the final results. Furthermore the integration of different level is not trivial. Here we give a comprehensive systems genetics overview of the methods and tools for analysis and the integration of RNA-Seq data including ncRNAs. We focused principally on merits and demerits of tools for post mapping quality control, normalization, differential expression analysis, gene network analysis, and integration of different omics data in order to generate a comprehensive guideline to systems genetics analysis using RNA-Seq data.

Afternoon, June 26, 2015 (Friday)

SESSION–3 (ICBBS&ICNFS 2015)
Session Chair: Prof. Haja Kadarmideen
Time: 16:20-18:40 (11 presentations)
Venue: Chatuchak Meeting Room

B3004 (ICBBS 2015)

Robust Control for the Motion Five Fingered Robot Gripper
W. Widhiada, **T. G. T. Nindhia**, N. Budiarsa
University of Udayana, Indonesia

Abstract—The design of multi-fingered robot hands have been one of the major research topics since grasping an object and are crucial functionalities of several robotic systems, including industrial robots, mobile robots and service robots. The author considers the problem of model-based control for a multi-fingered robot hand. This paper introduces an integrated design process for the design of the five fingered gripper suitable for dexterous motion by using simulation and experiment of prototype. To facilitate an integrated design of gripper finger, the author applied Matlab/Simulink (SimMechanics) and Inventor software packages, respectively. Multi-closed loop with the robust control of PID is applied to control both kinematics and dynamics motions of the five fingered gripper systems. To obtain the optimal trajectory planning approach using motion reference and integration of planning control for virtual actuators at each joint of finger gripper system. The analysis of experiment result shows the trajectory angular position of each finger link moves towards quickly to achieve the trajectory angle target with small error signal and overshoot.

Afternoon, June 26, 2015 (Friday)

SESSION–3 (ICBBS&ICNFS 2015)
Session Chair: Prof. Haja Kadarmideen
Time: 16:20-18:40 (11 presentations)
Venue: Chatuchak Meeting Room

N1003 (ICNFS 2015)

Effect of Fish Oil on Clinical Outcomes in Recent Onset Rheumatoid Arthritis

Michael James, Susanna Proudman, Robert Metcalf, Llewellyn Spargo, Thomas Sullivan, and Les Cleland
Royal Adelaide Hospital

Abstract—Objectives: To examine the effect of a fish oil intervention on disease control and disease-modifying anti-rheumatic drug effectiveness in recent onset rheumatoid arthritis (RA) with follow-up analysis of the relationships between plasma levels of the omega-3 fatty acids, EPA and DHA, and the same outcome measures.
Methods: We conducted a double-blind randomised controlled trial of high dose fish oil versus control in recent onset RA treated with a rules-based drug algorithm, responsive to disease activity and toxicity. This allowed drug use (in fact failure of anti-rheumatic drugs to achieve disease control) to be a primary outcome measure along with remission. As well as the analysis by treatment group, relationships between plasma EPA and DHA and the primary outcomes were examined.
Results: Compared to the control group, the fish oil group had an increased rate of remission (HR 2.09, 95%CI 1.02-4.30, p=0.04) and decreased rate of anti-rheumatic drug failure (RR=0.24, 95%CI 0.10-0.54, p=0006). Plasma EPA was favourably associated with time to remission (HR 1.12, 95%CI 1.02-1.23, p=0.017) and time to anti-rheumatic drug failure (HR=0.85, 95%CI 0.72-0.99, p=0.047). The Hazard Ratios for DHA and the same outcomes were similar to those for EPA but not statistically significant.
Conclusions: A randomised controlled trial demonstrated increased remission and decreased anti-rheumatic drug failure in the fish oil group. Follow-up analysis using blood omega-3 fatty acids showed that these biomarkers of omega-3 status have the potential to predict clinical outcomes relevant to standard drug treatment of RA patients. It is concluded that anti-inflammatory doses of fish oil can provide adjunctive therapy for standard drug treatment of recent onset RA.

Afternoon, June 26, 2015 (Friday)

SESSION–3 (ICBBS&ICNFS 2015)
Session Chair: Prof. Haja Kadarmideen
Time: 16:20-18:40 (11 presentations)
Venue: Chatuchak Meeting Room

N3002 (ICNFS 2015)

In utero Exposure of Fisher 344 Rats to Low Doses of Zeranol via the Maternal Diet Produces Dose-Dependent Effects on Sexual Development and Reproduction

Christal A. Lewis, Michael A. Gallo, Kenneth Reuhl, and **Helmut Zarbl**
Rutgers, The State University of New Jersey

