CONFERENCE ABSTRACT

2019 4th International Conference on Pharmacy and Pharmaceutical Science (ICPPS 2019)

March 28-30, 2019

Global Front, Surugadai Campus, Meiji University, Tokyo, Japan





Published and Indexed by



http://www.icpps.org/

Table of Contents

ICPPS 2019 Conference Introduction	3
Presentation Instruction	4
Hornored Speaker Introduction	5
Detailed Schedule for Conference	13
Parallel Sessions Index	16
Schedule of Sessions	18
Poster Session 1	45
Poster Session 2	99
Listener Name List	108
Conference Venue	111
Academic Visit & Tour	113
Note	115
Feedback Information	119

ICPPS 2019 Conference Introduction

Welcome to 2019 4th International Conference on Pharmacy and Pharmaceutical Science (ICPPS 2019) which is sponsored by Hong Kong Chemical, Biological & Environmental Engineering Society (CBEES) and Biology and Bioinformatics (BBS). The aim and objective of the 2019 4th International Conference on Pharmacy and Pharmaceutical Science (ICPPS 2019) 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 pharmacy and pharmaceutical science. This conference provides opportunities for the delegates to exchange new ideas and application experiences face to face, to establish business or research relations and to find global partners for future collaboration.

Papers will be published in one of the following journals:



Asian J Pharm Clin Res (AJPCR, Print ISSN- 0974-2441, Online ISSN-2455-3891), indexed by Google Scholar, Elsevier, EBSCO, EMBASE, SCI mago (SJR), CNKI, CAS, CASSI (American Chemical Society), Directory of Open Access Journal (DOAJ), Index Copernicus, ICAAP, Scientific commons, PSOAR, Open-J-Gate, Indian Citation Index (ICI), Index Medicus for WHO South-East Asia (IMSEAR), OAI, LOCKKS, OCLC (World Digital Collection Gateway), UIUC. Impact- 0.40 (SCImago, SJR 2016).



International Journal of Pharma Medicine and Biological Sciences (IJPMBS, ISSN: 2278-5221), indexed by Embase; ProQuest; International Committee of Medical Journal Editors(ICMJE); Health sciences library(NYU); HINARI Access to Research in Health Programme; etc.

Conference website and email: http://www.icpps.org/; icpps@cbees.net

Presentation Instruction

Instruction for Oral Presentation

Devices Provided by the Conference Organizer:

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

Materials Provided by the Presenters:

PowerPoint or PDF Files (Files should be copied to the Conference laptop at the beginning of each Session.)

Duration of each Presentation (Tentatively):

Keynote Speech: about **35** Minutes of Presentation and **5** Minutes of Question and Answer Plenary Speech: about **35** Minutes of Presentation and **5** Minutes of Question and Answer Invited Speech: about **15** Minutes of Presentation and **5** Minutes of Question and Answer Oral Presentation: about **12** Minutes of Presentation and **3** Minutes of Question and Answer

Instruction for Poster Presentation

Materials Provided by the Conference Organizer:

The place to put poster

Materials Provided by the Presenters:

Home-Made Posters: Submit the poster to the staff when signing in Maximum poster size is A1 Load Capacity: Holds up to 0.5 kg

Best Presentation Award

One Best Oral Presentation and One Best Poster Presentation will be selected from each presentation session, and the Certificate for Best Presentation will be awarded at the end of each session on March 28 and 29, 2019.

Dress Code

Please wear formal clothes or national representative of clothing.

Keynote Speaker Introduction

Keynote Speaker I



Prof. Carmine Pappalettere Politecnico di Bari, Italy

Carmine Pappalettere is full professor of "Mechanical Engineering and Experimental Mechanics", Dipartimento di Meccanica, Matematica e Management – DMMM (Mechanical Design Division), Politecnico di Bari (PoliBa). He got the Master degree in Mechanical Engineering, Università degli Studi di Bari in 1975 and worked as Head of the Dept. (2000-2004), Coordinator of Ph.D. courses in Mechanical and Biomechanical Design (2004-2009). He teaches classes such as Aerospace design, Design of machines, Design of ground vehicles, Experimental stress analysis. He published more than 400 papers in international journals, edited books and conferences proceedings. 178 papers are counted on Scopus, with a total number of 1656 citations for a h-index of 24.

Topic: "Optical Methods Applied to Bioengineering: Examples of Applications at Politecnico di Bari"

Abstract—Optical Methods constitute a broad class of experimental techniques widely used in many fields of experimental mechanics to measure displacements and/or strains and/or stresses. Independently of the specific working principle of each technique (Moir & Speckle Interferometry, Photoelasticity etc.) all of them share some common features: they are not contact, not invasive, high resolution and high sensitivity techniques, depending from the particular application. All these aspects make these methods appealing for applications in bioengineering problems. This paper will present on overview of successful applications of optical methods to several different problems as performed during more than 40 years of research on this topic in the Experimental Mechanics Laboratory of Politecnico di Bari. The most recent results will be in particular showed, such as the application of the fringe projection methods to endoral 3D teeth reconstruction, the mechanical characterization of umbilical cord by moir é methods, the mechanical behavior of bovine bones by means of PS-ESPI (Phase Shifting Electronic Speckle Pattern Interferometry).

Keynote Speaker II



Prof. Chiharu Ishii Hosei University, Japan

Chiharu Ishii received his PhD in Mechanical Engineering from Sophia University, Japan in 1997. From 2002 to 2009, he was an Assistant Professor with Kogakuin University. Currently, he is a Professor at the Department of Mechanical Engineering, Hosei University, Japan. He has received several awards such as The Best Paper Award in the area of Tactile and Haptic Interfaces at the 4th International Conference on Human System Interaction (HSI 2011); Best Paper Award at the 1st International Conference on Computer Science, Electronics and Instrumentation (ICCSE 2012); Best Presentation Award at the International Conference on Soft Computing & Machine Intelligence (ISCMI 2017). He is currently a member of IEEE, SICE, JSME, RSJ, IEEJ and JSCAS. His research interests are in medical robotics, assistive technology and robust control.

Topic: "Current Trends on Development of Medical and Assistive Devices"

Abstract—Japan is facing a serious problem of population aging. The percentage of elderly people of age 65 years or over (aging ratio) was 27.3% in 2017, and it is forecasted that the aging ratio becomes 33.4% in 2035. In this way, Japan has reached a super-aged society which no country in the world has experienced. Becoming the super-aged society, it is necessary to respond to the demand of medical care and nursing of elderly people. Therefore, challenge for development of medical and assistive devices through an application of the Robot Technology (RT) has been promoted. In this talk, some medical and assistive devices developed in my laboratory are introduced.

The robotic surgical system for single-port-surgery termed "HASROSS", the lightweight power assist suit termed "Cool Vest" to reduce caregiver's lumbar burden, the ultra-lightweight power assist suit termed "Aero back" to support workers who are working in half-sitting posture, control system of the electric wheelchair based on user's biosignals such as EMG, EOG and EEG, and sensory feedback device for myoelectric prosthetic hand, are explained.

Keynote Speaker III



Prof. Tjokorda Gde Tirta Nindhia Udayana University, Indonesia

Tjokorda Gde Tirta Nindhia received Doctor Degree from Gadjah Mada University (UGM) Yogyakarta, Indonesia on August 2003, with major field of study was Material Engineering. He participated in various international research collaborations such as with Muroran Institute of Technology Japan (2004), Toyohashi University of Technology Japan (2006), Leoben Mining University Austria (2008-2009), Technical University of Vienna Austria (2010), Institute Chemical technology of Prague Czech Republic (2012-now) and very recently with Michigan State University (MSU) and University of Hawaii in the USA under Fulbright Scholarship. His current job is as Full Professor in the field of Material Engineering at Engineering Faculty, Udayana University, Jimbaran, Bali, Indonesia. His research interest covers subjects such as, Biomedical Engineering, biosensor, biomaterial, waste recycle, failure analyses, advance ceramic, metallurgy, composite, renewable energy, and environmental friendly manufacturing.Speech Title: "STAT3 as a Molecular Target for Cancer Therapy".

Topic: "Biocompatibility and Tensile Strength of Natural Silk Fibers: *Bombyx mori, Cricula trifenestrata* and *Attacus atlas*"

Abstract—Three types of silk fiber obtained from silkworm cocoon from 3 diferent species of silkworm cocoon namely: Bombix mory, Cricula trifenestrata and Attacus atlas were investigated in this research. The biocompatibility and tensile strength will be investigate and compared for future consideration in application as biomaterial. Bombyx mori silk is well known and obtained from domesticated silkworm cocoon of Bombyx mori. It is biocompatible as biomaterial and has been used commercially as sutures in biomedical. Bombyx mori silkworm eat only one (monophagous) type of leaf (leaf of mulberry plant). Both Cricula trifenestrata and Attacus atlas are wild silkmoth and fiber can be obtained from its cocoon. Cricula trifenestrata and Attacus atlas are wild (non domesticated) and eat variety of leaf plant in their development. It can be concluded that the silk obtained from cocoon of Cricula trifenestrata has best biocompatibility properties followed by Attacus atlas and after that Bombyx mori. The highest tensile test is found for Bombix mori (230 MPa) followed by Attacus atlas (101 MPa) and the lowest is Cricula trifenestrata (162 MPa).

Plenary Speaker Introduction

Plenary Speaker I



Prof. Robert Borris Tianjin University, China

Following completion of a BS degree (Biology) from Loyola University in Chicago, Robert P. Borris earned his BS (Pharmacy) and PhD (Pharmacognosy) degrees at the University of Illinois Medical Center in Chicago. He then pursued postdoctoral studies in organic chemistry at the University of Zurich (Switzerland). Returning to the United States, he served as an Assistant Professor of Pharmacognosy at Rutgers University before moving to the pharmaceutical industry where he established and headed phytochemical research in the New Drug Discovery programs at Merck Research Laboratories. Retiring after a long career at Merck, he became Vice President for Botanical Science and Regulation at the Council for Responsible Nutrition (Washington DC) before moving to the University of Hawaii at Hilo as Associate Dean for Research at the newly formed Daniel K. Inouye College of Pharmacy. After seven years in Hawaii, he moved to his current position of Professor and Vice Dean (Research and Academic Programs) at the School of Pharmaceutical Science and Technology, Health Sciences Platform, at Tianjin University. Throughout his career, his passion for "Discovery" in general and "Natural Products Chemistry" in particular have enabled him to become President of the American Society of Pharmacognosy (1997-8) and a Fellow of the Linnean Society of London. Research in the Borris Laboratory focuses on the isolation and structure elucidation of naturally occurring compounds with biological activity and/or taxonomic significance, including the general theme of exploring the disconnect between traditional medicine and Western medical science.

Topic: "Back to the Future: Exploring the Disconnect Between Traditional Chinese Medicine and Western Medical Science"

Abstract—The World Health Organization (WHO) has stated that the majority of people worldwide rely on some form of traditional medicine to address their medical needs. Some of these traditional practices, including Traditional Chinese Medicine (TCM) for example, have been used, documented and refined over the space of thousands of years. Efficacy is well documented and often undeniable. Nonetheless, many published and unpublished investigations in Western laboratories have failed to detect and/or isolate the chemical principles that are responsible for the observed biological activities in man. The inability of

Western science to 'validate' the efficacy of TCM in the laboratory has contributed to the skepticism about traditional medicine that is prevalent throughout much of the "Developed World", severely limiting the acceptance of TCM outside of China. The present study explores some potential reasons for the apparent disconnect between the observed clinical efficacy of TCM and the disappointing results in laboratory studies.

Plenary Speaker II



Assoc. Prof. Keimei Oh Akita Prefectural University, Japan

Dr. Keimei Oh was born in Shanghai, China. He received B.Sc. in the Department of Chemistry from Shanghai University and Ph.D. degree from the Graduate School of Agricultural and Life Sciences, The University of Tokyo in 1997. After working at RIKEN as a Special Postdoctoral Fellow, he joined the Department of Biotechnology faculty at Akita Prefectural University in 1999. In 2003, he worked as a visiting scientist at US Department of Energy, Plant Research Laboratory in Michigan State University. He was appointed as Associate Professor at Akita Prefectural University in 2007. Currently, he is working in the field of design and synthesis biological active chemicals targeting plant hormone biosynthesis and signaling transduction pathways. He received numerous awards including the Society Award of the Japanese Society for Chemical Regulation of Plants.

Topic: "A Chemical Genetics Strategy That Identifies Small Molecules Which Induce the Triple Response in *Arabidopsis*"

Abstract—Chemical genetics is an effective way to discover new biological active compounds. The process is based on the phenotypic screening of compound libraries through searching chemicals that are able to induce phenotypes of interests. In the present study, report the discovery of new compound that induce "triple response" in *Arabidopsis*Among 9600 compound, we found a compound with pyrazole moiety (EH-1) exhibited promising activity to induce triple response in *Arabidopsis* seeding. To determine the action mechanism of EH-1, insensitive mutants of ethylene signaling were used. Also, we carried out RNA sequencing (RNA-seq) analysis.

Acknowledgement: This research is supported by JSPS KAKENHI Grant Number 16K01936 to Keimei Oh and is partially supported by the Platform Project for Supporting in Drug Discovery and Life Science Research (Platform for Drug Discovery, Informatics, and Structural Life Science) from Japan Agency for Medical Research and Development (AMED).

Invited Speaker Introduction

Invited Speaker I



Assoc. Prof. Md. Altaf-Ul-Amin Nara Institute of Science and Technology, Japan

Md. Altaf-Ul-Amin received B.Sc. degree in Electrical and Electronic Engineering from Bangladesh University of Engineering and Technology (BUET), Dhaka, M.Sc. degree in Electrical, Electronic and Systems Engineering from Universiti Kebangsaan Malaysia (UKM) and PhD degree from Nara Institute of Science and Technology (NAIST), Japan. He received the best student paper award in the IEEE 10th Asian Test Symposium. Also, he received two other best paper awards as a co-author of journal articles. He previously worked in several universities in Bangladesh, Malaysia and Japan. Currently he is working as an associate professor in Computational Systems Biology Lab of NAIST. He is conducting research on Network Biology, Systems Biology, Cheminformatics and Biological Databases. He published around 60 peer reviewed papers in international journals and conference proceedings. Google scholar citation index of his publications is currently more than 4700.

Topic: "Applications of KNApSAcK Database and DPClus Algorithm: Plants to Metabolites to Target Proteins in the Context of Jamu Medicines and IBD Gene Prediction"

Abstract—Initially, we developed KNApSAcK as a species-metabolite relational database and subsequently, inspired by its popularity we extended it to KNApSAcK family databases by adding different types of omics data together with data regarding edible plants and traditional medicines mainly focusing human health care and ecology. Previously we also developed graph clustering algorithms DPClus and DPClusO, which we and many other researchers applied to analysis of versatile omics data. In the present talk, first, I will briefly focus on the KNApSAcK database and the DPClus algorithm. Then I will discuss a new method to predict the relation between plant and disease using network analysis and supervised clustering based on Jamu formulas. Next, I will extend the talk on the analysis for predicting Jamu efficacy based on metabolite composition and identifying important metabolites. I will then focus on prediction of target proteins by Jamu metabolites. Finally, I will discuss application of DPClusO algorithm in finding inflammatory bowel disease related genes.

Invited Speaker II



Assoc. Prof. Yusnita Rifai Hasanuddin University, Indonesia

Yusnita Rifai has received master degree in Faculty of Medicine Flinders University (Australia) and then graduated with doctoral degree from Chiba University (Japan). She was honored of Endeavour Post-Doctoral Fellowship 2014 to continue her post-doctoral study at the University of Newcastle Australia. Her research interests lie in the area of drug discovery, including drug synthesis. There are some of research in medicinal chemistry that obtained recognitions, one of them is from Timmerman Award in 2003. For her new research, she succeeds to receive recognition from National L'Oréal For Woman in Science Fellowship 2013. She had published several international journals while delivering her presentation in various annual meeting of Pharmaceutical Society in the related field. She gained recognition from Grant Sinas Incentive from The Ministry of Research and Technology of Republic of Indonesia (2012-2013), Grant Drug Discovery from the Ministry of Research and Technology of Republic of Indonesia (2014), Grant Ipteks and Competence from Ministry of Research and Technology of Republic of Indonesia (2016-2018).

Topic: "Direct Binding Site Studies of Glioma Receptors on Lignan, Flavonoid and Alkaloid Constituents"

Abstract—Glioma (GLI) has been considered as a promising target for selective cancer therapy. We selected plants with known anticancer activity and performed *in silicoscreening* with 27 alkaloids, 28 lignans and 23 flavonoids against 2GLI as a target. The docking protocols used PLANTS (Protein-Ligand Ant System) software and evaluated parameters were included the interaction energy and hydrogen bond. A crystal structure of cyclopamine binds to 2GLI was used as the reference structure at the score of root mean square deviation of 1.614 Å. In this study, molecules with the lowest scores indicate the good stability affinity. Evodiamine, saurosporinone, 4-ketopinoresinol, taxiresinol and xanthohumol have a PLANTS® score which close to cyclopamine in both aqueous and non-aqueous environments. Therefore, these compounds are predicted in silico having an affinity identical to the affinity of cyclopamine to the GLI Protein.

Detailed Schedule for Conference

		Venue Arrival Regis	March 28, 2019 (Thursday) : Lounge of Room C5 (17th I tration	F loor) 10:00~17:50
			Afternoon Conference	
		V	Venue: Room C5 (17th Floor))
	13:00~13:05		Opening R Assoc. Prof. Hir Meiji Univers	Remarks oyuki KUDO sity, Japan
	13:05~13:45		Keynote S Prof. Carmine Politecnico di Topic: "Optical Methods Ap Examples of Applications	peech I Pappalettere Bari, Italy pplied to Bioengineering: at Politecnico di Bari"
Day 1	13:45~14:25		Plenary S Prof. Rober Tianjin Univer Topic: "Back to the Future: Between Traditional Chines Medical Science	peech I rt Borris rsity, China Exploring the Disconnect se Medicine and Western
	Venue: Ro	oom 404M	Venue: Room C6	Venue: Room C5
	(4th Floor)		(17th Floor)	(17th Floor)
	Session 1: 14:25~15:55		Session 2: 14:25~15:55	Session 3: 14:25~15:55
	6 presentations		6 presentations	6 presentations
	Detection and Analysis"		and Applied Pharmacy"	and Rehabilitation Medicine"
	Venue: Lounge of Room C5 (17th Floor)			
		15:55~16:20	Coffee Break & Group P	hoto Taking
	Session 4: 1	16:20~17:50	Session 5: 16:20~17:50	Session 6: 16:05~17:50
	6 preser	ntations	6 presentations	7 presentations
	Topic: "B Electr	nomedical onlics"	Topic: "Medicinal Botany and Chinese Pharmacy"	Topic: "Molecular Biology and Cytobiology"
	Poster S	ession 1: 14:25	~17:50 Venue: Lounge of	Room C5 (17th Floor)

		March 2	9, 2019 (Friday	y) 09:30~18:00
	Regis	stration	Venu	e: Lounge of Room C5 (17th Floor)
	Morning Conference Venue: Global Hall (1st Floor)			
	00.30.00.35			Opening Remarks Assoc. Prof. Hiroyuki KUDO
	09.30~09.33			Meiji University, Japan
				Keynote Speech II
	09.35~10.15			Prof. Chiharu Ishii Hosei University Japan
	07.55*10.15	2	Topic: "Curr	rent Trends on Development of Medical and
				Assistive Devices"
	10:15~10:40	Coffee	Break & Grou	p Photo Taking (Global Front, 1st Floor)
			_	Keynote Speech III
		96	Р	rof. Tjokorda Gde Tirta Nindhia
	10:40~11:20		Topic: "Bioc	ompatibility and Tensile Strength of Natural
		Silk Fibers: Bo		ombyx mori. Cricula trifenestrata and Attacus
				atlas"
Day 2		Plenary Speech II		
4		Assoc. Prof. Keimei Oh Akita Prefectural University, Japan		Assoc. Prof. Keimei Oh
	11:20~12:00			kita Prefectural University, Japan
			Topic: A Che Molecul	es Which Induce the Triple Response in
		Arabidopsis"		Arabidopsis"
	Lunch	12:00~13:00	Vei	nue: Lounge of Room C5 (17th Floor)
	Afternoon Conference			
	13:00~13:20			13:00~13:20
	Venue: Room C5 (17th Floor)		th Floor)	Venue: Room C6 (17th Floor)
	Invited Speech I		I	Invited Speech II
	Assoc. Prof. Md. Altaf-Ul-Amin		-Ul-Amin	Assoc. Prof. Yusnita Rifai
	Nara Institute of Science and		nce and	Hasanuddin University, Indonesia
	Technology, Japan		an XNA a SA a K	Topic: "Direct Binding Site Studies of
	I opic: "Applications of KNApSAcK		NAPSACK	Guoma Receptors on Lignan, Flavonoid and
	to Metabolite	s to Target P	roteins in the	Aikaioid Colistituellis
	Context of Jamu Medicines and IBD		nes and IBD	
	Ge	ene Prediction	n"	

	Venue: Room C5 (17th Floor)	Venue: Room C6 (17th Floor)	Venue: Room 403N (3rd Floor)	Venue: Room 403K (3rd Floor)
	Session 7:	Session 8:	Session 9:	Session 10:
	13:20~15:35	13:20~15:35	13:20~15:35	13:20~15:35
	9 presentations	9 presentations	9 presentations	9 presentations
	Topic: "Clinical	Topic: "Bone	Topic: "Computer	Topic: "Biomaterials
	Pharmacy and	Tissue Engineering	Aided Diagnosis	and Biochemistry"
	Pharmacology"	and Orthodontics"	Technology and	
Day			Application"	
2		Venue: Lounge of	Room C5 (17th Floor)	
		15:35~16:00	Coffee Break	
	Session 11:	Session 12:	Session 13:	Session 14:
	16:00~18:00	16:00~18:00	16:00~18:00	16:00~18:00
	8 presentations	8 presentations	8 presentations	8 presentations
	Topic:	Topic:	Topic: "Biomedical	Topic: "Botanical
	"Pharmaceutics"	"Microbiology And	Image Processing"	Antimicrobial
		Biochemical		Agents"
		Analysis"		
	Poster Session 2: 13:20~17:30 Venue: Lounge of Room C5 (17th Floor)			
	Dinner 18:	30~20:00 Venu	e: Lounge of Room C5	5 (17th Floor)
	Ma	arch 30, 2019 (Saturd	lay) 09:00~	19:00
		Academic	· Visit & Tour	
Day	08	:50~09:00 Gatheri	ing at Global Front, 1st	Floor
3	09	:00~12:30 City Vi	sit	1001
	12	:30~13:30 Have L	unch in Local Restaura	nt
	13	:30~18:30 Citv Vi	sit	
	18	:30~19:00 Go Bac	ck to Global Front, 1st F	loor

Note: (1) The registration can also be done at any time during the conference.