Abstract—Zeranol is a semi-synthetic derivative of zearalenone, a mycotoxin produced by Fusarium fungi that contaminate grain. Zeranol is a potent mycoestrogen with activity comparable to that of diethylstilbestrol, a synthetic estrogen previously used to prevent miscarriages in at risk women. Diethylstilbestrol was also used in livestock for many years to enhance meat production. Zeranol was developed as a replacement for diethylstilbestrol after human studies demonstrated that children and grandchildren of pregnant mothers who took the drug had an increased risk of cancer. Although zeranol has been used for more than 40 years in the USA and many other countries to enhance meat production and quality, its use is banned in the European Union and many Asian countries. Most human exposures to zeranol occurs result from consumption of contaminated meat and grain. Previous studies showed that both zearaleneone and zeranol are efficiently absorbed from the diet and are readily transported cross the placenta, resulting in significant exposure of the fetus. However, the effects of *in utero* exposures at low-doses have not been studied in offspring or in subsequent generations. The long-term goal of our research is to determine if *in utero* exposure to zeranol at doses that approximate the Allowable Daily Intake (ADI) of1.25 g/kg/day set by the US Food and Drug Administration has adverse, transgenerational effects on reproduction, sexual development and risk of cancer. In the present study, we treated pregnant Fisher F-344 with doses of zeranol (0, 1.25, 3.75, 7.5, 15 or 25 µg/kg/day) that ranged from the approximated human ADI to doses exceeding the ADI by 20-fold. Dams were exposed daily starting on gestational day 7 through weaning. Dose-dependent effects of zeranol on dam body weight, litter sizes, gender ratio and progeny body weights were assessed in at least three independent litters. The results indicated that developmental exposure to low-levels of zeranol induced significant effects on reproduction and sexual development.

18:40	**Dinner**
Hotel Restaurant	

Conferences ending, thanks!

Conference Venue

Hotel ibis Bangkok Riverside

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Tips: The organizer won't provide accommodation. It is suggested that early reservation to be made.

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Sales Manager: Ms. Orawan (orawan.vicharnarong@accor.com)

Notice:

For booking the hotel Ibis Bangkok Riverside, please contact VICHARNARONG Orawan (orawan.vicharnarong@accor.com) and tell him that you are the participants of APCBEES, then you can get a discounted price.

APCBEES Forthcoming Conferences

http://www.cbees.org/events/

CONFERENCE INFORMATION		PUBLICATION
Sep. 05-06, 2015, Shanghai, China		
ICBEE 2015	2015 7th International Conference on Chemical, Biological and Environmental Engineering (ICBEE 2015) http://www.icbee.org/	Volume of International Proceedings of Chemical, Biological and Environmental Engineering Journal (IPCBEE, ISSN: 2010-4618)
ICECS 2015	2015 8th International Conference on Environmental and Computer Science (ICECS 2015) http://www.icecs.org/	International Journal of Computer Theory and Engineering (IJCTE, ISSN: 1793-8201)
ICBEM 2015	2015 5th International Conference on Biotechnology and Environment Management (ICBEM 2015) http://www.icbem.org/	International Journal of Bioscience, Biochemistry and Bioinformatics (IJBBB, ISSN: 2010-3638) Journal of Environmental Science and Development (IJESD, ISSN:2010-0264)
Oct. 11-12, 2015, New York, USA		
ICSEA 2015	2015 3rd International Conference on Sustainable Environment and Agriculture (ICSEA 2015) http://www.icsea.org/	Journal of Environmental Science and Development (IJESD, ISSN:2010-0264) or Journal of Advanced Agricultural Technologies (JOAAT ISSN: 2301-3737)
ICFN 2015	2015 International Conference on Food and Nutrition (ICFN 2015) http://www.icfn.org/	International Journal of Food Engineering (IJFE)
ICBEC 2015	2015 6th International Conference on Biology, Environment and Chemistry (ICBEC 2015) http://www.icbec.org/	Volume of International Proceedings of Chemical, Biological and Environmental Engineering Journal (IPCBEE, ISSN: 2010-4618)
Oct. 23-25, 2015, Beijing, China		
ICAFS 2015	2015 2nd International Conference on Advances in Food Sciences (ICAFS 2015) http://www.icafs.org/	Volume of International Proceedings of Chemical, Biological and Environmental Engineering Journal (IPCBEE, ISSN: 2010-4618)
ICEBS 2015	2015 5th International Conference on Environment and BioScience (ICEBS 2015) http://www.icebs.org/	International Journal of Pharma Medicine and Biological Sciences (IJPMBS, ISSN: 2278-5221)
ICAAS 2015	2015 6th International Conference on Agriculture and Animal Science (ICAAS 2015) http://www.icaas.net/	Journal of Advanced Agricultural Technologies (JOAAT, ISSN:2301-3737)
Nov. 09-10, 2015, Jinju, South Korea		
ICCSE 2015	2015 4th International Conference on Chemical Science and Engineering (ICCSE 2015) http://www.iccse.org/	International Journal of Chemical Engineering and Applications (IJCEA, ISSN:2010-0221)