(2) The organizer doesn't provide accommodation, and we suggest you make an early reservation.

(3) Please arrive at the Conference Room 10 minutes before the session begins to upload PPT into the laptop.

(4) One Best Oral Presentation and Best Poster Presentation will be selected from each session, and the

Certificate for Best Presentation will be awarded at the end of each session on March 28, 2019 and March 29, 2019.

Parallel Sessions Index

March 28, 2019

Session	Time	Venue	Session Topic
Session 1 (P18~P21)	14:25~15:55	Room 404M (4th Floor)	Biomedical Signal Detection and Analysis
T3008-(P	18), T3034-(P19)	, T3014-(P19), T3065-(P20), T30	011-(P20), T3044-(P20)
Session 2 (P22~P25)	14:25~15:55	Room C6 (17th Floor)	Phytochemistry and Applied Pharmacy
T0072-(F	P22), T0001-(P22)	, T1007-(P23), T0038-(P24), T0	104-(P24), T0083-(P25)
Session 3 (P26~P30)	14:25~15:55	Room C5 (17th Floor)	Clinical Medicine and Rehabilitation Medicine
T0049-(P26), T3068-(P27), T3059-(P27), T3061-(P28), T0090-(P28), T2016-(P29)			090-(P28), T2016-(P29)
Session 4 (P31~P34)	16:20~17:50	Room 404M (4th Floor)	Biomedical Electronics
Т3055-(Р	231), T3092-(P32)	, T3062-(P32), T3098-(P33), T30	029-(P33), T0051-(P34)
Session 5 (P35~P39)	16:20~17:50	Room C6 (17th Floor)	Medicinal Botany and Chinese Pharmacy
Т0031-(Р	35), T0059-(P36)	, T0035-(P37), T0106-(P37), T0	073-(P38), T1016-(P38)
Session 6 (P40~P44)	16:05~17:50	Room C5 (17th Floor)	Molecular Biology and Cytobiology
T0052-(P40), T3076-(P40), T0056-(P41), T0053-(P42), T3080-(P42), T0054-(P43), T0040-(P43)			
Poster Session 1 (P45~P54)	14:25~17:50	Lounge of Room C5 (17th Floor)	Biomedical and Pharmaceutical Phytochemistry
T2005-(P	T2005-(P45), T3046-(P45), T3033-(P46), T0045-(P46), T3020-(P47), T0048-(P47),		
T3028-(P48), T0044-(P49), T3042-(P49), T3001-(P50), T3064-(P50), T3066-(P51), T2017 (P51) T0021 (P52) T2024 (P52) T2045 (P52)			

March 29, 2019

Session	Time	Venue	Session Topic
Session 7	13:20~15:35	Room C5 (17th Floor)	Clinical Pharmacy and
(P55~P61) Pharmacolog T1014-(P55), T0084-(P56), T1005-(P56), T0055-(P57), T0023-(P58), T1015-(P56))23-(P58), T1015-(P58),
T0105-(P59), T1010-(P59), T0107-(P60)			

	101			
Session 8 (P62~P66)	13:20~15:35	Room C6 (17th Floor)	Bone Tissue Engineering and Orthodontics	
$\frac{(102 \ 100)}{T3007_{-}(P62) \ T2010_{-}(P62) \ T3060_{-}(P63) \ T3051_{-}(P63) \ T3026_{-}(P64) \ T3024_{-}(P64)}$				
15007 (1	T308	7 (P65) T3054 (P65) T3088 (P	66)	
	1508	/-(105), 15054-(105), 15088-(1	Commuter Aided	
Session 9	12 20 15 25		Computer Alded	
(P67~P71)	13:20~15:35	Room 4031N (3rd Floor)	Diagnosis Technology and	
			Application	
Т3019-(Р	67), T3097-(P67)	, T3079-(P68), T3041-(P68), T3	101-(P69), T3043-(P69),	
	T3075	5-(P70), T3082-(P70), T3037-(P	70)	
Session 10	13.20~15.35	Room 403K (3rd Floor)	Biomaterials and	
(P72~P77)	15.20~15.55	Koom 403K (310 11001)	Biochemistry	
T0064-(P	72), T3094-(P72),	T3049-(P73), T3027-(P74), T20)12-(P74), T3016-(P75),	
	T3053	8-(P75), T3063-(P76), T1011-(P7	76)	
Session 11	1 < 0.0 10 0.0			
(P78~P82)	16:00~18:00	Room C5 (17th Floor)	Pharmaceutics	
T0050-(P78), T0068-(P79), T0079-(P79), T0081-(P80), T0041-(P80), T0067-(P81)				
		T0060-(P81), T0066-(P82)		
Session 12			Microbiology and	
(P83~P87)	16:00~18:00	Room C6 (17th Floor)	Riochemical Analysis	
	83) T2007-(P83)		17-(P85) T2003-(P86)	
12002 (1	05), 12007 (105),	$T_{2018}(P_{86})$ $T_{2038}(P_{87})$	(100), 12003 (100),	
Session 12		13010-(100), 13030-(107)	Biomodical Imaga	
	16:00~18:00	Room 403N (3rd Floor)	Diometrical image	
(P88~P92)			Processing	
T3035-(P	88), T3022-(P88),	13039-(P89), 13030-(P89), 130	J31-(P90), T3085-(P90),	
T3036-(P91), T3090-(P91)				
Session 14	16.00~18.00	Room 403K (3rd Floor)	Botanical Antimicrobial	
(P93~P98)	10.00 10.00	Koom 4031X (314 11001)	Agents	
T0095-(P	93), T0032-(P94),	T0097-(P94), T0020-(P95), T00)28-(P95), T0093-(P96),	
T0043-(P97), T1017-(P97)				
Poster		\mathbf{L} and \mathbf{c} of \mathbf{D} and $\mathbf{C}5$ (174h	Diamadiaal Engineaning	
Session 2	13:20~17:30	Lounge of Room C5 (17th	Biomedical Engineering	
(P99~P107)		Floor)	and Clinical Pharmacy	
T0057-(P99), T0046-(P100), T0019-(P100), T0047-(P101), T0080-(P101), T0100-(P102).				
T0018-(P102), T3005-(P103), T3013-(P103), T3052-(P104), T3083-(P104), T3084-(P105).				
``````````````````````````````````````	T0091-(P106).	T3091-(P106), T0016-(P107). T	0024-(P107)	

# Schedule of Sessions Session 1

**Tips:** The schedule for each presentation is for reference only. In order not to miss your presentation, we strongly suggest that you attend the whole session.

Afternoon, March 28, 2019 (Thursday)

Time: 14:25~15:55

## Venue: Room 404M (4th Floor)

## **Topic: "Biomedical Signal Detection and Analysis"**

T3008	Epileptic Seizure Classification Using Gradient Tree Boosting Classifier
	M. Asjid Tanveer and Ahmad Salman
Presentation I	National University of Sciences and Technology Islamabad, Pakistan
(14:25~14:40)	
	Abstract—Analysis of electroencephalography (EEG) is widely used for the
	diagnosis of epilepsy in which relevant information extraction from EEG
	signals poses great challenge due to noise and interference with various
	environmental factors. This paper proposes a binary classi_cation system
	through which EEG signals are analyzed to distinguish between ictal and
	normal signals. For this purpose discrete wavelet transform (DWT), along
	with gradient boosting is used for classi_cation. Two level, Daubechies
	order 4 wavelet are used to decompose the signal into three sub-bands after
	sub-bands resulting in a 6-dimensional feature vector. We use two
	benchmark datasets in our experimentation i.e. the Bonn's dataset and
	CHB-MIT dataset. We establish our classi er using training samples from
	the Bonn's dataset. Classi cation accuracy of 99.4% is achieved when tested
	on same dataset using di_erent samples. To validate the e_ectiveness and
	better generalization of our system, we crosstest on CHB-MIT dataset which
	yielded accuracy of 96.8%. Achieved performance surpasses previous state
	of the art technologies, giving better classi_cation results than other
	well-known techniques used for seizure classi_cation. Considering low
	feature dimension and hence decreasing complexity, coupled with the high
	performance on both datasets prove the given method to be favourable for
	distinguishing between epileptic and non-epileptic EEG signals.

Session Chair: Assoc. Prof. Hirooki Aoki

T3034	System Design in Determining the Lay Status of Ducks Through Gait
Presentation 2	Analysis
(14.40.14.55)	Hadi H Nograles Angelique Rochelle E Aguilar Jared Miguel T Cacho
(14:40~14:55)	Celine C. Madlangbayan and Karl Darren L. Resurreccion
	Mapua University. Philippines
	Abstract—Compass gait analysis was designed to describe the walking of
	ducks in simplest form and was used to standardize the determination of
	ducks' lay status from its acceleration, bending displacement and downward
	force of the duck's limb. The gait analysis consists of a Personal computer
	(PC), SD card modules, Arduino microcontrollers and Excel for
	computations. The SD card modules with the force pressure, flex bending
	sensor and accelerometer were attached on the body of the ducks, directly underneath their wings. The study investigated how the laving status affects
	the movements mainly based on the gathered numerical data
T3014	Digital Hearing Aid Signal Processing System Using Android Phone
	Yeh-Huann Goha, Yoon-Ket Leea, Mum-Wai Yipa, Kok-Seng Eua, Yann
Presentation 3	Ling Gohb and Kin-Yun Lum
(14:55~15:10)	Tunku Abdul Rahman University College, Malaysia
	Abstract—Objective: The objective of this research is to propose an
	Android-based digital hearing aid signal processing algorithm with
	following key features: 1) regenerated audio match the patient specific
	pattern of hearing loss, 2) noise reduction and 3) provide flexibility to the
	users. Methods: The proposed signal processing algorithm is designed based
	on the specific hearing loss of the hearing disorder patient using inverse
	Fourier Transform, besides noise reduction feature is included in the digital
	algorithm design as well. Proposed digital algorithm has been implemented
	real time condition <b>Besults:</b> Simulation results show that the frequency
	response of the proposed digital bearing aid signal processing algorithm is in
	agreement with the initial theoretical design that was carried out based on
	the hearing impaired patient's audiogram. The proposed algorithm has been
	implemented in the Android-based smartphone and tested in real time.
	Results show that most of the patients are satisfied with the regenerated
	audio quality. According to patients' comments, the regenerated audio is
	clear and the users are allowed to control the volume level. Besides, no
	obvious hearing latency can be detected. Conclusion: Audio signals
	generated by the proposed digital signal processing algorithm show similar
	autio signal frequency response in both theoretical design and Matlab
	results is the amplification levels. The proposed algorithm provides
	flexibility to the users by allowing them to choose the desired amplification
	level. In real time testing, the proposed Android-based digital hearing aid is

	able to reduce noise level from the surrounding and the output processed speech match the patient specific hearing loss
T3065	Design of Embedded System for Electrochemical Immunosensor using NI
	myRIO
Presentation 4	Joel G. Amora and Jocelyn Flore Villaverde
(15:10~15:25)	Mapua University, Philippines
	<i>Abstract</i> —Embedded system is an emerging technology that can be applied to all areas. In this paper, the embedded system is designed to be used for easily interpreting the signals of the electrochemical immunosensor. NI myRIO was used as the key component of the embedded system. LabView was used to design the block diagram of the system. This paper is only limited to the design of the embedded circuits. The signals coming from the electrochemical immunosensor was mimic by inputting low voltage level similar to the output of the immunosensor. Based on the given threshold voltage level the system successfully interpret the presence of disease.
T3011	Identification of EEG-based Music Emotion Using Hybrid COA Features
Presentation 5	and t-SNE <b>Hong He</b> , Wenxiu Zhao and Ken'ichi Fujimoto
(15:25~15:40)	Shanghai Normal University, China
	<i>Abstract</i> —Emotion recognition based on EEG signals is one of essential research topics in human-computer interface. Music is regarded as an efficient tool to arouse emotions of human being. This work proposed a scheme that automatically identification the emotions elicited by music. Firstly a music EEG measuring experiment of eight subjects was carried out. After filtering and segmentation, we mainly extract hybrid complexity, oscillation and asymmetry features (COA) from EEG signals, which respectively realized by Hjorth feature, higher order crossing (HOC) features and differential asymmetry features. To reduce and visualize high-dimensional feature data of samples, the t-distributed stochastic neighbor embedding (t-SNE) is applied to all samples of every subject. Classification results of SVM, KNN, Bayes, DT and RF show that the hybrid COA features are more efficient than statistic time-domain features, power spectral density (PSD), wavelet features and their combination in music emotion recognition. Moreover, with optimal parameters, music emotion features can be clearly visualized through the reduced COA features obtained by the t_SNE. Sensitivity of subject to the music can be investigated by the separation degree of happy feature data and negative feature data.
T3044	Acquisition of Spectral Signals for Determination of Chronic Disease to
Presentation 6	Syndrome Using Independent Component Analysis Katrina M. Ariones, Mark Albert D. Alquiros, Aesha Camille Canav.
(15:40~15:55)	Camille V. Morales, Analyn N. Yumang, Jose Lazaro and Ericson D. Dimaunahan

## **ICPPS 2019 CONFERENCE ABSTRACT** Map úa University, Philippines Abstract—Medical devices diagnose or monitor internal conditions to aid in early detection, which is a huge help in saving the lives of patients. There are underlying factors that affect a person's body if a disease is present. These diseases may have an impact on the different parameters of the human body. The combination of high and low values of these body parameters may lead to a certain chronic disease. Some examples of chronic diseases include hypertension and metabolic syndrome. In this paper, the researchers were able to obtain the blood pressure reading by getting pulse rate and pulse transit which will be obtained from ATMega328 clock of the Gizduino Mini. The percentage of the body fat can be derived using the principle of bioelectrical impedance analysis wherein an alternating current will flow between two electrodes attached to the surface of the skin to determine its corresponding impedance. The acquired data from the sensors passes through the computational technique of independent component analysis, wherein it separates the data from several sensors. There were 16 test subjects, whose ages are within the range of 55-65 years old. Confusion matrix was used in order to obtain the overall accuracy of the device. The best accuracy value is 1. The researchers obtained an accuracy value of 0.8125. By getting the absolute value of the difference of 1, 0 and the obtained value, it depicts that the obtained value is closer to 1 due to its difference of 0.2 compared to 0 which is 0.8. Hence, the spectral signal acquisition device provided accurate results in comparison with the clinical values.

# Session 2

**Tips:** The schedule for each presentation is for reference only. In order not to miss your presentation, we strongly suggest that you attend the whole session.

Afternoon, March 28, 2019 (Thursday)

# Time: 14:25~15:55

## Venue: Room C6 (17th Floor)

## **Topic: "Phytochemistry and Applied Pharmacy"**

## Session Chair: Prof. Robert Borris

T0072	Specific Standardization of Ficus Carica L. Leaves Extract Green Yordan
	Variety
Presentation I	Aldia Dwi Karina Ningrum, Yandi Syukri and Hady Anshory
(14:25~14:40)	Universitas Islam Indonesia, Indonesia
	<i>Abstract</i> —Specific standardization is a process to ensure that extract have constant parameter values related to the chemical content. The purpose of this study was to find out the results of the assessment of specific parameters of fig ( <i>Ficus carica</i> L.) leaves extract. Determination of fig plants of Green Jordan variety obtained from central Java of Indonesia and extraction using maceration method. Specific parameters test includes plant descriptions, organoleptic tests, and testing of compounds dissolved in certain solvents. The identification's result showed the truth of the type or species of plants used, namely figs.1 Based on organoleptic test obtained thick, dark brown, distinctive smell, and bitter taste of fig leaves extract. The average water solubility results in sample 1 and sample 2 were $34,16 \pm 1,53$ % and $35,41 \pm 1,58$ % respectively. The solubility results in ethanol 96% in sample 1 and sample 2 were $28,16 \pm 0,70$ % and $27,53 \pm 0,71$ % respectively. By the results of Anova test, it is known that both samples did not show a significant difference in results with a value of p > 0,05. In conclusion, fig leaves extract has fulfilled several specific criteria through a series of tests.
T0001	Assessing Brazilian Amaryllidaceae Activity: Acetylcholinesterase,
Presentation 2	Tyrosinase, $\alpha$ -Glucosidase and $\alpha$ -Amylase Inhibition
	Manuel H. Mera, Cristian A. Gasca, João V. D. Gomes, Christopher W.
(14:40~14:55)	Fagg, Pérola O. Magalhæs, Yris M. Fonseca-Bazzo, Jean P. Andrade,
	Cristina Luz Tosta, Marcelo A. de Oliveira, Warley de Souza Borges,
	Claudia M. Jamal, Jaume Bastida and Dâmaris Silveira
	University of Brasilia, Brazil

	Abstract—Amaryllidaceae family have been investigated mainly as a potential source of acetylcholinesterase inhibitors. This study was conducted to evaluate the effect of ethanolic extracts from bulbs of Brazilian Amaryllidaceae against four enzymes: acetylcholinesterase (AChE), tyrosinase (Tyr), $\alpha$ -glucosidase ( $\alpha$ -Glu), and $\alpha$ -amylase ( $\alpha$ -amy). Hymenocallis littoralis, Hippeastrum psittacinum, Habranthus irwinianus, Crinum erubescens, Crinum sp. and Hippeastrum sp., were collected from three different biomes of Brazil: Cerrado, Mata Atlântica, and Amazônia. The extracts were analyzed using CG/MS. Our data suggest that ethanolic extracts from bulbs of Amaryllidaceae showed remarkable AChE and $\alpha$ -Glu inhibitory activities. The extracts of C. erubescens, H. psittacinum, and Crinum sp. inhibited AChE activity in a dose-dependent manner (ICso = 12.56±1.52, 14.27±0.76 and 27.44±1.12 µg/mL, respectively). Moreover, the extract of H. irwinianus showed the most promising inhibitory activity against $\alpha$ -Glu (ICso = 47.71±2.69 µg/mL). The phytochemical screening by CG-MS revealed the presence of bioactive molecules such as alkaloids, steroids, and terpenes, while HPLC analyses showed the presence of gallic acid and derivatives as the main constituents of the ethanolic extracts. These findings expand the attractive therapeutic approach of Amaryllidaceae towards the inhibition of enzymes involved in neurodegenerative diseases and pathological diseases associated with sugar metabolism.
T1007	Anti-Tyrosinase Activity from Various Solvents of Peanut Shell (Arachis Hypogaea L.) Extracts in Vitro
Presentation 3	Risha Fillah Fithria, Mella Dwi Krisdiana, Etika Muslimah, Sarif
(14:55~15:10)	Musyafa and Nining Sugihartini Wahid Hasyim University, Indonesia
	<i>Abstract</i> —Objective: This study aimed to determine in vitro anti-tyrosinase activity from various solvents of peanut shell extracts and to find out if the activity are better than kojic acid which is a conventional compound used as anti-hyperpigmentation agent. Methods: Extraction was done by maseration method with various solvents of ethyl acetate, n-hexane, and 70% ethanol. Extracts were made into the series concentration of 25, 50, and 75 $\mu$ g / ml. Kojic acid with consentration of 50 $\mu$ g / ml used as positive control and 5% DMSO used as negative control. Tyrosinase enzyme will react with L-DOPA (L-3,4-dihydroxyphenilalanine) substrate to produce dopachrome compound. the absorbance of dopachrome read by microplate reader at $\lambda = 492$ nm. If the absorbance read by the microplate reader is low, means that the inhibition power of the peanut shell extract against the tyrosinase enzyme is high. Anti-tyrosinase activity seen by the % inhibition value. The percentage inhibition value was analyzed with Kruskal-Wallis test, followed by Mann-Whitney test, all tests were carried out with a

	confidence level of 95% Results. The mean of percentage inhibition value
	of n-beyane extract ranged from $12.44 \pm 1.66\%$ to $39.82 \pm 1.33\%$ 70% of
	of n-nexate extract ranged from $30.08\pm0.85\%$ to $70.10\pm1.08\%$ other
	ethanor extract ranged from $17.85\pm0.780$ to $60.20\pm0.070$ . Koiio acid has mean
	extract ranged from $17.85 \pm 0.78\%$ to $00.50 \pm 0.97\%$ . Kojic acid has mean
	percentage inhibition value of $78.19\pm1.97\%$ . IC ₅₀ of ethanol, ethyl acetat
	and n-hexane extracts were respectively 40.53 $\mu$ g / ml, 63.49 $\mu$ g / ml, and
	91.95 $\mu$ g / ml. Ethanol extract contains flavonoid, tannin, and saponin.
	Ethyl acetate extract contains flavonoid. Conclusion: All various solvents
	of peanut shell extracts have anti-tyrosinase activity but not better than
	kojic acid. Ethanol extract with concentration of 75 $\mu$ g / ml has the greatest
	anti-tyrosinase activity.
T0038	CYP2D6 Phenotypes Among Javanese and Sundanese Subjects in
Durantation 4	Indonesia
Presentation 4	Pri Iswati Utami, Sugiyanto, Sudibyo Martono and Lukman Hakim
(15:10~15:25)	Universitas Muhammadiyah Purwokerto, Indonesia
(,	
	Abstract—Backgroud: Polymorphism in drug metabolism has been
	recognized for many drugs used clinically or experimentally. Most of the
	study in polymorphism in drug metabolism was associated with the first
	phase reaction catalyzed by cytochrome P450.
	Objective: The objective of this study was to determine CYP2D6
	phenotype in a Javanese and Sundanese healthy subjects in Indonesia.
	Methods: Ninety unrelated healthy Indonesian subjects from Java and
	Sunda were studied. Metoprolol was used as phenotyping substrate. A 100
	mg oral tablet of metoprolol was administered to all the subjects. Urinary
	metoprolol and a hydroxymetoprolol were determined to calculate
	metoprolol metabolic ratio (MP). Determination of metoprolol and its
	metopholita by HDLC method. Desulta: Metoprolol MD varied widely (from
	inetadonice by HPLC method. Results: Metoprotor MR varied widery (from $0.08 \pm 72.75$ ). One methods (1.110/) in the starks are checkfield as mean
	0.08 to 72.75). One subject (1.11%) in the study was classified as poor
	metabolizer, one subject (1.11%) as ultrarapid metabolizer and the
	remaining 88 subjects (97.78%) were classified as extensive metabolizers.
	Conclusion: The frequencies of poor metabolizers for the CYP2D6
	phenotype (1.11%) in the Javanese and Sundanese population is in
	concordance with most results of oxidation metabolizers in other Asian
	populations.
T0104	Utilization of Opioid Analgesics for Cancer Pain in Different Regions of
	China
Presentation 5	Huang Zhiran, Su Xiawen, Diao Yifan and Sun Jing
(15:25~15:40)	Peking Union Medical College, China
(10.20 10.10)	
	<i>Abstract</i> —Objective: This study aims to learn the level and trend of opioid
	analgesics use in different regions of China. Methods: A retrospective
	method was used to analyze the utilization of opioid analysis in
	Morphine Use Density (MUD, daily defined doses of morphine used per
	100,000 population) and its growth rate from 2006 to 2016 in China and 7

	regions of the coutry. Regional needs of opioid analgesics (in morphine
	equivalents) were estimated based on regional cancer registration data and
	standard treatment course as defined by the international treatment
	guideline. Results: The national MUD increased from 1.45
	DDD/100,000/day in 2006 to 6.93 DDD/100,000/day in 2016, with a
	higher growth rate in early years and lower growth rate in the last 6 years.
	Southern China had the largest MUD in 2016 (9.67 DDD/100,000/day),
	Northwest China had the lowest MUD (3.28 DDD/100,000/day). The
	actual use of morphine equivalents accounted for only 21.5% of the needs
	of morphine for cancer pain treatment. Conclusions: The opioid analgesics
	use for the treatment of cancer pain were insufficient in China, which
	varies largely in different regions with different economic development.
T0083	Biological Activity of B-Glucans from Edible Mushroom, Schizophylum
	Commune in Thailand
Presentation 6	Samraj Rattanadilok Na Phuket, Titima Sangkaew, Piyatida Chanapan
(15:40~15:55)	and Surachai Techaoei
	Rajamangala University of Technology Thanyaburi, Thailand
	Abstract—Objective: The objective of this research was to determine the
	antioxidant of $\beta$ -glucans from edible mushroom, S. commune in Thailand.
	Method: The antioxidant activity of $\beta$ -glucans was measured in terms of
	hydrogen donating or radical scavenging ability by DPPH method, ABTS
	radical scavenging activity analysis and total phenolic compounds. The
	B-glucans structure was analyzed by FTIR spectrophotometer. Results: The
	Lising the Folin Ciocaltan Positive method we found that the phonolic
	compound contents of ethanol extracts of the mushroom sample was
	284 41 + 1.22  mgGAE/g extract. The IC50 radical scavenging ability
	(DPPH) and IC50 radical scavenging activity (ABTS) of β-glucans was
	$0.829\pm0.006$ and $0.724\pm0.021$ mg/mL, respectively. Conclusion: The
	ß-glucans from S. commune at Thailand showed a potent antioxidant
	activity and it will be able to apply in pharmaceutical cosmetics.

# **Session 3**

**Tips:** The schedule for each presentation is for reference only. In order not to miss your presentation, we strongly suggest that you attend the whole session.

# Afternoon, March 28, 2019 (Thursday)

## Time: 14:25~15:55

#### Venue: Room C5 (17th Floor)

#### **Topic: "Clinical Medicine and Rehabilitation Medicine"**

#### Session Chair: Prof. Carmine Pappalettere

T0049	Correlation of Radiographic Damage and Metabolic Syndrome in
	Spondyloarthritis: A Cross-Sectional Study
Presentation I	Hendra Gunawan, Sony Wibisono Mudjanarko, Awalia, Lita Diah
(14:25~14:40)	Rahmawati, Joewono Soeroso and Agung Pranoto
· · · · · · · · · · · · · · · · · · ·	Airlangga University, Indonesia
	Abstract—Background: Cardiovascular complication remains the long-term
	complications in spondyloarthritis. Previous studies revealed that metabolic
	syndrome is the risk factor of cardiovascular in spondyloarthritis patients.
	Previous studies also revealed the prevalence of metabolic syndrome is
	34,9-45,7% in spondyloarthritis patients. However, previous studies also
	revealed the controversy of the correlation of spondyloarthritis' disease
	activity with metabolic syndrome. Aim: To investigate the correlation of
	spondyloarthritis' radiographical damage measured with mSASSS score
	with metabolic syndrome in spondyloarthritis patients which routinely
	visited Rheumatology outpatient department in Dr. Soetomo General
	Hospital. Methods: An observational study with cross-sectional design with
	consecutive sampling technique was conducted in July-October 2018. All
	spondyloarthritis patients which fulfilled the inclusion criteria were included
	in this study. Data analysis were conducted with SPSS v21.0. Results: There
	were 33 spondyloarthritis patients (10 males and 23 females) included in this
	study. The average age was 48,18 years old. The average mSASSS score
	was 24,36 (K:0,93, p:0,00). Metabolic syndrome was diagnosed in 54,5%
	patients with 100% patients had central obesity, 66,7% had increased blood
	pressure, 61,5% had impaired fasting glucose, 55,6% had increased
	triglycerides, and 77,8% had decreased HDL cholesterol. Positive
	correlation between mSASSS score and metabolic syndrome was observed
	(r:0,510, p:0,002). Conclusion: A correlation between spondyloarthritis
	disease activity measured with mSASSS score and metabolic syndrome was

	ICPPS 2019 CONFERENCE ABSTRACT
	observed. Therefore, routine metabolic syndrome screening is strongly
	suggested for spondyloarthritis patients.
T3068	Computational Aerodynamic Prediction of PM2.5 Risk in Congenital
	Tracheal Stenosis
Presentation 2	Juanya Shen, Xiaolei Gong, Jinlong Liu, Limin Zhu and Zhuoming Xu
(14.40, 14.55)	Shanghai Children's Medical Center, China
(14.40~14.55)	
	<i>Abstract</i> —PM 2.5 is one of the particulate pollutants in atmosphere. Long-term exposure can lead to health problems, especially to the respiratory system. However, there are little reports published on its risk prediction to the children with congenital tracheal stenosis (CTS). Here, we used the technique of computational fluid dynamics (CFD) to investigate the aerodynamic characteristics of airflow with PM 2.5 in trachea. The motion of airflow and the risk of PM2.5 were predicted in a normal tracheal model and a patient-specific CTS model, respectively. The potential risk of PM 2.5 to the CTS was disclosed. The calculated results indicated that more deposited areas of PM2.5 were observed at the downstream of the trachea stenosis and the bronchus around the bridging bronchus were more likely affected by PM2.5. This implied that the trachea with CTS was more vulnerable and PM2.5 might aggravate the tracheal stenosis. The application of computational aerodynamic analysis could be used for the risk prediction
	of PM2 5 in CTS
T3059	Application of LIB Cavitation Bubbles for Cell Lysis in vitro
13039	Dering Legikova Miraslava Dysava and Michael Katek
Presentation 3	<b>Darma Jasikova</b> , Miroslava Kysova and Michai Kolek
	Technical University of Liberec, Czech Republic
(14:55~15:10)	Abstract—The aim of the project is to study the influence of controlled cavitation bubbles on the behavior of biological systems. The cavitation bubbles are generated by the Laser Induced Breakdown (LIB) method. This method allows accurate synchronization and geometric location of the cavitation bubble against the biological system. The impact of controlled cavitation on the biological system is synchronously monitored under a microscope and recorded by a camera, as well as visualization of the cavitation course, which is visualized by a high-speed camera. In addition to evaluating the effect of cavitation bubbles on cells in real time, the subsequent analysis and evaluation of the biological systems will be carried out by conventional methods of optical and fluorescence microscopy. The impact of technology on the cell layer in the form of healthy cell cultures of stable lines is verified. Particular attention will be paid to the influence of the confluent layer and the viability of individual cells. Understanding the basic mechanism of action of the cavitation bubble on a living cellular substrate is crucial to the development and application of sophisticated methods of influencing the behavior of cells based on the use of controlled cavitation.

T3061	Extremity Lymphedema Patient
	Yao-De Wang, Jong-Chen Chen and Ying-Sheng Lin
Presentation 4	National Yunlin University of Science and Technology, Taiwan
(15:10~15:25)	
(,	Abstract—The arch plays the role of buffering the impact and stress caused
	by the body. Flat-footed people do not have a normal arch when standing or
	walking, due to the tissues holding the joints in the foot together (called
	tendons) are loose. Injuries may occur as no arch to reduce the impact
	force, as their foot has complete or near-complete contact with the ground.
	Lymphedema patient have arch collapse. The purpose of this study was to
	explore the effect of using textures and arch insoles on improving the
	pressure distribution and balance of lymphedema patient. The aim of this
	study is to develop an intelligent system that integrates current modern
	technology to analyze the plantar pressure of lymphedema patient, to
	investigate the changes of plantar pressure with different motions, and
	finally to investigate patient' plantar pressure under different situations. Our
	ultimate goal is to develop a customized plantar pressure system for different
	people, time, and needs. When the occurrence of an unexpected event, the
	system can detect and report it immediately, allowing caregivers to act on
	time so to minimize harmful effects. The contribution of this study may
	also be suited for people with different special needs (e.g., stroke, flatfoot,
	dementia, and lack of mobility at walking). A commercially available foot
	pressure analysis system could cost from 10.000 to 20.000 and is therefore
	an unaffordable private device for "lymphedema patient". In this study, the
	cost of self-made plantar sense of foot shoes costs only a few hundred
	dollars. Under the supervision of the physician, self-made foot test insole
	according to patient foot shape and plantar pressure distribution will be
	made for lymphedema patient through a 3-D printer. The goal is to balance
	the plantar foot pressure by alleviating excessive foot pressure that might
	lead to foot lesions or nerve and musculoskeletal damage, which may reduce
	the occurrence of ulceration and subsequent amputation risk. To collect the
	data of human plantar pressure data, for each foot, six piezoresistive force
	sensors were embedded into an insole (12 sensors for both feet). These
	sensors were linked with an Arduino, a family of single-board
	microcontrollers, was used to input, process, and output data between the
	piezoresistive force sensors and the computer. A 3D printer was used to
	generate different shapes of an insole (Textured insole and arch insole) to
	investigate the effect of the shapes on plantar pressure. The study has been
	approved by the IRB (The Institutional Review Board / Ethics Committee)
	on National Taiwan University Hospital (IRB Case Number:
	201805068RIN).
T0090	Educational Needs of Pharmacists on Dementia Care: Findings from a
	Cross-Sectional Study
Presentation 5	Windy SY Chan and Angela YM Leung
(15:25~15.40)	Caritas Institute of Higher Education & The Hong Kong Polytechnic
(10.20 10.10)	

#### **ICPPS 2019 CONFERENCE ABSTRACT** University, Hong Kong Abstract—Dementia is a significant public health issue. Yet, limited attention was given to evaluate healthcare professionals' knowledge on it. The objective of this study was to examine the knowledge of dementia among pharmacists and healthcare professionals in Hong Kong. This was the baseline cross-sectional survey in a randomized controlled trial utilizing Facebook for professional education in dementia. The 25-item Dementia Knowledge Assessment Scale (DKAS) was used to measure the dementia knowledge characteristics. Of the 80 subjects, 41.8% were pharmacists, 35.4% were nurses and the rest were mostly optometrists and physiotherapists. The mean total correct response in DKAS was 57.98% (SD=15.47%, range=26-96%) which was lower than those measured in Japan (65.17%) and Australia (83.19%). Among the four subscales, the lowest scores in both the cohort and subgroup of pharmacists were shown in Communication and Behavior (correct response=46.1%). At the item level, four statements showed remarkably lower scores which include relating to differentiating cognitive symptoms (correct response=36.2%), risks of high response=50%), blood pressure (correct complications (correct response=55%), and communication approaches (correct response=57.5%). The highest item score related to the irreversibility of dementia (correct response=98.8%). The findings highlight the educational needs of pharmacists and healthcare professionals on providing quality dementia care. T2016 Study on Development of Real-Time Vestibular Measuring Device **Kun-I** Chiu Presentation 6 Minghsin University of Science and Technology, Taiwan $(15:40 \sim 15:55)$ *Abstract*—The vestibular system is one of body sensation systems and plays a very important role in the process of human development from lying to standing. It is not only the major source for the formation of spatial cognition, but also for the real-time detection of gravity at the time of dynamic activity. Human beings rely on this sensation to help in daily living and to maintain anti-gravity, secure one's balance, and to determent orientation. Without normal vestibular function, people will lose orientation and feel vertigo. In this developmental research, we created a real-time vestibular measuring (RVM) device combining the technology of a gyroscope sensor. The RVM device could be portable and easy to use in manual and automatic operations. For rotatory accuracy and precision testing, this study firstly conducted calibrations between servo motor (with or without weight loading) and gyroscope monitoring, and then designed for 8-direction program with 3 modes. Secondly, for applying program testing, this study detected 5 subjects, 4 females and 1 male), with designed program for testing their vestibular sensitivities. Finally, we compared subjects'

vestibular sensitivities with their spatial cognition and habits to find out the

pilot correlations. The RVM device testing revealed us that weight loading rotatory plate could be controlled normally, under 4 rpm, accompanied with gyroscope monitoring. The RVM device could also perform clockwise, counter clockwise, and freewill rotation functions according to commands from the program. Those subjects also completed 4 random directional tests and 1 freewill rotation, and results showed 2 high vestibular sensitivities, and 3 medium-low sensitivities. High sensitive subjects tend to like active recreational activities; however, the medium-low subjects prefer static activities. In conclusion, the newly developed RVM device could be programed and well controlled by a smart phone, and it also provide us to measure vestibular sensitivity which could preliminarily judge one's activity style.

Coffee Break & Group Photo Taking		
	15:55~16:20	Lounge of Room C5 (17th Floor)
LE I	-	ake a little



# **Session 4**

**Tips:** The schedule for each presentation is for reference only. In order not to miss your presentation, we strongly suggest that you attend the whole session.

# Afternoon, March 28, 2019 (Thursday)

## Time: 16:20~17:50

## Venue: Room 404M (4th Floor)

## **Topic: "Biomedical Electronics"**

## Session Chair: Assoc. Prof. He Hong

T3055	Android Application-Based Electrocardiogram Design using Microcontroller
	and Bluetooth Technology
Presentation 1	Glenn Phillip S. Baluyot, Jocelyn Flores Villaverde, Shih-Lun Chen and
(16:20~16:35)	Danny Wen-Yaw Chung
	Mapua University, Philippines
	Abstract—Electrocardiogram (ECG) is one of the healthcare machines that
	are being known as a subject for the vast development in wearable devices.
	Previous studies were conducted for the development of wearable ECGs and
	the Smart ADC Chip which utilizes data compression is one development
	that can be realized for this kind of development. This study aims to develop
	a device that can capture the heart activity of a person with the utilization of
	Microcontroller Device and Bluetooth for wireless transmission. A mobile
	application was developed for Android Devices that display the heart
	activity. Power consumption and transmission of ECG devices are crucial in
	terms of using this technology for wearable devices and with this study,
	designing a system was a huge step to this continuous development for
	ECGs. In this paper, the transmission was tested with a 0% Bit Rate Error
	and the heart activity as well as the mobile application was carefully
	assessed

		ICFFS 2019 CONFERENCE ADSTRACT
T309	92	Automatic Detection of Circulating Tumor Cells with Very Deep Residual
Pres	entation 2	<b>Bin Li</b> , Yunhao Ge, Yanzheng Zhao and Weixin Yan
(16:3	35~16:50)	Shanghai Jiao Tong University, China
(10:.	35~16:50)	Abstract—Automatic detection of circulating tumor cells (CTCs) in microscopic images is a very challenging task due to the variable artificial and environmental factors, such as inconsistency of light intensity and staining, cell adhesion, multiple impurities and so on. In order to meet these challenges, we propose a novel deep multiscale residual network (DMRN) for CTCs detection. Compared with existing methods either low-level hand-crafted features or CNNs with shallower architectures, our deep networks can acquire more discriminative features for more accurate detection. To train very deep networks more efficiently, we propose a set of schemes to ensure effective training and learning under limited training data. First, we apply the residual learning to generate more discriminative features and overcome the overfitting problem when a network goes to deeper. Then, a fully residual convolutional network (FRCN) is proposed to produce the prediction maps of CTCs. Finally, we propose to integrate multi-scale contextual information in proposed FRCN and fuse these prediction maps both global and local features of CTCs, making the prediction more accurate and robust. We built three DMRN models to study the impact of network depth on model performance. Each model was tested on our own dataset containing complex jamming information. The DRMN-50 model which has a depth of 50 layers performs best among three models with Jaccard-index of 0.810 (with a pixel accuracy of 99.8% as a reference index) and its performance outperform other existing state-of-art methods such as U-Net in other domain. The result also depicts the accurate and robust performance of proposed method in complex environment.
T300	62	Determination of Schizophrenia using Electronic Nose via Support Vector
Pres	entation 3	Rainier V. Leal, Alyssa Xyra C. Quiming, Jocelyn Flore Villaverde, Noel
(16:	50~17:05)	B. Linsangan, Analyn N. Yumang and Meo Vincent C. Caya Mapua University, Philippines
		<i>Abstract</i> —Schizophrenia is a chronic brain disorder that is considered as the top mental illness in the Philippines. When schizophrenia is not prevented, especially on early stage more complications on the brain functionality is affected due to the deterioration of gray matter or brain tissues. Breath Analysis using electronic nose (e-nose) is a non-invasive and easy to use method of detection in providing information for many illnesses. This paper examines and measures the concentration of pentane, ammonia and other volatile organic compounds (VOCs) in determining schizophrenia using breath analysis. The preliminary performance of the electronic nose has been

	demonstrated on 10 breath samples from a subject that has schizophrenia than in healthy individual subject which has found out that the e-nose can discriminate the patterns of VOCs from these two groups. Confusion matrix was used to show the accuracy of the system in detecting schizophrenia. This study uses support vector machine for classification and achieving the accuracy of 80% of classifying schizophrenic and non-schizophrenic subjects.
T3098 Presentation 4 (17:05~17:20)	Attempt to Visualize Cardiac Motion on Body Surface using Active Stereoscopic Depth Camera <b>Hirooki Aoki</b> , Tsuyoshi Shiga and Atsushi Suzuki Chitose Institute of Science and Technology, Japan
	<i>Abstract</i> —For the purpose of monitoring the cardiac mechanical phenomena, we propose a non-contact cardiac motion measurement method applying the active stereo depth camera. In the proposed method, the three-dimensional shape of the subject's chest is reconstructed based on the active stereo method using infrared light using RealSense F200 which is a three-dimensional image sensor manufactured by Intel Corporation. Then, by performing the active stereo measurement by projecting the green dot matrix pattern using the RealSense color camera, micro displacement of the chest surface due to the cardiac motion is acquired. In this paper, we confirm the feasibility of non-contact cardiac motion measurement by green dot matrix pattern projection, and attempt to visualize the distribution of the cardiac motion on the chest surface.
T3029 Presentation 5 (17:20~17:35)	<ul> <li>Photoplethysmography Circuit Design for Peak-to-Peak Voltage Monitoring via Arduino Uno with Moving Average Filter</li> <li>Febus Reidj G. Cruz, Charmaine C. Paglinawan, Celina Nadine V. Catindig, John Charles B. Lamchek, Danielle Diane C. Almira ñez and Anne Flereece Sanchez</li> <li>Mapua University, Philippines</li> <li>Abstract—This paper presents a circuit design which can capture</li> </ul>
	photoplethysmography signal and estimate its peak-to-peak voltage reading with the aid of an Arduino microcontroller. Photoplethysmography is a non-invasive optical technique used to detect blood volume changes in the microvascular bed of tissue. With this technique, common health-related factors like heart rate reading, blood pressure reading, and blood glucose level can be measured. The proposed circuit design uses a CNY70 reflectance photoplethysmography sensor and an SEN-09673 force sensitive resistor to determine the force applied on the finger strap that can be worn on any of the proximal phalanges of the user. An algorithm referred to as Moving Average Filter is applied to estimate the photoplethysmography signal in terms of peak-to-peak voltage.

ICPPS 2019 CONFERENCE ABSTRACT		
T0051	Metabolites Profile of Colorectal Cancer Cells at Different Stages	
Presentation 6	Hazwani Mohd Yusof, Sharaniza Ab-Rahim, Wan Zurinah Wan Ngah,	
	Sheila Nathan, A. Rahman A. Jamal and Musalmah Mazlan	
(17:35~17:50)	Universiti Teknologi MARA, Malaysia	
	Abstract—Objective: The aim of this study is to characterize the metabolite	
	profiles of CRC cells of different stages of the disease in order to understand	
	the pathophysiological changes that may help to identify prevention	
	strategies as well as the sites for potential therapeutic drug actions. Methods:	
	Six CRC cell lines of different stages (classified using the Dukes	
	classification) were used and they are; SW 1116 (stage A), HT 29 and SW 480	
	(stage B), HCT 15 and DLD-1 (stage C), and HCT 116 (stage D). Metabolites	
	were extracted using methanol and water and metabolic profiling was	
	performed using liquid chromatography-mass spectrometry (LC-MS). Mass	
	Profiler Professional software was used for statistical analysis. Results: There	
	were 111,096 compounds detected across the samples and 24 metabolites	
	were identified to be significantly different between the CRC stages. Most	
	notably, there were eight metabolites that were significantly up-regulated in	
	the more advanced stages (B, C and D) compared with stage A. These	
	metabolites include flavine mononucleotide, 1-methionine, muricatacin,	
	amiliaripin, 2-methylbutyroylcarnitine, lumichrome, nexadeconoic acid, and $E_{\rm max}$ DE (0.0/16.0). Completing This stade shows a first the superscience of	
	lysoPE (0:0/16:0). Conclusion: This study showed that the expressions of	
	metabolites at different stages of CRC were different which represent the	
	metabolic changes occurring as CKC advances. The knowledge may help	
	identify biomarkers for staging of CRC which could improve its prognosis	
	as well as provide basis for the development of therapeutic interventions.	

# **Session 5**

**Tips:** The schedule for each presentation is for reference only. In order not to miss your presentation, we strongly suggest that you attend the whole session.

Afternoon, March 28, 2019 (Thursday)

## Time: 16:20~17:50

## Venue: Room C6 (17th Floor)

## **Topic: "Medicinal Botany and Chinese Pharmacy"**

#### Session Chair: Prof. Tjokorda Gde Tirta Nindhia

T0031 In-Vitro Cytotoxic and Apoptotic Activities of Sulfated Polysaccharide from Codium Edule P.C Silva Against Breast Cancer Adenocarcinoma Presentation 1 Ariane Marie G. Bayro, Mary Jho-Anne T. Corpuz and Ross D. Vasquez Adamson University, Philippines  $(16:20 \sim 16:35)$ Abstract—Objective: The primary purpose of this study is to characterize Codium edule crude sulfated polysaccharide (CSP) and its fractions and to determine its potential antiproliferative and apoptotic properties. Methods: The CSP was obtained through hot water extraction followed by precipitation with absolute ethanol. CSP was further purified using ion exchange chromatography, Sepharose DEAE fast flow column and yielded three fractions (F1, F2, and F3). The CSP and fractions were characterized for their sulfate, protein, carbohydrate, and uronic acid content. Fourier Transformed Infrared Spectroscopy (FT-IR) was used to determine the functional groups present in CSP and SP fractions. Antiproliferative activity against human breast adenocarcinoma (MCF-7) was analyzed using MTT assay with Doxorubicin as positive control. Apoptotic activity of C. edule was analyzed using Caspase 3/7 and Annexin V-FITC assay. RESULTS: CSP afforded 6.3% sulfate, 4.1% protein, 68.7% and carbohydrate. F1 has the highest content of sulfate, protein, carbohydrate and uronic acid among the fractions. FT-IR shows a broad band around 3400 cm⁻¹ indicates the presence of hydroxyl stretching vibration of polysaccharide (-OH) and a band at 2922 cm⁻¹ suggest a C-H stretch (alkane). 1658  $\text{cm}^{-1}$  may be attributed to the C=O stretches of amide C=N group. Peak around 1259 cm⁻¹ is a characteristic band for S=O sulfate ester. The antiproliferative activity of C. edule against MCF-7 showed significant difference in the mean percent inhibition between CSP and F3 (p=0.001), F1 and F3 (p=<0.001), F2 and Doxorubicin (p=0.025), and F3 and Doxorubicin (p = < 0.000). F1 of C. edule has the lowest IC₅₀ of 5.54

	$\mu$ g/ml and displayed apoptotic phase and caspase 3/7 activity. Conclusion: The investigation revealed that sulfated polysaccharide from green seaweed, <i>C. edule</i> , could be use as potential anticancer treatment against breast cancer adenocarcinoma.
T0059 Presentation 2 (16:35~16:50)	Cytotoxic Activity Evaluation of <i>Eriocaulon Cinereum</i> R.Br. on Hela and Vero Cell Lines <b>Pinus Jumaryatno</b> , Arde Toga Nugraha, Adilia Tri Hidayati, Baiq Risky Wahyu Lisnasari, Widyanur Maya Diahandari and Nanang Fakhrudin Universitas Islam Indonesia, Indonesia
	Abstract—Objective: This study aimed to evaluate the cytotoxic activity of the extracts and fractions of <i>E. cinereum</i> against HeLa and Vero cell lines, which represent cervival cancer and normal cells, respectively. In addition, a phytochemical screening was carried out to determine the chemical constituents in the extracts and the active fractions. Methods: The extracts of <i>E. cinereum</i> were obtained by ultrasound-assisted extraction method using <i>n</i> -hexane, ethyl acetate and methanol, successively. The active extract was fractionated using vacuum liquid chromatography with dichloromethane followed by ethyl acetate. The cytotoxic activity was evaluated by MTT assay method and measured using microplate reader at wavelength 595 nm. The data were analyzed with PROBIT from SPSS 16 for Windows [®] . Additionally, phytochemical screening was performed using standard procedures. Results: The cytotoxic evaluation of the extracts of <i>E. cinereum</i> showed that the ethyl acetate extract was the most active extract against HeLa cell line with IC ₅₀ value of 580.07 µg/ml. The dichloromethane and ethyl acetate fractions from the active extract of <i>E. cinereum</i> exhibited cytotoxic activity against HeLa cell with the IC ₅₀ values of 466.61 µg/ml and 267.34 µg/ml, respectively. In addition, the ethyl acetate fraction showed a low cytotoxic effect against Vero cell line. The phytochemical screening of the ethyl acetate fraction indicated the presence of terpenoids and alkaloids. Conclusion: This finding revealed the anticancer potential of <i>E. cinereum</i> and warrant further investigation for the discovery of new anticancer agents from natural resources for cervical cancer.
T0035	Effect of Latex from Musa Paradisiaca var. Sapientum and Carica Papaya
----------------------	-------------------------------------------------------------------------------------------------------------------------------------------------
	L on Proliferation and Migration Fibroblast Cell NIH3T3
Presentation 3	Elza Sundhani, Endah Nur Irohim, Rumiyana Hartiningsih, Erza
(16:50~17:05)	Genatrika and Nunuk Aries Nurulita
	Universitas Muhammadiyah Purwokerto, Indonesia
	Abstract—Objective: The objective of this research was to screening
	phytochemical constituents and determine the activity of latex from Musa
	paradisiaca var. Sapientum and Carica papaya L to the process of wound
	healing in NIH313 fibroblasts cells through observations of the
	proliferation and migration of cells. Methods: Screening phytochemical
	compounds of latex from <i>Musa paradisiaca</i> var. Sapientum and <i>Carica</i>
	(4.5 dimethylthiazol 2 yl) 2.5 dimenyl tatrazoliym bromida) (MTT)
	(4,5-dimetry)(mazoi-2-yi) - 2.5-dipitely) tetrazonum biomide) (M11) method. The proliferation test used the <i>doubling time</i> method at a
	susceptible incubation time of 0 24 48 and 72 hours with a concentration
	of 25 $\mu$ g / mL-250 $\mu$ g / mL. The migration test was carried out using the
	scratch wound healing method with a concentration of 25 µg/mL-250
	$\mu$ g/mL in the time range of 0, 12, 24 and 48 hours. Results: Phytochemical
	compounds contained in the latex from Musa paradisiaca var. Sapientum
	(saponin and tannin) and Carica papaya L (saponin and alkaloid). The
	cytotoxic assay results showed that no toxic effect (IC $_{50}$ value of more than
	1000 $\mu g$ / mL). Cell proliferation and migration test results showed an
	increase in NIH3T3 fibroblast cell proliferation and migration process
	compared to controls. Concentration 250 $\mu$ g/mL of latex from Musa
	<i>paradisiaca</i> var. Sapientum and <i>Carica papaya</i> L is the best to increase of
	promeration and migration process of NIH313 inbrodiast cells.
	Sanientum and <i>Carica nanava</i> L has the potential to increase proliferation
	and migration activity of NIH3T3 cells
T0106	The Effect of an Ethanol Extract of Homalanthus Populneus (Giesel) Pax
10100	Extract in Expression of T Cell Receptor: Inhibition Study of HIV
Presentation 4	Infection
$(17:05 \sim 17:20)$	Erly Sintya and Nastiti Wijayanti
(11100 11120)	Warmadewa University, Indonesia
	Abstract-Homalanthus populneus is a native plan of Indonesia which
	contains active compound as known as prostratin. Many studies have
	proved that prostratin can inhibit HIV infection by inducing latent proviral
	and reducing CD4 expression. Based on those findings, the aim of this
	study is to analyse the effect of <i>H. populneus</i> 's extract toward the
	expression of CD4 and CD8 which both are important in body's defense
	mechanism against HIV. The research method consisted of extraction with 70% othered CD4 and CD2 expression test using flow extraction for a 41
	70% emanol, CD4 and CD8 expression test using now cytometry, gp41 quantitative test with talicytometry, gp120 quantitative test using ELISA
	quantitative test with tancytometry, gp120 quantitative test using ELISA.

	This study reported that <i>H.populneus</i> 's extract reduced the expression of CD4 receptor in both peripheral blood mononuclear cell (PBMC) and T lymphoblast cell line (CEM). In contract, this extract increased CD8 expression in PBMC. It was also able to reduce the percentage of protein gp41 and gp120 in CEM cultures. Those results show that <i>H. populneus</i> 's extract is potentially developed as an HIV drug from Indonesia. However, further study needs to be done including analyzing the effect of variety of concentrations and also exposure periods.
T0073	Cytotoxic Activity of Eriocaulon Cinereum R.Br to MCF-7 and Vero Cell
Presentation 5	Line Arde Toga Nugraha Asgar Purnama Siti Nurul Komariah and Hady
(17:20~17:35)	Anshori T
	Universitas Islam Indonesia, Indonesia
	Abstract—Objective: The aims of study was to determine the strength of the <i>Eriocaulon cinereum</i> R.Br plant against breast cancer cells (MCF7) and cytotoxic against Vero cells. Methods: <i>Eriocaulon cinereum</i> R.Br was taken from the province of Bangka Belitung and then extracted in stages with n-hexane, ethyl acetate, and methanol. Then the ethyl acetate extract was fractionated using the Vacuum Liquid Chromatography method with dichloromethane and ethyl acetate solvents. Sample was tested for MCF-7 cells and Vero cells using the MTT method (3- (4,5-dimethylthiazol-2-yl) - 2,5-diphenyltetrazolium bromide). The data obtained is analyzed by probit SPSS. Results: The results of this study showed that the best IC ₅₀ extract was ethyl acetate extract with an IC ₅₀ value of 450.31 µg/ml. Then, ethyl acetate extract produced dichloromethane fraction with IC ₅₀ values 443.52 µg/ml and ethyl acetate with IC ₅₀ value 214.75 µg/ml. Ethyl acetate fraction was also tested against Vero cells to see cytotoxic against normal human cells with IC ₅₀ 679.11 µg/ml
T1016	Effect of Dayak Onion Tuber ( <i>ELEUTHERINE AMERICANA MERR</i> .)
Presentation 6	Extract to Prevent Increased Necrosis of Kidney Tubular Epithelial Cells in Mice ( <i>MUS MUSCULUS</i> ) to Oral Lead Acetate Exposure
(17:35~17:50)	Gadis Meinar Sari, Daeng Agus Vieya Putri, Tjitra Wardani and Lilik Herawati
	Universitas Airlangga, Indonesia
	<i>Abstract</i> —Objective: This study aims to determine the effect of <i>dayak</i> onion tuber extract to prevent an increase in necrosis of kidney proximal tubular epithelial cells exposed to lead acetate. Methods: Fresh <i>dayak</i> onion tuber were extracted with 96% ethanol and then given orally to mice with doses of 65 mg/kg, 130 mg/kg and 260 mg/kg for 21 days, accompanied by 14 days of lead acetate on the 8 th to 21 st days. Histological preparations of the mice's kidney were made by hematoxylin and eosin (HE) staining, then the necrosis of tubular cells was examined by using a 400x magnification light microscope that observed 5 views randomly

marked by the presence of pyknosis, karyorrhexis, and karyolysis. Results:
This study showed that the higher the dose of <i>dayak</i> onion tuber extract,
the lower the number of tubular epithelial cell necrosis (p <0.05).
Conclusion: Extract of <i>dayak</i> onion tuber could prevent an increase in
necrosis of kidney proximal tubular cells of mice that exposed to lead
acetate.

**Tips:** The schedule for each presentation is for reference only. In order not to miss your presentation, we strongly suggest that you attend the whole session.

# Afternoon, March 28, 2019 (Thursday)

# Time: 16:05~17:50

## Venue: Room C5 (17th Floor)

# **Topic: "Molecular Biology and Cytobiology"**

## Session Chair: Prof. Peidu Jiang

T0052	Expression of the Microfold (M) Cells in 3D Co-Culture System for in
	Vitro Cultivation of Human Norovirus
Presentation 1	Mizanurfakhri Ghazali, Sharaniza Ab-Rahim and Mudiana Muhamad
(16:05~16:20)	Universiti Teknologi MARA, Malaysia
	Abstract—Human norovirus (HuNoV), a food-borne virus is leading cause for acute gastroenteritis. However, its inability to propagate <i>in vitro</i> persists as major challenge in understanding HuNoVbiology. Objective: This study aims to determine an effective culture system for HuNoV. Methods: The Caco-2 cells were co-cultured with Raji B cells on alginate hydrogel beads. Scanning electron microscopy (SEM) was performed to confirm the 3D cells morphology. Western blot (WB) analysis was performed to detect protein markers expressed by M cells. Results: Optimisation of Caco-2 cells monoculture in the alginate hydrogel beads showed optimum number of cells of $1 \times 10^6$ cells/ml, indicated by the intact structure of the beads. Result of SEM showed clear structure of monoculture in the alginate hydrogel beads indicated by presence of smooth and regular apical surface while the co-culture showed reduced apical surface of M cells. Result of WB showed down-regulation of <i>Ulex</i> <i>Europeus</i> antibody expression. Conclusion: It is evident that the avpression of M cells, aroun in 3D eleinete hydrogel beads was
	expression of M cells grown in 3D alginate hydrogel beads was successful, indicated by the structural morphology seen under SEM as well as expression of protein marker by M cells. This established <i>in vitro</i> system
	is highly potential for cultivation of HuNoV.
T3076	Cancer-Specific Metastasis Control Strategy Based on the Molecular
20070	Dynamics of Lung Cancer Cell
Presentation 2	Jiveon Park, Suveong Kim, Ye-Eun Shin, Namhee Kim and
(16:20~16:35)	Kwang-Hyun Cho

	Korea Science Academy of KAIST, Republic of Korea
	<i>Abstract</i> —Epithelial-mesenchymal transition (EMT), which is the key to metastasis control, is a mechanism that is involved not only in metastasis of cancer cells but also in wound healing of normal cells. Therefore, cancer-specific EMT inhibition is required to prevent disorder in wound healing. In order to control the cell, we constructed a molecular network model composed of normal EMT and cancer EMT mechanisms in lung cancer cells. Based on this network model, we investigated the molecular dynamics difference between normal cells and cancer cells and proposed control targets for cancer-specific treatment. Furthermore, we defined and analyzed link motifs to explain why there was a molecular dynamics difference in the target molecules. Finally, by demonstrating the validity of the proposed control targets we confirmed that the control strategy through molecular dynamics analysis is an effective cancer-specific EMT control strategy. This study has great significance in that it has attempted a new approach to control metastasis cancer-specifically using the difference in molecular dynamics.
T0056	A Comparison of CSF1 Expression Between Osteosarcoma Cancer Cells
Presentation 3	and Normal Human Osteoblasts <b>Muhammad Fawwaz Abdullah</b> , Sharaniza Ab-Rahim and Mudiana
(16:35~16:50)	Muhamad Universiti Teknologi MARA, Malaysia
	<i>Abstract</i> —Introduction: Colony-stimulating factor 1 (CSF1) is a crucial cytokine involved in osteoclast differentiation. Previous study on genome-wide association (GWAS) reported that <i>CSF1</i> has a strong susceptibility towards Paget's disease of bone (PDB), a common skeletal disorder. Almost 80% of patients with PDB developed osteosarcoma (OS) due to strong genetic components in PDB. Although CFS1 is well reported as the predisposing gene for PDB, little is known about <i>CSF1</i> in osteosarcoma. Thus, this study focuses on gene expression profile of <i>CSF1</i> in osteosarcoma cell lines, MG63 in comparison with the normal human osteoblasts (hFOB1.19). Methods: The mRNA expression level of <i>CSF1</i> was determined using Real-Time PCR, QuantiNova SYBR GREEN and normalised against four housekeeping genes; <i>homo sapiens</i> hydroxymethylbilane synthase (HMBS), <i>homo sapiens</i> peptidylprolyl isomerase A (PPIA), <i>homo sapiens</i> TATA-box binding protein (TBP), and <i>homo sapiens</i> tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein zeta (YWHAZ). Results: The <i>CSF1</i> mRNA expression level in MG63 was significantly higher compared to that showed in hFOB1.19. Conclusion: The higher expression level of <i>CSF1</i> , which in turn causes higher disease susceptibility. This finding provides valuable insights toward functional study of the CSF1 protein in

ICPPS 2019 CONFERENCE ABSTRACT

	osteosarcoma disease progression.
T0053	Aberrant N-Glycosylation Regulates Invasion of MG63 Cells via
Duran utation 4	Extracellular Matrix Remodelling
Presentation 4	Sarmila Hanim Mustafa, Mudiana Muhamad and Sharaniza Ab-Rahim
(16:50~17:05)	Universiti Teknologi MARA, Malaysia
	<i>Abstract</i> —Objective: Despite advances in multimodal therapy, osteosarcoma (OS) still imposes big challenge due to its high rate of metastasis. Previous studies reported that aberrant glycosylation in the cells mediates the invasion of several cancers including OS. However, its mechanism, particularly <i>N</i> -glycosylation in OS progression is still poorly understood. Thus, this study aims to investigate the effect of glycosylation inhibitions towards OS cells invasiveness. Methods: Both 1-deoxynojirimycin (DNJ) and 1-deoxymannojirimycin (1-DMJ) were used to inhibit the activities of alpha-glucosidase-I/II and alpha-1,2-mannosidase respectively. Invasion assay and Real-Time PCR (qPCR) analysis of extracellular matrix (ECM) related genes were performed at post 24 hours of treatment with the inhibitors, 0.5 mM 1-DNJ and 0.5 mM 1-DMJ respectively on the OS cell line, MG-63. Results: Results showed that the inhibition of <i>N</i> -glycosylation by 1-DMJ caused the invasion rate of MG-63 cells while the inhibition, TIMP2 was up-regulated in both type of treatments. In this study, MMP9 genes was not detected in both samples however the expression of its inhibitor; TIMP1 was down-regulated in MG-63 cells treated with 1-DNJ but up-regulated in 1-DMJ treated cells. Conclusion: It is concluded that 1-DNJ reduced the invasion rate in MG-63 cells through down regulation of MMP2 gene which subsequently reduced degradation of collagen type IV. However the contrasting effect showed by 1-DMJ requires further investigation to elucidate its underlying mechanism.
T3080	Expression and Purification of Soluble Bacterially-Expressed Human
Presentation 5	Hexokinase II in <i>E.coli</i> System
(17:05~17:20)	Suriyea Tanbin and <b>Fazia Adyani Ahmad Fuad</b> International Islamic University Malaysia, Malaysia
	<i>Abstract</i> —Human hexokinase II (HKII) is one of the key enzymes in the glycolytic pathway. It has been postulated that HKII is a potential target for anti-dengue (DENV) drug development, as well as involved in cancer and tumor cell growth. In this work, the human hexokinase II (HKII) gene was cloned into pETite N-His SUMO vector and transformed into the <i>E.coli</i> strain HI-control 10G for the propagation of clones. Two different expression hosts, <i>E.coli</i> HI-control TM BL21 (DE3) and BL21 (DE3) pLysS were used to optimize HKII expression. In order to obtain the

	soluble recombinant HKII in a functional form, we optimized protein
	expression at three different temperatures: $17 ^{\circ}\text{C}$ 25 $^{\circ}\text{C}$ and 37 $^{\circ}\text{C}$ at 24
	hours incubation time. The soluble protein was expressed in the presence
	of 0.5 mM isopropyl 2.D thiogalactopyranoside (IPTG) in TR media at
	17 % for 24 bro. The expressed protein was then purified to homogeneity.
	17 C for 24 firs. The expressed protein was then purfied to homogeneity
	by a combination of Immobilized Metal Ion Affinity Chromatography
	(IMAC), size exclusion chromatography (SEC) and ion-exchange
	chromatography (IEX), resulting in pure bacterially-expressed HK2.
	Taken together, this study has successfully produced soluble
	bacterially-expressed human HKII that can be utilized for further
	therapeutic studies.
T0054	The Low Density Lipoprotein Receptor-Related Protein 8 (LRP8) Gene in
	MG63 Osteosarcoma Cell Lines
Presentation 6	Zulaika Binti Roslan, Mudiana Muhamad, Lakshmi Selvaratnam and
(17.20, 17.25)	Sharaniza Ah-Rahim
(17:20~17:55)	Universiti Teknologi MARA Malaysia
	Chiveishi Teknologi wirtikri, walaysia
	Abstract Low Density Lineprotein Decentor related Drotein 9 (LDD9) is a
	Abstract—Low Density Elepoptotein Receptor-related Flotenin 8 (ERF8) is a
	transmemorane receptor that belongs to the LKP protein family. It was
	reported as a positive regulator in the winip-catenin signaling pathway.
	Previous studies have shown that $WNI/\beta$ -catenin pathway is essential in
	osteosarcoma (OS) progression and metastasis. Thus, this study aims to
	elucidate the LRP8 gene expression in OS cells, MG63. The detection of
	LRP8 gene was performed by reverse transcription polymerase chain
	reaction (RT-PCR). Firstly, total cellular RNA was extracted from MG63
	cells using the Qiagen RNeasy Mini Kit. The RT-PCR was done by two
	steps reaction kits with forward and reverse primers for the LRP8 gene.
	The RT-PCR product was separated on 0.8% agarose gel and the band was
	visualized by Bio-Rad GelDoc Imager. The LRP8 gene was successfully
	detected in MG63 cells indicated by the prominent band of 2.5kb. The
	DNA sequencing result showed confirmation of the LRP8 gene amplified
	product This finding is comparable with LRP8 gene expressed in other
	two OS cell lines, which are U2OS and Saos 2. Presence of LPD8 gene in
	OS calls provides a platform for angoing study on the role of LRPS in OS
	US cens provides a platform for ongoing study on the fole of LKF8 in US
	progression via wixi7/p-catenin patiway.
10040	Identification of a Novel Autophagy Activator
Presentation 7	Peidu Jiang
	Sichuan Academy of Medical Sciences & Sichuan Provincial People's
(17:35~17:50)	Hospital, China
	Abstract—Autophagy is a self-degradative process by which cytosolic
	components and organelles are delivered to the lysosome for degradation.
	Autophagy plays important roles in cellular homeostasis and disease
	pathogenesis. For example, downregulation of autophagy is involved in
	numerous diseases including neurodegenerative diseases, cancer, aging.

metabolic disorders, and infectious diseases. Therefore, small chemical
molecules that can modulate autophagy activity may have pharmacological
value for treating these autophagy-related diseases. Using a
GFP-LC3-based high content screening assay, we identified a novel
chemical that is able to activate autophagy at initiation stage. This
molecule, termed as CPC, increases the numbers of autophagosomes and
reduces the autophagy substrate p62/SQSTM1 levels by inhibiting mTOR
signaling pathway. In conclusion, our study identified a novel autophagy
activator, which could be a potential therapeutic candidate for
autophagy-related diseases such as neurodegenerative diseases, cancer, and
aging.

# **Poster Session 1**

**Tips:** The schedule for each presentation is for reference only. In order not to miss your presentation, we strongly suggest that you attend the whole session.

# Afternoon, March 28, 2019 (Thursday)

# Time: 14:25~17:50

# **Venue: Lounge in Front of Room C5 (17th Floor)**

T2005	Influence of Exercise Habit on the Oxygen Saturation of Vastus Medialis
De stev 1	Taipau Chia, Jian-Guo Bau, Yi-Tin Huang, Gia-Cheng Hsu and Wei-Feng
Poster 1	Lai
	Hungkuang University, Taiwan
	Abstract—At present, physical activity is insufficient for most people in
	Taiwan, including the university students. The objective of this study is to
	evaluate oxygen saturation of vastus medialis for students with different
	exercise habit. Twenty healthy male university students were recruited and
	divided into exercise group (n=10) and non-exercise group (n=10)
	according to their exercise habit. For the students with physical activity at a
	vigorous intensity more than 75 minutes a week was categorized as
	exercise group. Near-infrared spectroscopy was used to measure oxygen
	saturation of vastus medialis. All the students performed sit-stand exercise
	for 20 times within 40 seconds at a constant frequency during
	measurement. The whole measurement process including the rest period
	was about 3 minutes. It was found that the minimum oxygen saturation of
	vastus medialis of the exercise group during the sit-stand exercise was
	29.8% lower than the average oxygen saturation at rest, and was 18.2%
	lower for the non-exercise group. The minimum oxygen saturation of the
	exercise group was significantly lower than that of the non-exercise group
	(p<0.001). It indicated that the non-exercise group had poorer function of
	O ₂ delivery and utilization in vastus medialis. This simple and invasive
	measurement may be used to promote the students' physical activity.
T3046	Development of Controlled Release of Docosahexaenoic Acid with
Destar 2	Nanofiber Membranes for Neural Injury Repair
Poster 2	Zhuo-Hao Liu, Chang-Yi Kuo, Huang, Yin-Cheng and Jyh-Ping Chen
	Chang Gung Memorial Hospital, Taiwan
	Abstract— Central and peripheral nervous system injuries often lead to
	persistent neurological dysfunction due to failure in axon regeneration.

## **Topic: "Biomedical and Pharmaceutical Phytochemistry"**

	Docosahexaenoic acid (DHA) is an omega-3 polyunsaturated fatty acid
	that is essential in brain development and has roles in neuroprotection and
	neuroplasticity. Several studies have shown that DHA can induce marked
	improvement after traumatic injury of the nervous system. Here, we
	introduce a core-shell aligned nanofibers generate controlled release of
	DHA to potentially serve as a novel therapy in nervous system injury.
	Aligned nanofibers fabricated using core-shell electrospinning were
	characterized for their physical properties and their ability to release DHA
	over one month. DHA bioactivity was confirmed by a PC12 cell assay with
	inducing the levels of neurite extension. To test the cytocompatiblity of
	core-shell aligned nanofibers, we successfully increase the 3T3 cell
	number. Overall, this research demonstrated the potential of core-shell
	aligned nanofibers to act as therapeutic matrix while delivering bioactive
	DHA in a control fashion.
T3033	Modification of Optical Compound Microscope to Detect Malaria Blood
Destar 2	Parasites using Wright-Giemsa Staining Process with SURF Based Stitching
Poster 5	Garcia Ramon G., Paglinawan Charmaine C., Paglinawan Arnold C., Gatus
	Hanes Mar F., Mallari Jose Emmanuel P., Maniacup Michael Anthony G.
	and Saguiguit Aldwin A.
	Mapua University, Philippines
	Abstract—Hematology is the study of diseases and disorders causing
	irregularities in blood cells. Hematology is used to determine the
	irregularities in the blood cell containing different parasites ranging from
	mild to severe symptoms. Malaria has been found to be the 9th leading
	cause of death in the country. Mataria is caused by a bite of an Allopheles
	parasite that will then be released onto a person's blood stream. The
	general objective of this study is to detect blood parasite from sample
	blood smears. This study is obtrusive and the device requires a blood
	sample to be tested the researchers let expert medical doctors and
	laboratorians to take the blood from the patients. In hope of helping the
	telemedicine in the Philippines the device is able to capture images from
	the microscope and designed an algorithm that will process the captured
	images stitching it into one whole image. In addition, the device can output
	if the blood sample is positive or negative based on the dominant color
	seen from the images. The prototype is designed to replace the analytics of
	a skilled hematologist in rural cases whereas shortage in experts is a major
	problem.
T0045	Determination of Lupeol from Makhaen at Thailadn and Taiwan by High
	Performance Liquid Chromatography (HPLC)
Poster 4	Surachai Techaoei, Khemjira Jarmkom, Nakuntwalai Wisidsri,
	Suradwadee Thungmungmee and Warachate Khobjai
	Rajamangala University of Technology Thanyaburi, Thailand

	Abstract—Objective: The objective of this research was to investigate the
	extraction and isolation of chemical compounds of Zanthoxylum limonella
	Alston extracts which selected from Chiang Mai and Payao province,
	Thailand and Taiwan. Method: There are 3 locations of medicinal plant,
	Zanthoxylum limonella Alston were collected, two provinces of northern
	Thailand, Chiang Mai and Payao, including the other country, Taiwan. All
	of extraction was carried out by methanol. In this experimental study, Thin
	layer chromatography and High performance liquid chromatography.
	Results: The result was found that the best organic solvent for extraction is
	of 0.1 when developing with this layer characterization and column in the fatio
	methanol and water when analyses with HPLC. The notantial bioactive
	compound from crude extracted was lupeol. Crude extracted from leaf at
	Chiang Mai was highest luneol as 5655.72 µg/mg extraction whereas
	Crude extracted from leaf at Payao showed this compounds as 16 98 81
	ug/mg extraction. In addition, the crude extraction from root and bark of
	both areas showed the amount of lupeol less than leaf crude extracted. The
	further study will focus on antimicrobial activity and biological activity in
	the near future. Conclusion: The bioactive compound, lupeol was found in
	all part of Makhaen in Thailand but did not found in Taiwan seed.
T3020	Automated Urine Microscopy using Scale Invariant Feature Transform
	Jennifer C. Dela Cruz, Ramon G. Garcia, Mikko Ivan D. Avilledo, John
Poster 5	Christopher M. Buera, Rom Vincent S. Chan and Paul Gian T. España
	Mapua University, Philippines
	Abstract—Urine microscopy is a tedious task that requires utmost care
	from the technician doing the job. In order to provide clearer images for
	accurate interpretation of urine samples, microscopic images must be
	properly focused. Likewise, it is essential for the technician to avoid
	contamination with the urine sample when doing the task, especially in the
	course of the disease. Less human handling to prevent the spread of
	of autofocus on a compound microscope and implementation of automated
	microscope slide adjuster with image stitching through use of Variance of
	Laplacian method and Scale Invariant Feature Transform (SIFT)
	respectively.
T0048	The Characteristics and Antioxidant Activities of Chaba Maple ( <i>Hibiscus</i>
	Acetosella) Homemade Jam
Poster 6	Suradwadee Thungmungmee, Nakuntwalai Wisidsri, Warachate Khobiai,
	Thisakorn Dumrongphuttidecha, Khemiira Jamkom and Surachai Techaeoi
	Rajamangala University of Technology Thanyaburi Thailand
	Abstract—Objective: This study aimed to characterized physicochemical
	and chemical characteristics of Chaba maple ( <i>Hibiscus acetosella</i> )
	homemade iam (CHI) and determine its autoxidation ability Methods. The
	physicochemical and chemical characteristics of CHI were investigated
	The color viscosity and pH were observed as physicochemical data while
	chemical properties were obtained from sugar content and total polyphenol
	content determined using HPI C-refractometer and Folin Ciocalten assay
	content, acternance using in LC-renacionater and roun-Clocatel assay

	respectively. The antioxidant activities of CHI were identified using DPPH
	respectively. The antioxidant activities of CHJ were identified using DTTH radical accounting forming reducing antioxidant power (EDAD) and nitric
	radical scavenging, terric reducing antioxidant power (FRAP) and muric
	oxide (NO) radical scavenging ability methods. Results: The color and
	viscosity of CHJ was purple-red and $34,483.33 \pm 152.75$ cP respectively.
	The pH was at 3.78. The total sugar was not detected in CHJ. The total
	polyphenol content of CHJ showed the highest $(47.18 \pm 1.80 \text{ mg GAE/g of})$
	jam) followed by SL (23.66 $\pm$ 0.32 mg GAE/g of jam), DK (21.99 $\pm$ 0.50
	mg GAE/g of jam) and BF (9.75 $\pm$ 0.38 mg GAE/g of jam) respectively.
	Antioxidant activities of CHJ with %DPPH radical scavenging of $100.00 \pm$
	1.39% and FRAP value of 1690.70 $\pm$ 8.26 uM which exhibited the highest
	activity and significantly different when compared with others. The %NO
	scavenging activity of CHI and SL were $72.43 \pm 1.93\%$ and $73.82 \pm 1.66\%$
	respectively which higher than DK and BE Conclusion. This study show
	and in both physicochemical and chemical characteristics of CHI. The
	good in both physicochemical and chemical characteristics of CHJ. The
	CHJ presents the highest total polyphenol content as well as antioxidant
	activities. Thus, a homemade jam of Chaba maple may be considered as a
	good source of antioxidants and functional foods.
T3028	Application of Reflectance Mode Photoplethysmography for Non-invasive
Dester 7	Monitoring of Blood Glucose Level with Moving Average Filter
Poster /	Febus Reidj G. Cruz, Charmaine C. Paglinawan, Celina Nadine V.
	Catindig, John Charles B. Lamchek, Danielle Diane C. Almirañez and
	Anne Flereece Sanchez
	Mapua University, Philippines
	<i>Abstract</i> —With the continuous increase in number of people suffering
	from diabetes the demand of a device that can noninvasively monitor
	blood glucose level has been greater. The goal of the study is to develop a
	device that can monitor the blood glucose level that would not cause any
	discomfort to the patients by utilizing reflectance mode
	abstanlathyamagraphy againsed with a filtering technique Moving
	photopietnysmography equipped with a intering technique, Moving
	Average filter. Initially, the device prompts the user to choose from two
	categories depending on his condition: diabetic or non-diabetic, and then
	would choose between the two modes: fasting or post meal mode. The
	parameters utilized in the study are the force in Newton (N) which
	corresponds to the applied pressure on the finger, the peak-to-peak voltage
	(V) of the photopletyhsmography signal, and lastly, the blood glucose level
	measured in milligram per deciliter (mg/dL). The force is acquired using a
	force sensitive resistor that is incorporated in the ring. The suggested
	device employs a photoplethysmography sensor which can diagnose
	variations on microvascular bed of tissue. The variations in the distribution
	of blood volume has a significant relation with the measurement of blood
	glucose level. The technique used to estimate the photonlethysmography in
	glucose level. The technique used to estimate the photoplethysmography in terms of peak to peak voltage is the Moving Average filter, and the result is
	glucose level. The technique used to estimate the photoplethysmography in terms of peak-to-peak voltage is the Moving Average filter, and the result is then commerced to that of the OpeTeuch shows and Facting Pl
	glucose level. The technique used to estimate the photoplethysmography in terms of peak-to-peak voltage is the Moving Average filter, and the result is then compared to that of the OneTouch glucometer and Fasting Plasma

	output the blood glucose level for diabetic and non-diabetic patients in
	mg/dL. The equations are described to be both linear, a positive correlation
	for non-diabetic patients with a percentage of 70.3004% and a negative
	correlation for the diabetic with a percentage of 91.9226%.
T0044	Factor Promoting Wound Healing: Radical Scavenging and
<b>D</b>	Anti-Inflammatory Activity, and Growth Factor Promotion of Heliotropium
Poster 8	Indicum
	Nakuntwalai Wisidsri, Suradwadee Thungmungmee and Warachate
	Khobjai
	Rajamangala University of Technology Thanyaburi, Thailand
	Abstract-Objective: This study aims to investigate the effects of the
	Helliotropium indicum extract (HIE) on factor promoting wound healing in
	radical scavenging and inflammatory activity, and growth factor
	promotion. Methods: The radical scavenging capacity of HIE was
	evaluated by scavenging of 2,2-diphenyl-1-picrylhydrazyl (DPPH) and
	nitric oxide (NO) radicals. Furthermore, anti-inflammatory of HIE was
	determined in a cellular model. RAW264.7 macrophage cells were treated
	with various concentrations of HIE prior to activating the treated cell with
	lipopolysaccharide (LPS). The nitrite concentration of activated
	macrophage was determined by the Griess reagent kit. The cell viability of
	RAW264.7 was evaluated by resazurin reduction assay as well as NIH3T3
	fibroblast cells. In addition, production of the growth factors (TGF- $\beta$ and
	bFGF) of fibroblast was determined by Elisa kit. Results: HIE exhibited
	radical scavenging activity in the 2,2-diphenyl-1-picrylhydrazyl (DPPH)
	and nitric oxide (NO) radicals with half maximal inhibitory concentration
	$(IC_{50})$ at 0.22 mg/ml and 0.52 mg/ml, respectively. In a cellular study, HIE
	inhibited nitric oxide (NO) production in LPS-stimulated macrophage
	without cytotoxic effect to the cells with $IC_{50}$ at 87 µg/ml. Furthermore,
	HIE promoted fibroblast cell viability at 72 h of treatment and, TGF-B and
	bFGF production at 24 h of treatment. Conclusion: These results obtained
	in this study suggested that HIE promoted the factors which involved in
	wound healing processes, including anti-inflammatory effect with
	scavenged radical forming and inhibited activated-macrophage.
	Furthermore, HIE also sumulated growth factor production in fibroblast.
	Hellistronium in disum in wound treatment
T2042	Vital Signs Determination from ECC and DDC Signals Obtained from
13042	Arduino Based Sensors
Poster 9	Anglyn N Vumang Jassia P. Balbin Janatta C. Fausta Caraldo C. Taliaia
	Christel Evance V Lonez Christonhar James DMahbagu and Lorenz E
	Orinavnav
	Manua University Philippines
	Trupan Oniversity, Finippines
	Abstract—Blood pressure is one vital sign that can predict and detect

	hypertensive on individuals. One prevalent problem in developing Asian
	countries is hypertension; and it has been a global health problem. The
	main objective of this study is to determine the BP of the patient by using
	Arduino-Based Sensors: SEN0213 Heart Rate Sensor and SEN0203 PPG
	Pulse Sensor using Pulse Transit Time (PTT). Linear and 4th Order
	Polynomial Regression is used to learn the equations to calculate the
	Systolic Blood Pressure (SBP) and Diastolic Blood Pressure (DBP) of the
	nations based on the Pulse Transit Time top and bottom (PTTt and PTTh)
	with DBP and SBP measured by a medical expert using clinical equipment
	The researchers exemined 20 individuals in order to incorporate equipment.
	in relation to SDD and DDD using DTT. D values of the coefficients were
	In relation to SBF and DBF using F11. F-values of the coefficients were
	less than 0.05, which means that the data entered for regression analysis
	were not by chance and that the coefficients were significant. A
	84.06-84.61% and 67-71% of SBP and DBP data, respectively fit the
	model in an observation of 30. A 0.9199 and 0.8458 multiple R value for
	SBP and DBP is near I, which means that both datasets have a
<b>—</b>	nearly-perfect positive-relationship.
13001	A Full-Implantable Continuous Blood Glucose Monitoring System Design
Poster 10	Juan Deng, Yan Wang, Shu Zhao, Lei Wang, Yunjie Tian and Hong Sha
	Institute of biomedical engineering, Chinese Academy of Medical Science &
	Peking Union Medical College, China
	Abstract—Experimentation on animals is part and parcel of diabetes
	pathological study and new drugs development. There are several
	disadvantages of traditional blood-glucose acquiring approach since tail
	incision for blood manually operated on experimental rats. This study
	focused on automatic continuous blood-glucose measurement after one-off
	implanting operation. A full-implantable system including blood-glucose
	measurement, power source, communication and control was developed,
	where three-electrode electrochemical sensor was adopted for
	measurement module, wireless power transmission based on
	electromagnetic field was employed for power supply and bluetooth4.0
	low energy (BLE) technology was used for wireless communication. The
	final encapsulation size and weight of implantable part were
	11mm*17mm*5mm and 2.57g respectively, which are suitable for
	implantation into rats. Experiments by the designed system showed that the
	system is effective, blood-glucose concentrations can be relative accurately
	measured under the measurement range 2-34mmol/L.
T3064	An Effective Adaptive Filter to Reduce Motion Artifacts from ECG Signals
Doctor 11	Using Accelerometer
Poster 11	Miao Huang, Dongyi Chen and Fan Xiong
	University of Electronic Science and Technology of China, China
	Abstract-Electrocardiogram (ECG) is most commonly used for the
	diagnosis of heart disease. Physicians utilize high quality ECG to interpret

	and identify physiological and pathological phenomena. However, motion artifacts are caused by the electrode-skin impedance with electrode motions that are the results of a subject's movement, so it is a classical problem to reduce motion artifacts from ECG signals during real-time heart rate measurements. To the best of our knowledge, Block Least Mean Square (BLMS) algorithm has not been considered in the context of the use of accelerometer measurement data in ECG signals as a reference signal on reducing motion artifacts. Therefore, in this paper, we propose a 3-axis accelerometer to measure the acceleration signal of the movement of the trunk as the reference input of the adaptive filter and the optimal weight of the adaptive filter is adjusted by the BLMS algorithm. Finally, we have applied this algorithm on ECG signals from the subject and compared its performance with the conventional Least Mean Square (LMS) algorithm. The results show that the performance of the BLMS algorithm is superior than the LMS algorithm. And, we have found the R wave of the filtered ECG was clearly appeared.
T3066	Prediction of Behavioral Traits via Anatomical Connectivity Fingerprint
Poster 12	<b>Dongya Wu</b> and Xin Li University of Chinese Academy of Sciences, Institution of Automation, China
	Abstract—Inter-subject variability in behaviors and brain structure is widely existed even in healthy persons without neurological or psychiatric disorders. Understanding the brain origins of the inter-subject variability in behaviors is a major goal in modern human neuroscience. In this work, we aim to explore the extent to which the variability in behaviors is related to the variability in anatomical connectivity and identify the structural substrates of individual differences in multiple behaviors. Using diffusion MRI and behavioral data from the Human Connectome Project, we revealed patterns of anatomical connectivity that underlay different behaviors via a model of partial least square regression, and demonstrated that these patterns of anatomical connectivity could be used to predict multiple behavioral traits of unseen subjects. Our results describe a comprehensive relationship between multiple behaviors and anatomical connectivity, and provide a way of linking human behavior to brain anatomy.
T2017 Poster 13	Correlation Indices of Electroencephalogram-based Relative Powers during Human Emotion Processing Noor Kamal Al-Qazzaz, <b>Mohannad K. Sabir</b> and Karl Grammer University of Baghdad, Iraq
	<i>Abstract</i> —The present study sought to employ audio-visual video clip stimuli to explore the electroencephalography-based (EEG) correlation between various emotional states. To that end, seven short video clips were shown to ten volunteer participants without health conditions whilst

	ICITS 2019 CONTERENCE ADDITACT
	emotional EEG data were captured. The method of independent component analysis and wavelets (AICA-WT) was adopted for screening the extracted data. The correlation indices were computed based on spectral features employing the relative powers ( $RP$ ) of delta ( $\delta RP$ ) theta ( $\theta RP$ ) alpha
	$(\alpha RP)$ , beta $(\beta RP)$ , and gamma $(\gamma RP)$ . The next step was calculation of
	Pearson's correlation between the $RP$ of the neutral state and the $RP$ of
	the six fundamental emotional states (i.e. anger, anxiety, disgust, happiness, sadness and surprise) of every EEG channel for different brain areas (i.e. frontal, temporal, parietal and occipital scalp). According to the findings obtained, the correlation of brain activity and emotional states among the brain areas observable in healthy EEG data can be investigated based on the relevant indices afforded by the new denoising method alongside
	EEG-based correlation analysis of the <b><i>RP</i></b>
T0021 Poster 14	Assessment of the Quality of Outpatient Prescriptions from Various Clinical Setting in a Tertiary Hospital, Saudi Arabia <b>Sultan M. Alshahrani</b> King Khalid University Saudi Arabia
	<i>Abstract</i> —Objective: The quality of prescribing influences to a large extent the health outcomes of patients as errors made could result in adverse drug reactions. The aim of this study is to assess determine the quality of outpatient prescriptions in various clinical settings in Aseer region, Kingdom of Saudi Arabia. Materials and Methods: An observational, cross sectional descriptive study was carried out in various community pharmacies where the prescriptions received were analyzed for their quality. Results: The prescriptions were checked for the completeness of the patients' bio-data (name, age, sex, and hospital number), categories of drugs, prescribing by generic name, legibility of prescriber's writing, the name and signature of the prescriber. Two hundred and fifty (250) prescriptions were collected and used for analysis. A significant number of the prescriptions were written in illegible (26%) handwriting. The name (15%), age (48%) and sex (46%) of the patient were not mentioned in majority of the prescriptions. Most of the prescriptions (94%) failed to demonstrate the presence of address, height and weight of the patient. Brand name of the drugs was mentioned in all the prescriptions with only 17% of them having the generic name. The doctor's name, signature was present in 81% and 70% of the prescription respectively. Conclusion: Study show that there is a need for improvement in the quality of prescription witten by doctors. The adoption of a computer –aided prescribing system in outpatient setting would go a long way in achieving

T0034	In Vitro Anticoagulant and Antioxidant Activities of Prasaplai Recipe and
Destan 15	Zingiber Cassumunar Roxb. Extracts
Poster 15	Suriyan Sukati, Khemjira Jarmkom, Surachai Techaoei, Nakuntwalai
	Wisidsri and Warachate Khobjai
	Walailak University, Thailand
	<i>Abstract</i> —Objective: This present study aimed to evaluate the anticoagulant activity and antioxidant properties of Prasaplai recipe, a Thai traditional medicine, and its major ingredient, <i>Zingiber cassumunar</i> Roxb. extracts, seeking new therapeutic purposes for the recipe. Methods: Aqueous extracts of Prasaplai recipe and <i>Z. cassumunar</i> Roxb. were prepared by hot water decoction technique. The anticoagulant activity of the extracts was evaluated by prothrombin time (PT) and activated partial thromboplastin time (APTT) tests. In addition to anticoagulant activity, total phenol content and antioxidant activity were investigated. Total phenol content was determined by using the Folin-Ciocalteu assay. The antioxidant activity was estimated by DPPH radical scavenging activity
	and ferric reducing antioxidant power (FRAP) assay. Results: The APTT of plasma samples mixed with the Prasaplai recipe and Z. cassumunar Roxb. extracts was significantly prolonged ( $P < 0.05$ ) at the concentration of
	1.0 mg/ml and above comparing to the control (normal saline solution), but
	was no significantly different for the PT. These results suggested that
	Prasaplai recipe and Z. cassumunar Roxb. extracts showed anticoagulant
	activity affecting the function of coagulation factor in the intrinsic
	pathway. All aqueous extracts possessed considerable antioxidant activity
	and were rich in total polyphenol. Conclusion: This finding indicates that
	the aqueous extracts possess significant anticoaguiant and antioxidant activities, thus showing the potential Presentai regine and Z cassumumar
	Roxb. as a new source of bioactive compounds for therapeutic purposes, with particular emphasis on the prevent and treatment of thrombosis.
T3045	Spectroscopic Properties of Blood for Pulse Oximeter Design
Destar 16	Abeera Vaqar, Intisar Rizwan I Haque and Tahir Zaidi
Poster 16	National university of Sciences and Technology (NUST), Pakistan
	<i>Abstract</i> —Pulse oximeter is an important medical device as it is used for emergency situations in hospitals for monitoring patient's peripheral oxygen saturation (%SpO ₂ ). For more than 30 years many research studies have focused on designing a wearable compact pulse oximeter device for accurate %SpO ₂ measurements. Most of these devices provide values that are either 2% above or below the desired %SpO ₂ values, calculated using arterial blood gas (ABG). Pulse oximeter provides %SpO ₂ readings of arterial blood and the pulse rate through convenient placement of the sensor on the finger. In the transmittance type pulse oximeter, the
	measured at two wavelengths one each from the Red band and the Infrared

(IR) band. The two band's combined wavelength ranges from 600nm to
1000nm on the electromagnetic spectrum. At each wavelength, the light is
detected after placing a finger between the light source and the detector of
spectrophotometer. The detected signal consists of a cardiac synchronous
AC signal which is due to the changes in arterial blood volume, and the DC
level which is due to bone, tissue and non-pulsatile blood. The ratio of
signals corresponding to Red and IR bands is calculated and is related to
arterial oxygen saturation. In this paper, we investigate the spectral
properties of blood through spectrophotometer-based readings from finger
in the wavelength range of 600nm to 1000nm and determine the optimum
wavelength combination for designing the transmittance type pulse
oximeter. For this purpose, a comparison of all combinations of Red and IR
band wavelengths was carried out. The results of our study indicate that
more than one combination of wavelengths can be used for designing pulse
oximeters based on the absorbance values observed in the IR and Red
bands

**Tips:** The schedule for each presentation is for reference only. In order not to miss your presentation, we strongly suggest that you attend the whole session.

Afternoon, March 29, 2019 (Friday)

# Time: 13:20~15:35

## Venue: Room C5 (17th Floor)

## **Topic: "Clinical Pharmacy and Pharmacology"**

## Session Chair: Assoc. Prof. Keimei Oh

T1014 Correllation Between Glucose-6-Phosphate Dehydrogenase Enzyme, Proteinuria, Isoprostane on Preeclampsia with Nifedipine, Metildopa, Presentation 1 Magnesium Sulfas Therapy Lina Lukitasari, Aditiawarman, Masyhudi, Siti Khaerunnisa and Suhartati  $(13:20 \sim 13:35)$ Universitas Airlangga, Indonesia Abstract—Objective: The objective of this research was to correlate between the enzyme activity of Glucose-6-Phosphate Dehydrogenase (G6PD) with proteinuria i.e a marker of kidney damage and isoprostane i.e marker of oxidative stress on maternal with preeclampsia after administration nifedipin, metildopa and magnesium sulfas integration. Methods: This cross sectional study was held in Suwandi Hospital, Surabaya, East Java, Indonesia from September to November 2018. From, 800 pregant women population there was total sampling about 30 pregnant women with preeclampsia with nifedipin, metildopa, and magnesium sulfas administration, age ranged from 17 to 48 years during their third trimester (> 20 weeks) were studied. They were cellected from the Obstetric and Gynaecology Patient Department (Obsgyn) of Muhamad Soewandi Hospital, Surabaya, East Java, Indonesia. G6PD enzyme activity was measured from plasma by spectrophotometric method, isoprostanee plasma were measured by competitive-ELISA method and proteinuria urine spot was measured by urine dipstick from standart laboratory of the hospital. The statistic analysis in this study used Spearman's correlation coefficient test were performed by using SPSS for windows version 23 as applicable. Results: In this research, G6PD enzyme was positively correlated (p<0,05) with proteinuria and it was significant statistically connection. Proteinuria was statistically positive correlated (p<0,05) with blood pressure. There was no significant statistically correlation between G6PD enzyme activity and isoprostane concentration. Conclusion: The

	present study found that correlation between the enzyme activity of G6PD
	and proteinuria i.e implication of renal damage in preeclampsia with
	administration nifedipin, metildopa and sulfas magnesium. But, there is no
	correlation with isoprostane i.e implication of stress oxidative. This study
	suggest that there was need a concern about understanding the
	pathophysiology of proteinuria for possibility of drug target for individuals
	with preeclampsia
T0084	In Vitro Antimicrobial Activity of Some Essential Oil Against Bacterial
10004	Pathogens Causing Skin Diseases in Vapor Phase
Presentation 2	Purit Pattanananit Sunisa Mithonglang Sunita Mithonglang and
(10.05.10.50)	Surachai Tachaoai
(13:35~13:50)	Baiamangala University of Tashnology Thenyshuri, Theiland
	Rajamangana Omversity of Technology Thanyaburi, Thanand
	Abstract—Objective: The objective of this study was to evaluate the antimicrobial activity of volatile oils from aromatic plants against pathogenic bacteria. Method: Thai aromatic plants, <i>Pogostemon cablin</i> (Blanco) Benth (Patchouli oil), <i>Cymbopogon nardus</i> Rendle Zitronella grass oil), <i>Pelargonium roseum</i> (geramium oil), <i>Syzygium aromaticum</i> (L.) Merrill & Perry (clove oil), <i>Cinnamomum</i> spp. (cinnamon oil) and <i>Cymbopogon citratus</i> (DC.) Stapf. (lemongrass oil) were selected. Essential oils were obtained by water distillation and stored at 4 °C until use. Six human pathogenic bacteria were obtained from Thai traditional medicine college, Rajamangala University of Technology, <i>Staphylococcus epidermidis, Escherichia coli, Staphylococcus aureus</i> , Methicillin-resistant <i>Staphylococcus aureus</i> (MRSA), and <i>Pseudomonas aeruginosa</i> . The antibacterial activity of volatile oils was determined by disc diffusion assay. MIC (minimum inhibitory concentration and MBC (minimum bactericidal concentration) of each essential oil were determined. Results: Our study showed that 10% of essential oil from <i>Cinnamomum</i> spp. was the most potential against <i>Staphylococcus aureus</i> , Methicillin-resistant <i>Staphylococcus aureus, Escherichia coli</i> when assayed by disc diffusion method with inhibition zones ranging from 37.66±0.57–45.33±1.15 mm. and 29.33±0.57 to 36.00±1.00 for lemongrass oil with MIC and MBC of 1.25%. Conclusion: From this study it can be concluded that some essential oils have potential antibacterial activity. The present investigation provides support to the antibacterial properties of essential oils and will be apply to health care product as aroma antibacterial products.
T1005	Atheroprotective Effect of Solanum Betaceum on Rats Exposed to
11005	Cigarette Smoke
Presentation 3	Siti Khaerunnisa, Hanik Badriyah Hidayati, Joni Susanto, Inatun Yustrilia
(13:50~14:05)	and Uhartati
	Universitas Airlangga, Indonesia
	<i>Abstract</i> —Objective: The objective of this research was to determine the atheroprotective effect of <i>Solanum betaceum</i> 's ethanol extract towards carotid artery intima media thickness (cIMT) and the level of Malondialdehyde (MDA) on Rats exposed to cigarette smoke. Methods: Thirthy adult <i>Rattus norvegicus</i> strain <i>Wistar</i> were divided into five groups

	and exposed to cigarette smoke, 3 pc cigarette/day and simultaneously
	administered with Solanum betaceum in group K2, K3, K4 (100 mg/kg
	b.w/day: 200 mg/kg b.w/day: 400 mg/kg b.w/day) respectively. The
	duration of treatment for all groups was 28 days. Blood was withdrawn
	from the cardiac to determine the MDA level. Histological slide from
	carotid artery intima media was collected to determine cIMT Results:
	Calorum hatagaum'a athanal avtract administration could significantly
	solution belaceum's ethanol extract administration could significantly
	prevent the development of atheroscierosis due to oxidative stress by
	decreasing the level of MDA ( $p<0.05$ ) and reducing degree of cIMT
	changes (p $<0.05$ ). Conclusion: The present study found that <i>Solanum</i>
	betaceum's ethanol extract could prevent the development of
	atherosclerosis due to smoke exposure through the reduction of the MDA
	level i.e., the marker of oxidative stress, which is associated with the
	reduced of cIMT changes. However, further studies on other bioactivity of
	Solanum betaceum as antioxidant are warranted.
T0055	Tocotrienol-Rich Fraction Modulate the PI3K/AKT Signaling Pathway
	Genes And Prevent Oxidative Stress in Nicotine-Induced Pre-Implantation
Presentation 4	Embryos
(14.05, 14.20)	Nurul Hamirah Kamsani, Sharaniza Ab-Rahim, Yuhaniza Shafinie
(14.03~14.20)	Kamsani, Nor Ashikin Mohamed Noor Khan and Mohd Hamim Rajikin
	Universiti Teknologi MARA Malaysia
	Chivershi Texhologi Ini heri, Muluyshi
	Abstract Objective: This study aimed to determine the effects of TRE on
	the regulations of <b>DI2K</b> /Akt nathways related gapes in proimplentation
	ambruog induced by nicoting. Methoda: Twenty four famile Balh/a mice
	embryos induced by income. Methods. Twenty-four female Bab/c fince
	were divided into four groups with incotine and TRF supplementation for 7
	consecutive days. Animals were superovulated prior to mating with fertile
	males. Plasma malondialdehyde (MDA), superoxide dismutase (SOD),
	catalase (CAT), and glutathione peroxidase (GPx) were determined and
	analyzed accordingly. Embryos with 2 and 8 blastomeres were assessed for
	gene expression analysis. Results: The levels of endogenous anti-oxidative
	enzymes for the group with TRF intervention and TRF only group showed
	no significant changes when compare to the control group. The level of OS
	biomarkers was also significantly decreased when compared to the
	nicotine-induced group. At 2-cell stage, the group with TRF intervention in
	the nicotine-induced mice resulted in a significant upregulation of <i>PTEN</i> ,
	Akt1, GSK3 $\beta$ and Mapk1 genes almost similar to the baseline (control). On
	the other hand, at 8-cell stage, intervention with TRF in the
	nicotine-induced mice resulted in significant downregulation of all these
	genes except for $Aktl$ when compared to the nicotine-induced group
	Conclusion: This showed that TRE evidently has oxidative stress
	protection canacity and its could be via modulating the $DI2K/Akt$ signaling
	protection capacity and its could be via modulating the FISR/ARt signaling
	Paulway.
	Amenorative Effect of Phoenix Dactylifera on Adverse Effects of
	Linezolid in Male Albino Rats

ICPPS 2019 CONFERENCE ABSTRACT		
T0023	Mahmoud A. A. Said, Sayed, A. Aziz, and Sameh, M. El- Nabtity	
Presentation 5	Zagazig University, Egypt	
(14:20~14:35)	<i>Abstract</i> —Objective: This study aimed to investigate of the adverse effects	
	of LZD (linezolid) on biochemical and hematological parameters and some	
	organs including bone marrow, brain & kidneys. Investigate the possibility	
	of MEPD (methanolic extract of Phoenix dactylifera) to counteract the	
	adverse effects of linezolid Methods: Forty eight adult male albino rats	
	were allocated into four equal groups (each of 12 animals). The first group	
	received tween 80 orally. The second group received was given 0.5 ml of	
	linezolid suspension 4% in tween 80 (100mg/kg body weight) orally. The	
	third group received the same dose of linezolid suspension followed by 1	
	ml of MEPD orally. The rate in the last group were given 1 ml of MEPD	
	(1000 mg/kg body weight) orally. Pats were sperified and blood samples	
	(1000 mg/kg body weight) orany. Kats were satisfied and blood samples	
	were conected for nematological and blochemical study. Femuli bones,	
	to perform the historethological investigation. Desulta: The dase of	
	to perform the instopathological investigation. Results: The dose of	
	Linezond administered for 14 successive days induced a mild to moderate	
	nematological abnormalities including decrease in hemoglobin content	
	(7.88±0.18 g/L) on day-1 post-treatment. Significant increase in serum	
	urea (59.75±0.85) & increase in serum creatinine was observed	
	$(1.89\pm0.04)$ . On day-14 post- treatment, Linezolid induced mild to	
	moderate cellular abnormalities in bone marrow, brain and kidneys. The	
	concurrent oral administration of MEPD and linezolid for the same period	
	corrected the hematological, biochemical and histopathological alterations	
	induced by linezolid. Conclusion: It was concluded that methanolic extract	
	of phoenix dactylifera clearly ameliorated these damaging effects induced	
	by linezolid.	
T1015	Solanum Betaceum Improves Cognitive Function by Decreasing	
Presentation 6	Indri Safitri. Hanik Badrivah Hidavati. Agus Turchan. Suhartati and Siti	
(14:35~14:50)	Khaerunnisa	
	Universitas Airlangga, Indonesia	
	<i>Abstract</i> —Objective: The purpose of this study was to evaluate the effect	
	of Solanum betaceum towards cognitive function i.e memory, and the level	
	of N-Methyl-D-Aspartate receptor (NMDAR) and Brain Derived	
	rats model. Methods: Fifty adult male albino rats were divided into five	

	groups AD-induced rats by Aluminum chloride (AlCl ₃ ) with dose 2g/L for
	21 days period and in 22 th day administered parallelly with Solanum
	<i>betaceum</i> in group P ₁ , P ₂ , P ₃ (100 mg/kg b.w/day; 200 mg/kg b.w/day; 400
	mg/kg b.w/day respectively) for 14 days. The level of NMDAR, BDNF
	were measured by ELISA methods, whereas memory were measured by
	Morris water maze test. Results: Solanum betaceum administration
	increased cognitive function significantly (p=0.037) of Alzheimer's disease
	(AD) induced-rats by decreasing the time to reach the target of Morris
	water maze and maintaining the low levels of NMDAR significantly
	(p=0.006), but the level of BDNF did not increase significantly (p=0.346).
	These results indicated that ethanol extracts of <i>Solanum betaceum</i> could
	decrease brain NMDAR and increase cognitive function by promote better
	memory function but did not significant increased the level of BDNF in
	AD-induced rats Conclusion: This study revealed that the treatment of
	AD-induced rats with Solanum betaceum extracts significantly improve
	memory function and decrease the level of NMDAR
T0105	Effect of Simvastatin on Histopathology of The Heart after 5/6 Subtotal
10105	Nenhrectomy
Presentation 7	Putu Nita Cahvawati
(14.50, 15.05)	Warmadewa University Indonesia
(14:50~15:05)	warmadewa emiversity, maenesia
	Abstract—Cardiovascular disease are a major cause of morbidity and
	mortality in chronic renal failure Stating are very potent HMG-CoA
	reductase inhibitors. This study aims to assess the condition of cardiac
	histopathology through hematoxyline-eosin staining in 5/6 subtotal
	nephrectomy conditions Fifteen male Swiss mice aged 3-5 months will be
	grouped into the nephrectomy group (ISN $n=5$ ) sham operation (ISO
	n=5) simvastatin 20 mg/kg BW (ISIM $n=5$ ) Histopathology of the hearth
	is assessed based on scoring using a scale (-) no damage $(+)$ mild $(++)$
	medium and $(+++)$ heavy. The results showed no morphological changes
	in heart muscle tissue in the ISO group, whereas in the ISN and ISIM
	groups there was moderate damage to sarconlasm (11) and minimal
	groups there was moderate damage to satcoplasm $(++)$ and minimal changes in myofibrils $(+)$ . The ISN group also found severe damage $(++)$ .
	to the irregularity of the heart muscle, whereas in ISIM only moderate
	domage (11) Simulation scores to be able to correct the irregularity of the
	heart muscle in the condition of 5/6 subtotal nonbroatomy
T1010	The Impact of Cassythe filiformic Dutonal Erection to the Dragmoney and
11010	Factol Development on Miss
Presentation 8	Armania Nama Eidiais Armaine and Almah in Almadia
	Armenia Nazar, Firincia Ayuning and Almandy Anmadin
(15:05~15:20)	University of Andalas Padang, Indonesia
	Abstract Objectives The impost of Country filiformic butered for the
	Abstract—Objective: The impact of Cassytha filiformis butanol fraction to
	Abstract—Objective: The impact of Cassytha filiformis butanol fraction to the pregnancy and fetal development had been conducted. Methods: The
	Abstract—Objective: The impact of Cassytha filiformis butanol fraction to the pregnancy and fetal development had been conducted. Methods: The fertilized mice were treated with butanol fraction of <i>C. filiformis</i> at doses

	during first, second and third periods of pregnancy. Parent body weight
	was monitored every day until day 18, where the animals were
	laparactomized to determine the fetal number, death and or resorbtive site,
	fetal body weight and defect. ANOVA followed by Duncan multiple T
	range test (significance at $p < 0.05$ ) was performed to analyze data. Results:
	The parent weight was affected by the period, doses and duration of
	pregnancy and the interaction of those factors ( $p<0, 01$ ). Mice treated with
	doses of 5 and 10 mg/kg BW during the first period of pregnancy were not
	pregnant and less fetus on all treated parent ( $p<0,05$ ). We also found fetus
	death, resorbtive site and under developed fetus on mice treated during the
	second period of gestation, but no fetal defect was found. Conclusion:
	These indicated the butanol fraction of <i>C. filiformis</i> produced infertility and
	slowed pregnancy development and produce fetal defect on mice.
T0107	In Vitro Entrapment and Release Studies of Levofloxacin Using
	Epichlorohydrin-Crosslinked Hydrogel
Presentation 9	Angeli Ann S. Rescober
(15:20~15:35)	Adamson University, Philippines
	Abstract—Objective: This study aimed to optimize and evaluate the
	controlled release rate, ocular irritancy, and <i>in vitro</i> antimicrobial
	properties of levofloxacin entrapped in epichlorohydrin-crosslinked
	hydrogel of sodium carboxymethylcellulose and gelatin. Methods: Various
	parameters such as polymer ratio, amount of crosslinker, temperature,
	reaction time, swelling capacity and percent drug loading were considered
	in optimizing levofloxacin hydrogel (OLH). Hydrogel preparations with
	higher amount of drug loaded were further analyzed to determine its in
	vitro drug release rate, ocular irritancy on New Zealand rabbits, and
	antimicrobial activities against Pseudomonas aeruginosa and
	Staphylococcus aureus. Optimized levofloxacin hydrogel was then
	subjected to three-month stability testing at 40 $\pm 2$ °C and 75 $\pm 5$ % relative
	humidity in which samples were withdrawn at the end of each month for
	analysis. Results: Polymer groups with higher concentrations of sodium
	carboxymethylcellulose have higher swelling and drug loading capacities
	than those with higher gelatin concentrations. Meanwhile, qualitative
	analysis using differential scanning calorimetry, fourier-transformed
	infrared spectroscopy, and scanning electron microscopy verified the
	presence of levofloxacin in epichlorohydrin-crosslinked hydrogel.
	Among the four polymer ratio, F3 was the optimized hydrogel with drug
	loaded concentration of 99.50% which was within the acceptable assay
	limit of 0.5% levofloxacin solution based on USP monograph. It
	followed Higuchi kinetic model with drug release mechanism of super case
	2 transport indicating hydrogel swelling as a key factor for its controlled
	drug release. In vitro antibacterial test against Pseudomonas aeruginosa
	and Staphylococcus aureus were sensitive to optimized levofloxacin
	hydrogel (OLH) with inhibitory diameter zones of 31.68 mm and 37.05

mm respectively. Ocular irritancy test also showed that the OLH is
non-irritating upon instillation in the cul-de-sac of New Zealand rabbits.
Conclusion: Optimized levofloxacin hydrogel was effective, non-irritating
and stable which can be used as an alternative to conventional 0.5%
levofloxacin ophthalmic solution.

**Tips:** The schedule for each presentation is for reference only. In order not to miss your presentation, we strongly suggest that you attend the whole session.

Afternoon, March 29, 2019 (Friday)

# Time: 13:20~15:35

## Venue: Room C6 (17th Floor)

## **Topic: "Bone Tissue Engineering and Orthodontics"**

## Session Chair: Prof. Chiharu Ishii

T3007	Experimental Study on Bone Health in Drilling
Presentation 1	Khurshid Alam, Ahmed Al-Ghaithi and Mushtaq Khan
	Sultan Qaboos University, Oman
(13:20~13:35)	
``````````````````````````````````````	Abstract—Drilling in bone is a common surgical procedure routinely
	performed in orthopedics and dental surgeries for repair and fixation
	purposes. Measurement and control of bone temperature and drilling thrust
	force are critical to the outcome of the procedure. Excessive heat and large
	drilling force and torque produce in bone drilling process may cause
	physiological changes in the bone cells. The aim of this study was to
	evaluate the extent of biological damage in the immediate vicinity of the
	drilling region. Temperature in bone drilling process was measured by
	varying drill speed. The effect of bone temperature on the extent of cells
	damage surrounding the drilling area was evaluated. Necrotic depth was
	measured for the range of temperatures obtained from drilling experiments.
	Elevated temperature in bone was found to have negative impact on the
	health of the bone. Result showed that minimum cell damage can be
	achieved by using lower drill speed in bone drilling operation.
T2010	MiMIC – Engineered Bone Tissue Microfluidic Platforms for Observing
Presentation 2	Migration and Metastasis in a Chip
r resentation 2	Chong Seow Khoon Mark, Jerry Chan, Lee Lui Shiong and Roger Kamm
(13:35~13:50)	Nanyang Technological University, Singapore
	Abstract—The bone marrow stromal niche is a common metastatic site for
	cancers of prostate, breast and lung. Prior in vivo studies have shown
	prostate cancer (PCa) invasion into tissue-engineered human graft.
	However, mechanisms for early stages of metastasis remain elusive due to
	the difficulty of studying single-cell migration in real-time. Here, we
	developed bone-on-a-chip models to describe bone metastasis in vitro. Two