ICABT 2015	2015 3rd International Conference on Agriculture and Biotechnology (ICABT 2015) http://www.icabt.org/	Journal of Advanced Agricultural Technologies (JOAAT, ISSN:2301-3737) Or International Journal of Life Sciences Biotechnology and Pharma Research (IJLBPR, ISSN:2250-3137)
ICESB 2015	2015 5th International Conference on Environment Science and Biotechnology (ICESB 2015) http://www.icesb.org/	the Volume of Journal (IPCBEE, ISSN: 2010-4618)
Nov. 19-21, 2015, Auckland, New Zealand		
ICCEN 2015	2015 4th International Conference on Civil Engineering (ICCEN 2015) http://www.iccen.org/	International Journal of Engineering and Technology (IJET, ISSN:1793-8236)
ICFSH 2015	2015 2nd International Conference on Food Sciences and Health (ICFSH 2015) http://www.icfsh.org/	International Journal of Food Engineering (IJFE ISSN: 2301-3664) or Journal of Advanced Agricultural Technologies (JOAAT ISSN: 2301-3737)
ICECB 2015	2015 4th International Conference on Environment, Chemistry and Biology (ICECB 2015) http://www.icecb.org/	Volume of International Proceedings of Chemical, Biological and Environmental Engineering Journal (IPCBEE, ISSN: 2010-4618)
Dec. 05-06, 2015, Dubai, UAE		
ICFAS 2015	2015 3rd International Conference on Food and Agricultural Sciences (ICFAS 2015) http://www.icfas.org/	Journal of Advanced Agricultural Technologies (JOAAT, ISSN:2301-3737) Or International Journal of Food Engineering (IJFE，ISSN: 2301-3664)
ICEPP 2015	2015 3rd International Conference on Environment Pollution and Prevention (ICEPP 2015) http://www.icepp.org/	The Journal of Environmental Science and Development (IJESD, ISSN:2010-0264)
ICMEB 2015	2015 3rd International Conference on Medical, Environmental and Bio-technology (ICMEB 2015) http://www.icmeb.org/	International Journal of Pharma Medicine and Biological Sciences (IJPMBS, ISSN: 2278-5221) Or Journal of Environmental Science and Development (IJESD, ISSN:2010-0264)
Dec. 25-26, 2015, Phuket, Thailand		
ICESR 2015	2015 2nd International Conference on Environmental Systems Research(ICESR 2015) http://www.icesr.org/	the Volume of Journal (IPCBEE, ISSN: 2010-4618)
ICAMC 2015	2015 International Conference on Architecture, Materials and Construction (ICAMC 2015) http://www.icamc.org/	International Journal of Structural and Civil Engineering Research (IJSCER, ISSN: 2319-6009) Or International Journal of Materials, Mechanics and Manufacturing (IJMMM, ISSN: 1793-8198)
ICSAT 2015	2015 International Conference on Sustainable Agriculture Technologies (ICSAT 2015) http://www.icsat.org/	Journal of Advanced Agricultural Technologies (JOAAT, ISSN:2301-3737)

Jan. 12-13, 2016, Penang, Malaysia		
ICEBE 2016	2016 2nd International Conference on Environment and Bio-Engineering (ICEBE 2016) http://www.icebe.org/	Journal of Environmental Science and Development (IJESD, ISSN:2010-0264) Or International Journal of Bioscience, Biochemistry and Bioinformatics (IJBBB, ISSN: 2010-3638)
ICGCE 2016	2016 3rd International Conference on Geological and Civil Engineering (ICGCE 2016) http://www.icgce.org/	International Journal of Structural and Civil Engineering Research (IJSCER, ISSN: 2319-6009)
ICPPE 2016	2016 3rd International Conference on Petroleum and Petrochemical Engineering (ICPPE 2016) http://www.icppe.org/	International Journal of Chemical Engineering and Applications (IJCEA ISSN: 2010-0221)
Jan. 23-25, 2016, Pattaya, Thailand		
ICFEE 2016	2016 6th International Conference on Future Environment and Energy (ICFEE 2016) http://www.icfee.org/	Journal of Clean Energy Technologies (JOCET, ISSN: 1793-821X) Or Journal of Environmental Science and Development (IJESD, ISSN:2010-0264) Or International Journal of Structural and Civil Engineering Research (IJSCER, ISSN: 2319-6009),
ICBBB 2016	2016 6th International Conference on Bioscience, Biochemistry and Bioinformatics (ICBBB 2016) http://www.icbbb.org/	International Journal of Life Sciences Biotechnology and Pharma Research (IJLBPR, ISSN:2250-3137) Or International Journal of Bioscience, Biochemistry and Bioinformatics (IJBBB, ISSN: 2010-3638) Or International Journal of Pharma Medicine and Biological Sciences (IJPMBS, ISSN: 2278-5221)
ICCCH 2016	2016 5th International Conference on Climate Change and Humanity (ICCCH 2016) http://www.iccch.org/	International Proceedings of Chemical, Biological and Environmental Engineering (IPCBEE)

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Note

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Conference Name and Paper ID					
Full Name					
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Area of Research					
Affiliation					
Please indicate your overall satisfaction with this conference with "√"					
	Very Satisfied	Somewhat Satisfied	Neutral	Somewhat Dissatisfied	Very Dissatisfied
Conference Content					
Presentation and Paper Value					
Registration Process					
Venue					
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Where did you get the conference information?					
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Did the conference fulfill your reason for attending?	Yes – Absolutely □ Yes- But not to my full extent □ No □ (If "No", please tell us the main reason)				

Would you please list the top 3 to 5 universities in your city?	
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Any Other Suggestions/ Comments	

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