	models based on three-channel microfluidic devices were described in
	these studies Firstly Migration-in-chin in which engineered hone
	microanying ments were demonstrated to attract and conture establishing
	incroenvironments were demonstrated to attract and capture osteotropic
	cells in a collagen gel "capture" channel. Preliminary experiments were
	conducted to demonstrate utility for drug testing and cancer stem cell
	isolation. Secondly, Metastasis-in-chip, where vascularised bone stromal
	environments were engineered into microfluidic chips; these chips were
	shown to be useful for the recapitulation and visualisation of early
	metastatic events. Taken together, these studies show the utility of
	engineering tissue-on-chip environments for utility as models for bone
	metastasis and potential applications in cancer diagnostic and prognostics
T2060	Lumber Spinel Loading during Steen Squat and Knooling Lifting: A
13000	Lumbar Spinar Loading during Stoop, Squat, and Kneering Linting: A
Presentation 3	Musculoskeletal Modeling Analysis
r resentation 5	Arjaree Ausavanonkulporn, Kanyakorn Areekul, Wongwit Senavongse
(13:50~14:05)	and Chamaiporn Sukjamsri
	Srinakharinwirot University, Thailand
	Abstract—Pain at the lower back is a common health problem affecting
	working-age population around the world. The risk of low back pain has
	been assessed through spinal loads that change across different postures
	Lifting is the most frequent posture that has been studied in previous
	Literature However it is upclear which lifting posture should be performed
	interature. However, it is unclear which inting posture should be performed
	in order to decrease the incidence of low back pain. The objective of this
	study was to evaluate spinal loads for three different lifting techniques;
	stoop, squat, and kneeling, at several levels of the lumbar spine. The
	present study was conducted via musculoskeletal modeling using
	commercial software (AnyBody Technology). The results indicate that
	there was no significant difference in compressive and resultant force
	among the three liftings. However, the difference in shear force between
	stoop and kneeling lifting was found to be significant. Increasing level of
	the lumbar spine significantly led to the decrease of shear force. The
	findings should benefit various research studies dealing with I RD
T2051	Strass and Strain Analysis on Knop Joint
15051	Suess and Surall Analysis on Knee Joint
Presentation 4	Goo Li jie and Sara Lee Kit Yee
	Tunku Abdul Rahman University College, Malaysia
(14:05~14:20)	
	Abstract—The effect of weight force on knee model was studied by
	simulation analysis using the SolidWorks. Six different human weight
	varied from 40 kg to 90 kg were subjected to stress and strain analysis on
	the knee joint model. A mesh size of 3.5 mm was selected according to the
	corresponding maximum stress intensity and number of nodes. The results
	showed that maximum stress intensity and strain increased with the
	increase of applied weight force. The upperment and the force
	increase of applied weight force. The uppermost part of the femur was
	tound to be deformed for 58 mm when subjected to a human weight of 90
	kg and gradually decreases from femur towards the tibia. However, there is

	insignificant deformation on the tibia detected although the weight was
	increased to 90 kg.
T3026	An Approach for Quantitative Evaluation of Transfemoral Prosthesis
Dresentation 5	Socket by Finite Element Analysis
Presentation 5	Le Van Tuana, Akihiko Hanafusab and Shinichirou Yamamoto
(14:20~14:35)	Hanoi University of Science and Technology, Vietnam
	Abstract—Objective: The correct shaping of the socket for appropriate
	load distribution is a critical process in the design of lower limb prosthesis
	sockets. Several studies have been conducted to disclose these parameters,
	they can be divided into two methods: experiment method and computation
	interface pressure between the residual limb and socket. But there is a little
	study focus on creating separate models of socket and residual limb
	Almost research using the same shape of socket and residual limb or using
	the unreal model of the socket. This study will be give some solutions for
	above issues. Methods: The author creates two models of residual limb:
	same and different with the shape of the socket. After that, the FE models
	were generated with appropriate conditions of the donning process. The
	experimental procedure was conducted for comparison and discussion with
	the results of simulation. Results: The results in case of different shape of
	socket and residual limb suggest that it is the better model for evaluating
	the interface pressure. Conclusion: The procedure developed through this
	work can be used by future researchers and prosthesis designers in
	understanding how to better design the socket and transfemoral prostheses.
T3024	Mechanical Behaviors of the Stent Deployment Inside A Patient-Specific
Presentation 6	Stenotic Coronary Artery
	Liu Yuqian, Pan Lianqiang, wu Heng and Lin Changyan
(14:35~14:50)	Beijing Anzhen Hospitai, Capitai Medicai University, China
	Abstract—The PCI prognosis is significantly influenced by the instant
	mechanical behaviors of stenotic coronary artery and deployed stents.
	which could be used to strategically deploy stent based on verified
	structural and hemodynamics results in order to identify the optimal
	solution for each individual's anatomy. However, the instant mechanical
	behaviors of stenotic coronary artery and deployed stents could not be
	obtained directly from current examination techniques commonly used in
	clinical. In this paper, we expect to establish a patient-specific model to
	assess their instantaneous mechanical status. With additional advances
	computational simulations FEA models, including rigid guide catheter,
	six-folded balloon with conical tip, crimped and bended stent, stenotic
	coronary artery with soft plaques, were simulated through virtual
	mechanical expansion and recoil. The morphology changes of coronary
	apposition of stent struts were analyzed. Desults indicated that human in the
	mechanical expansion and recoil. The morphology changes of coronary lumen, strain and stress distributions of vessel involved by components, apposition of stent struts were analyzed. Results indicated that lumen in the

	stenotic region restored patency obviously. The maximum principal stress distribution of vessel mainly concentrated in the area with thicker plaque. The higher von Mises stress occurred in the corner of the strut and at the connection between different crowns. Slight malappositions were found in the proximal end. In conclusion, the instant mechanical behaviors of artery and stent could be obtained through virtual stenting approach, and that is proposal to contribute to choosing the best stenting schemes and predicting the clinical outcomes for a specific patient.
T3087	Behaviour of Invisible Aligners under Static and Dynamic Loading
Presentation 7	Domenico Ciavarella, Claudia Cianci , Francesco De Cillis, Michele Laurenziello, Lorenzo Lo Muzio, Carmine Pappalettere
(14:50~15:05)	Polytechnic of Bari, Italy
	Abstract—The reliability of the invisible aligners (IA) treatment may be influenced by the deformation they undergo in the 15 days treatment period. In this study the dynamic and static stress of the IA has been evaluated. Three different materials used to realize the IA has been chosen and tested: PET-G; PET; SmartTrack®. The evaluation of dynamic stress has been realized on aligners used by a patient for two weeks (22 hours per day – 2 hours are needed for eating). A resin cast of the patient has been realized and fixed in an Instron 3343 testing machine; than the different IA has been positioned on the cast and loaded using a continuous force of 50 N for 15 min. The tested aligners were scanned and compared with untested aligners. The deformation was evaluated at the posterior, medium and anterior area of the IA by the Base of the Tooth point and Facial Axis point techniques. It was demonstrated that the material PET had a lower deformation compared with PET-G and SmartTrack®, in particular in the anterior area. Moreover, the contact with human saliva determines a greater deformation in IA.
T3054	Comparison of Molar Distalization Devices in a Treatment of
Presentation 8	Malocclusion Class II: Finite Element Analysis Kornkamol Anasart, Atinun Pattarahirun, Chamaiporn Sukjamsri , Eduardo
(15:05~15:20)	Yugo Suzuki and Boonsiva Suzuki Srinakharinwirot University, Thailand
	<i>Abstract</i> —Malocclusion Class II is a poor-bite condition when the lower first molar situates more posteriorly than the upper first molar. To restore the normality of bite condition, the upper molar is often moved distally using an orthodontic device. The objective of this study was to predict and compare the outcomes of two different orthodontic devices both equipped with miniscrews. The first device, called a buccal mini-implant, has miniscrews placed on the alveolar bone on the buccal surface. The second device, called an indirect palatal miniscrew anchorage and distalization appliance or iPANDA, has miniscrews inserted along the midline of the palatal bone. For comparison purpose, a three-dimensional (3D) model of

	both devices was virtually attached to a 3D model of the upper teeth with maxillary bone and periodontal ligament. A force of 200g was applied through the devices to simulate a recommended distalization force. Teeth displacement, stress in both miniscrews and surrounding bone, and micromotion at miniscrew-bone interface were measured using finite element method. The findings show that the iPANDA device led to a higher molar distalization and higher micronmotion compared to the buccal mini-implant device. Stress obtained from the iPANDA device was also found to be higher, however, it was relatively too small to damage both the miniscrew and surrounding bone.
T3088	A Novel Assessment Technique for the Degree of Facial Symmetry Before and after Orthographic Surgery Based on Three Dimensional Contour
Presentation 9	Features Using Deep Learning Algorithms
(15:20~15:35)	Hsiu-Hsia Lin, Lun-Jou Lo and Wen-Chung Chiang Chang Gung Memorial Hospital, Taiwan
	Abstract—Improvement of the facial asymmetry has become as important as correction of the malocclusion in the evaluation and planning for orthognathic surgery. In this study, we proposed an automatic machine learning system (DLS) to extract three-dimensional (3D) contour features and assess the degree of facial symmetry in patients treated with orthognathic surgery. A total of 500 normal populations were included to construct the DLS. The ground truth was based on an average of the survey of 50 of diverse referees offering their facial symmetry ratings over a 10-point scale for 500 3D facial images via an auto-play and separate slide show. The facial region of interest (ROI) was extracted by removing the disturbed region, such as the ears, the neck and all points above the hairline. A contour map was extracted from the ROI image, and used as an input pattern for automatic DLS, which included a deep convolutional neural network (CNN) for feature extraction, and a regression network provided for prediction. The experimental results showed that our model achieved 78.85% accuracies on held-out test patterns. The facial symmetry degree assessment within 1 degree was 98.63%. In addition, our method was compared with conventional 2D approaches, which obtained better results than 2D-only features which resulted accuracy is 65% using the same sample size, and the CNN system. For clinical application, 100 patients with facial asymmetry were enrolled in evaluating facial symmetry improvement after orthognathic surgery. A paired t-test was used to compare the significance of the differences between the pre-surgery and post- surgery assessing result of facial symmetry using DLS, with p <0.05 considered significant. The mean of preoperative facial symmetry degree (0.92 \pm 0.17) was higher than of postoperative (0.65 \pm 0.13) with a significant improvement (p = 0.021).

Tips: The schedule for each presentation is for reference only. In order not to miss your presentation, we strongly suggest that you attend the whole session.

Afternoon, March 29, 2019 (Friday)

Time: 13:20~15:35

Venue: Room 403N (3rd Floor)

Topic: "Computer Aided Diagnosis Technology and Application"

Session Chair: To be added

T3019	Microscopic Image Analysis and Counting of Red Blood Cells and White
Presentation 1	Blood Cells in a Urine Sample
	Jennifer C. Dela Cruz, Ramon G. Garcia, Mikko Ivan D. Avilledo, John
(13.20 - 13.35)	Christopher M. Buera, Rom Vincent S. Chan and Paul Gian T. España
(10.20 10.00)	Mapua University, Philippines
	Abstract—Traditional counting of red blood cells (RBC) and white blood
	cells (WBC) in a urine sample is done manually by a medical technologist.
	However, this makes the blood cell count subjective to the skill of the
	laboratory technician and will take much longer time in doing the task.
	This paper proposes the use of image processing in counting the WBCs and
	RBCs in a urine sample through use of Canny Edge Detection and Circular
	Hough Transform algorithm. The process consists of two (2) main parts.
	First is the Canny Edge Detection and the final part is Circular Hough
	Transform algorithms. It shows that the proposed system has a percentage
	accuracy of at least 93.229% in reference to the actual RBC and WBC
	count result.
T3097	HH-Net: Image Driven Microscope Fast Auto-Focus with Deep Neural
Presentation 2	Network
	Yunhao Ge, Bin Li, Yanzheng Zhao and Weixin Yan
(13:35~13:50)	Shanghai Jiao Tong University, China
(
	Abstract—Computer aid auto-focus system is necessary for accurate
	microscope diagnosis, especially for the high precision microscope, which
	leaves little physical distance for focus adjusting manually. We proposed
	an image-driven microscope fast auto-focus system with a deep neural
	network. There are two main contributions. First, combining the high-level
	feature learning ability advantages of convolution neural network (CNN)
	and the handcraft feature selection ability of statistical learning, we

	proposed a High-level-Handcraft Neural Network (HH-Net) to accurately determine the distance index between microscope lens and cell smear by evaluating the image focus quality. It deployed 13 layers CNN for the high-level feature extraction from image patches. While the handcraft features which provide global information from the raw image were extracted by statistical algorithms and merged into CNN features. Finally, the combined features are utilized by the fully connected layers in the network to obtain the final distance index by classifying the biomedical image focus quality. Second, cooperated with the HH-Net, we propose an end to end image driven microscope fast auto-focus system, that can learn auto-focus policies from visual input and finish at a clear spot automatically. The accuracy of our patch level focus quality prediction is 92.4% with HH-Net, while the real-time image level focus quality voting strategy. Our auto-focus system can also cooperate with the X-Y Micro platform to automatically scan the whole cell smear and get the real-time best-in-focus image of a microscope with fast response, accuracy, and robustness.
T3079	Rapid Microscopic Analysis Using Natural Neighbor Interpolation
Presentation 3	Gabriel Avelino R. Sampedro, Maricor N. Soriano, Analyn N. Yumang and Ericson D. Dimaunahan
(13:50~14:05)	Mapua University, Philippines
	<i>Abstract</i> —This paper focuses on the use of a method of spatial interpolation to analyze microscopic slides of an Olympus CX21. The method used natural neighbor interpolation (NNI), that entails the analysis of random pre-determined points to interpolate and analyze the slide as a whole [1-2]. The flood-fill algorithm was used to perform a differential count in conjunction with NNI to analyze samples of cells infected with Malaria. After analyzing selected random points, a summary of the whole slide may be produced. The results of the various tests yielded a percent difference of no more than 20% for the application of NNI.
T3041	PCA Based Guided Bilateral Filter for Medical Color Images
Presentation 4	Waseda University, Japan
(14:05~14:20)	<i>Abstract</i> —This paper presents a fast and accurate approximation of the bilateral filter for color images such as medical color images. The bilateral filter has a problem of high computational complexity. Various acceleration methods have been proposed in the past. However, most of the existing methods have been developed for grayscale images, not for color images. Therefore, the computational complexity is high even though we apply the state-of-the-art fast approximate methods to color images. This paper tackles the problem based on the idea of the cross/joint bilateral filter. It filters a target image using an additional guide image for higher-quality

	output. Our key idea is to generate the guide image by the principal component analysis for the color vector distribution of the target image. As a result, the proposed method achieves highly-accurate approximation of the bilateral filter and succeeds in drastically reducing the computational complexity. Our experiments show that the proposed method is robust in
	high contrast medical color images. Furthermore, we combined the state-of-the-art constant-time bilateral filter with the proposed method. This combination achieved high quality performance in terms of both approximate accuracy and computational complexity.
T3101	Back Propagation Technique for Image Reconstruction of Microwave
Presentation 5	Tomography
(14:20~14:35)	Mohammad Ridwan Effendi, Ricky Willyantho and Achmad Munir Institut Teknologi Bandung, Indonesia
	<i>Abstract</i> —Tomography is a method to reconstruct the image of internal structure of some objects using signals or electromagnetic (EM) waves which are illuminated from several angles. In this paper, microwave tomography is proposed to reconstruct an internal structure of target using back propagation technique. As a target, a perforated wood is applied which is represented by a wood of tree trunk for object measurement The advantage of used technique compared to others is in its capability to consider the effects of diffraction when performing tomographic image reconstruction. Measurement data is generated by parallel-beam projections using a microwave frequency of 1.5GHz, 3GHz and 4.5GHz. By using three different microwave frequencies, the analysis and evaluation of reconstructed image are carried out which provides clearer information about the difference between the refractive index distribution of wood and its cavities.
T3043	Retina Blood Vessel Detection for Diabetic Retinopathy Diagnosis
Dresentation 6	Athasart Narkthewan and Noppadol Maneerat
riesentation o	King Mongkut's Institute of Technology Ladkrabang, Thailand
(14:35~14:50)	<i>Abstract</i> —Diabetes affects the microangiopathy in the retina which causes to retinal disorders such as blood vessel blockage then the abnormal blood vessel is occurred. The microvascular leakage will decrease or loss of sight. The aim of this research is to find the retinal blood vessel detection method for diagnosis of diabetic retinopathy. This study was carried out using the principle of image processing to analyze the retina image. The green channel was used for data processing. Consequently, several image processing techniques were applied to the green channel data as image enhancement, scaling, morphological operator and filter to extract the features of the retinal blood vessel in the retina image. The retinal blood vessel was extracted and displayed on the screen for diagnosis. The efficiency of algorithm for the retinal blood vessel detection was presented in this study. All different twenty retinal images from the DRIVE database

	were tested for blood vessel extraction. The error detection data was
	compared with the ground truth image. The results show that the maximum
	specificity and accuracy were 99.66% and 96.80%, respectively. It
	indicated that the proposed method could detect the blood vessel from
	retina image.
T3075	Eczema, Hives and Psoriasis Detection with the Application of Local
Procentation 7	Binary Pattern, Color Histogram, SVM and RGB-HSV Color Space
riesentation /	Jennifer C. Dela Cruz, Ramon G. Garcia, Ericson D. Dimaunahan, Jason
(14:50~15:05)	J. Labaclado, Gethsemane Achaia B. Reyes, Holy Merr Carol P. Riomero,
	Patrisha Mae Salamatin
	Mapua University, Philippines
	Abstract—This paper uses a system that can recognize and detect skin
	diseases such as hives eczema and psoriasis and provide temporary relief
	using RGH-HSV Color Space. Local Binary Pattern, Color Histogram and
	Support Vector Machine (SVM) These algorithms were used to train
	images for the testing process of the system. For the controlled testing the
	researchers gathered 30 images for each disease, eczema, hives and
	psoriasis, from dermnet.com and images from people that have been
	already diagnosed with the mentioned diseases in both training the
	prototype and testing the system's accuracy. The system identifying
	eczema, hives, and psoriasis have the following accuracies respectively.
	96.0560%, 95.8041%, and 98.5609%.
T3082	A Stable Video Stitching Technique for Minimally Invasive Surgery
-	Dinh Thai Kim, Ching-Hwa Cheng and Don-Gey Liu
Presentation 8	Feng Chia University, Taichung, Taiwan
(15:05~15:20)	
``````````````````````````````````````	Abstract—One of the major challenges in Minimally Invasive Surgery
	(MIS) is the limited field of vision (FOV) of the endoscope. We have
	designed an MIS Panoramic Endoscope (MISPE) to provide doctors with a
	broad field of view. However, there was an issue in its stability for video
	stitching. In this paper, we propose a novel algorithm to improve the
	MISPE's performance. Experimental results show that our revised MISPE
	can operate stably and enhance the camera's FOV up to 70%.
T3037	Fundus Image Classification for Diabetic Retinopathy Using Disease
Presentation 9	Severity Grading
	Aiki Sakaguchi, Renjie Wu And Sei-Ichiro Kamata
(15:20~15:35)	Waseda University, Japan
	Abstract—Diabetic Retinopathy (DR) is ranked at the top of blindness
	causes. It progresses without subjective symptoms and leads to blindness in
	the worst case. However early detections and proper treatments can prevent
	visual disturbance. Because it takes time and cost for diagnoses by
	clinicians, research and development of diagnostic support systems has
	actively been conducted. This research aims to establish a fundus image

classification method based on disease severity assessment for a diagnostic
support by a fundus image analysis. In this paper, we propose a Graph
Neural Network (GNN)-based method to improve accuracy for severity
classification. Our method has two features. The first is to extract
Region-Of-Interest (ROI) sub-images focusing on regions locally capturing
lesions in order to minimize background noise in image preprocessing for
the classification. The second is to utilize the GNN which is not yet applied
for fundus image classification. In order to evaluate our proposed method,
we use Indian Diabetic Retinopathy Image Dataset (IDRiD) utilized in
"Diabetic Retinopathy: Segmentation and Grading Challenge" on
Biomedical Imaging held at the IEEE International Symposium in 2018.
We verified that the accuracy of our method improved 2.9% over the
conventional method in this contest.

**Tips:** The schedule for each presentation is for reference only. In order not to miss your presentation, we strongly suggest that you attend the whole session.

# Afternoon, March 29, 2019 (Friday)

# Time: 13:20~15:35

# Venue: Room 403K (3rd Floor)

## **Topic: "Biomaterials and Biochemistry"**

## Session Chair: To be added

T0064	Green Synthesis and Characterization of Gold Nanoparticles Using Fig
Presentation 1	Leaf (Ficus Carica L.) Extract
	Febriana Yoga, Nugroho B.H and Syukri Yandi
(13:20~13:35)	Universitas Islam Indonesia, Indonesia
	Abstract—Gold nanoparticles became a new breakthrough and are widely
	used as a medium for treating diseases. Most of the synthesis of gold
	nanoparticles comes from chemical compounds that are toxic and not
	environmentally friendly. The flavonoid content in Fig leaves is thought to
	be used as a reducing agent in the formation of gold nanoparticles. The aim
	of this study was to conduct biosynthesis and characterization of gold
	nanoparticles from Fig leaf extract. The gold nanoparticle biosynthesis
	method was carried out by extracting of leaves, then extract was mixed
	with a solution of HAuCl4 using ultrasonication. Characterization of gold
	nanoparticles includes observation of color change, time of formation gold
	nanoparticles using UV-Vis, particle size, reading of functional groups
	using Fourier Transform Infrared, the morphology of gold nanoparticles
	using Scanning Electron Microscopy and Transmission Electron
	Microscopy. Gold nanoparticles from Fig leaf water extract changed color
	from yellow to pink, a wavelength of 535 nm at 24 hours, average particle
	size 88,83 nm $\pm$ 4,73 with a polydispersion index value of 0,304 $\pm$ 0,02, the
	morphology showed triangular, hexagonal, and round shape. In conclusion,
	Fig leaf extract could be used to preparation gold nanoparticle with simple
	and eco-friendly value.
T3094	Synthetic Manganes Oxide Nanozyme Impeding Lipopolysaccharide
Durantation 2	Induced Bacterial Sepsis And Prevent Cognitive Damage
Presentation 2	Vishnu Revuri and Yong-Kyu Lee
(13:35~13:50)	Korea National University of Transportation, Republic of Korea
	Abstract—Ectopic activation of innate immune system and excessive
-----------------	--------------------------------------------------------------------------------------------------------------------------------
	secretion of proinflammatory markers ensue in the pathogenesis of Sepsis.
	The oxidative stress mediated by hydrogen peroxide $(H_2O_2)$ , a toxic
	reactive oxygen species in the immune cells plays a crucial role in the
	onset of systemic immune activation. Here we developed peroxidase
	ministing mannasylated manganasa avida based synthetic nanozymas to
	affect the U.O. induced immune activation. Devine server allowing
	offset the $H_2O_2$ induced infinute activation. Bovine serum abuning
	stabilized manganese oxide nanoparticles (BM) were wrapped with
	mannosylated disulfide crosslinked polyethylenimine to target the immune
	cells. The final mannosylated disulfide crosslinked polyethylenimine
	wrapped BM nanoparticles (mSPAM) significantly reduced the secretion of
	free radicles, proinflammatory markers and cytokines in the
	lipopolysaccharide (LPS) insulted macrophage cells. Local and systemic
	LPS insulted endotoxemia models were developed to challenge the
	mSPAM activity in the reducing the pathogenesis of sepsis. The mSPAM
	nanozymes significantly reduced the secretion of TNF- $\alpha$ and IL-6 in the
	serum and further prevented the neutrophil infiltration and systemic organ
	damage. Interestingly, we observed that mSPAM nanozymes reduced the
	microgial cell immune activation and prevented the cognitive damage.
	Finally, we demonstrate that the developed nanozymes play a crucial role
	in mitigating the local, systemic and neuroinflammtion activation in the
	LPS induced endotoxemia.
T3049	Multifunctional Nanodots for Imaging-Guided and Laser-Promoted Nucleus-Targeted
Duran utatian 2	Synthetic Phototherapy
Presentation 5	Xian-Wu Hua, Yan-Wen Bao, Jia Zeng and Fu-Gen Wu
(13:50~14:05)	Southeast University, China
	Abstract—Developing a multifunctional platform that integrates various
	therapeutic/imaging components, unique intracellular performance
	including high cellular uptake and nucleus-targeting ability, ultrasmall size,
	excellent therapeutic performance, and good biocompatibility is highly
	desirable but still remains a huge challenge. Herein, we develop a novel
	type of ultrasmall "all-in-one" nanodots (BCCGH) by simply mixing
	bovine serum albumin (BSA), metal ions ( $Cu^{2+}$ and $Gd^{3+}$ ), and CDs,
	followed by conjugation with a photosensitizer HPPH. Notably, BCCGH
	with an ultrasmall size (~7.9 nm) and superior colloidal stability show
	excellent PT properties with an extremely high photothermal conversion
	efficiency of 68.4%, high longitudinal relaxivity (11.84 mM ^{$-1$} s ^{$-1$} , 7T), and
	negligible $Gd^{3+}$ release. Besides, mild near-infrared laser irradiation (0.3 W
	$cm^{-2}$ , below the safe threshold of 0.329 W cm ⁻² ) can significantly promote
	the cytosolic and nuclear delivery of BCCGH. leading to high
	photodynamic therapy (PDT) efficiency with deadly DNA damage More
	importantly in vivo experiments reveal that the nanodots have excellent
	tumor accumulation rapid renal clearance and can realize multimodal (FI
	PA. MR. and PT)-imaging-guided synergistic photothermal therapy (PTT)
	PA, MR, and PT)-imaging-guided synergistic photothermal therapy (PTT)

	and PDT, which is especially beneficial for precise and efficient cancer
	diagnosis and treatment.
T3027	Nanobots for Biomedical Applications
	Krishna Ganesh, Mary Lourde R and Keerthi Jerome
Presentation 4	Birla Institute of Technology & Science, Pilani Dubai, UAE
(14:05~14:20)	
, , , , , , , , , , , , , , , , , , ,	Abstract-Nanobots are robots of size below 200nm. Due to the various
	restrictions and the multifaceted aspects of a nanobot its difficult to
	implement as compared to a microbot (having size in the micrometer scale).
	The construction of Nanobots is heavily dependent on Molecular
	nanotechnology and Mechano-synthetic chemistry. These robots are NEMS
	(Nano-electro Mechanical Systems) based devices which are programmed
	to carry out either one or multiple tasks with high efficiency, minimal work
	comput and consumption of power. The Size and wide programmable
	medical and pharmaceutical applications. There are different ways to create
	nanobots as they can either be made purely synthetic or biodegradable or a
	mix of both called Bio-Hybrid nanobots. This paper provides an overview of
	some of the feasible construction techniques that can be used to build
	nanobots for their use in the biomedical applications and current trends and
	future scope of nanobots in biomedical applications.
T2012	Design and Fabrication of Robotic Autopsy Saw
Durantation 5	Arnon Jumlongkul and Panuwat Chutivongse
Presentation 5	Mae Fah Luang University, Thailand
(14:20~14:35)	
	Abstract—An autopsy saw is a device for opening cadaveric skulls. Most
	electric saws generate bone dust and can also cause loud noise pollution.
	Sometimes technicians might be injured in the autopsy operating room,
	whilst using either hand saws or electric autopsy saws. To help protect
	physicians and their colleagues from potentially unsafe working
	project demonstrates the design and fabrication of an electric circular say
	that can be controlled at distance by remote control so increasing human
	safety limiting cadaveric secretion and hone dust contamination and
	reducing noise. The device consists of a control unit for the saw frame, a
	speed control for the saw blade, a control to set blade depth, and an
	electrical control box that uses pulse width modulation (PWM). The results
	showed that this machine can minimize bone dust contamination, reduce
	heavy noise and increase human safety, mostly due to the use of a remote
	control unit. This instrument can cut many spherical objects like a
	calvarium. For future studies, the unit and blade function should be
	adjusted using wireless remote control and the machine needs to be
	installed on the ceiling for easy attachment to the head of the corpse.
	Label-Free Detection of Exosomes Using Microfluidic Deterministic
	Lateral Displacement

ICPPS 2019 CONFERENCE ABSTRACT		
T3016	Thoriq Salafi and Yong Zhang	
Presentation 6	National University of Singapore, Singapore	
(14:35~14:50)	Abstract—Exosomes are extracellular vesicle secreted by mammalian cells that have been used as biomarkers including cancer and cardiovascular disease, thus, the detection of exosomes has recently gained interest for liquid biopsy for diagnostics. Currently, there are several methods to detect exosomes including fluorescent immuno-affinity method, surface plasmon resonance, electrochemical detection, and other methods. However, some of these methods are complex, require labelling, and expensive equipment for detection. Here, we demonstrate a simple and inexpensive label-free bead-based method for exosome detection with microfluidics deterministic lateral displacement (DLD). The method detects the exosome coating on the microbead based on the extent of beads size change after coating, which can be detected through the lateral displacement of the microbeads in a high-resolution DLD arrays. The detection of exosomes secreted from the MB49 mouse cancer cell lines using the antibody against CD63 conjugated on microbeads results in the limit of detection of $1.3x10^4$ exosome particles/µL. Compared to the existing exosome detection techniques, this label-free DLD method is fast, inexpensive, and only requires small sample volume (<5 µL), and a standard laboratory microscope for the detection of the beads lateral displacement spectrum in the outlet of the microfluidics DLD.	
T3053	The Origin of Color Emission of Beetle Luciferases	
Presentation 7	New York University Abu Dhabi, UAE	
(14:50~15:05)	<i>Abstract</i> —The different colors of light emitted by bioluminescent beetles ranging from yellow–green to red are related to slightly different enzymes (luciferases) that catalyze the same two–stage chemical reaction, conversion of luciferin to oxyluciferin in presence of ATP and oxygen.	
	However, luciferases with known crystal structures emit only green light with several mutations resulted in red emission ( $\lambda_{max}$ 610 nm) that is still far from the emission of the only red-emitting beetle luciferases (623 nm) from <i>Phrixothrix hirtus</i> (RE _{Ph} ). To shed light on the mechanism of color "tuning" in beetle luciferases, we determined the crystal structure of RE _{Ph} in addition to a blue-shifted green-emitting luciferase from the firefly <i>Amydetes vivianii</i> (GB _{Av} ). The structure of RE _{Ph} was found to be an oligomer with monomers with $\alpha/\beta$ structural fold, similar to other known luciferase structures. The active site is located between the large N-terminal and small C-terminal domains, where it opens or closes by motion of the latter. Multiple mutations were introduced in two loops to evaluate their roles in the emission color. First, loop ^{346–361} at the bottom of the active site was found to have an effect on the energy of the emitted light. However, loop ^{346–361} contains amino acids that affected emission of	

ICPPS 2019 CONFERENCE ABSTRACT

	the $RE_{Ph}$ and $GB_{Av}$ luciferases.
T3063	Predictive Analytics in Healthcare for Diabetes Prediction
Presentation 8	<b>Faizan Zafar</b> , Saad Raza, Muhammad Umair Khalid and Muhammad Ali Tahir
(15:05~15:20)	National University of Sciences & Technology, Pakistan
	Abstract—Diabetes mellitus type 2 is a chronic disease which poses a serious challenge to human health worldwide. Globally, about 8.3% of the population is diagnosed with the disease. The applications of predictive analytics in diagnosis of diabetes are gaining significant momentum in medical research. The aim of this research paper is to aid medical professionals in the early detection and efficient diagnosis of Type 2 diabetes. We utilize bioinformatics theory and supervised machine learning techniques for improving the accuracy in predicting diabetes, based on 8 clinical measurements existing in the widely used PIMA dataset. We outline our methodology and highlight the implementation steps, while reviewing prominent past work in the field. Moreover, this paper fully exploits known machine learning algorithms and provides a detailed comparison of the results obtained from each method. The gradient boosting algorithm with parameter tuning proves to be the most successful, having an F1 Score of 0.853 and out of sample accuracy of 89.94%. Our prediction model focuses on computing the probability of the onset of diabetes in an individual based on their clinical data. The most crucial results of using this research within the healthcare sector are its cost-effectiveness and yielding of instant diagnosis. With this work, we intend to improve the process of diagnosing Type 2 diabetes and inspire other researchers to use machine learning based techniques for further inquiry into diabetes prediction.
T1011	Comparison Tensile Strength of Natural and Synthetic Absorbable Sutures
Presentation 9	<b>Tjokorda Gde Tirta Nindhiaa</b> , I Putu Astawa, Tjokorda Sari Nindhia, I Wayan Surata
(15:20~15:35)	Udayana University, Indonesia
	Abstract—Objective: The aim of the investigation is to evaluate and to compare the tensile strength of commercial natural and synthetic absorbable suture materials currently used in surgery. The natural absorbable sutures of chromic catgut, is prepared for this purpose as well as commercial synthetic absorbable sutures made from polyglycolide. Method: The analysis has been carried out following Standard Test method fo tensile strength and Young modulus of fiber ASTM C1557-03. Measuring the diameter of each suture has been carried out with an optical microscope to determine the accuracy of manufacturers' data. Tensile testing has been performed to evaluate the tensile strength of each type of sutures. The Modulus elasticity and strain ( $\epsilon$ ) obtaines is also presented. Results: show that sutures made from braided synthetic material of

ро	lyglycolide (violet coated) present a tensile strength remarkably
su	perior (1070.292 MPa ) to that of natural absorbable sutures of chromic
ca	tgut(392.276 MPa.). Using Optical macro microscope analysis
mo	onofilament sutures present less surface irregularities than multifilament
Po	blyglycolide sutures. Chromic catgut monofilament sutures present less
su	rface irregularities than multifilament Polyglycolide. Conclusion: Tensile
tes	st of absorbable sutures was conducted in this research. Two type of
ab	sorbable sutures were investigated and compared. It is found that sutures
ma	ade from braided synthetic material of polyglycolide (violet coated)
ha	ving much better tensile strength comparing with sutures made from
na	tural material (Chromic catgut monofilament)

#### **Coffee Break**

15:35~16:00

Lounge of Room C5 (17th Floor)



**Tips:** The schedule for each presentation is for reference only. In order not to miss your presentation, we strongly suggest that you attend the whole session.

## Afternoon, March 29, 2019 (Friday)

# Time: 16:00~18:00

# Venue: Room C5 (17th Floor)

### **Topic: "Pharmaceutics"**

#### Session Chair: Prof. Tjokorda Gde Tirta Nindhia

T0050	Formulation and Characterizations of Self-Nano Emulsifying Drug
	Delivery System (Snedds) of Extract Petiveria Alliacea (Singawalang)
Presentation 1	Leaves
(16:00~16:15)	Arifa Mustika, Nurmawati Fatimah and Gadis Meinar Sari
, , , , , , , , , , , , , , , , , , ,	Airlangga University, Indonesia
	Abstract—Objective: Formulation of Singawalang leaves extract should be
	considered because the extract contains a variety of compounds so that
	there may be a competitor in the absorption process and will cause the
	absorption of active ingredients in the gastrointestinal decline. One way to
	increase the absorption and disposition of active ingredients on target
	organs is to use a nanoparticle formulation. Therefore, this study will
	conduct research on self-nano emulsifying drug delivery system
	(SNEDDS) formulation of Singawalang (Petiveria alliaceae) leaves
	extract. Methods: The systems were developed by investigating the
	solubility Singawalang leaves extract in various carrier oil, the suitable
	surfactant, and co-surfactant, construction of SNEDDS of Singawalang
	leaves extract and characterization of droplet size through particle size
	analyzer and transmission electron microscopy. Results: The results of this
	study indicate that the optimum carrier oils for Singawalang leave extract
	are migliol and virgin coconut oil, the compatible surfactant component is
	tween 80 and the compatible co-surfactant is propylene glycol. The
	average of droplet size is 13 nm and polydisperse index 0,004 and 0,006.
	Conclusion: It can be concluded, the present study demonstrated that the
	optimum self-nano emulsifying drug delivery system formulations of
	Singawalang leave extract are the mixture of virgin coconut oil, tween 80,
	propylene glycol at ratio 1:8:1 and migliol, tween 80, propylene glycol at
	ratio 2:5:3.

ICPPS 2019 CONFERENCE ABSTRACT		
T0068	Optimization of Self-Nano Emulsifying Drug Delivery System-Loaded	
	Propolis Using D-Optimal	
Presentation 2	Uno A. M., Syukri Yandi and Chabib Lutfi	
(16:15~16:30)	Universitas Islam Indonesia, Indonesia	
(10.15 10.50)		
	Abstract-Propolis (bee glue) is a sticky dark-colored material that	
	naturally produced by the bees. Propolis known has many pharmacological	
	effects such as immunomodulatory, antibacterial, anti-inflammatory,	
	anti-virus, and anticancer. It contains terpenoid, phenolic acid, steroid,	
	amino acid, and mostly flavonoid especially aglycon which has poor water	
	solubility and lower bioavailability. To overcome this problem, propolis is	
	formulated become Self-Nanoemulsifiving Drug Delivery System	
	(SNEDDS) using capryol-90 (vehicle oil), cremophor RH40 (surfactant)	
	and PEG400 (co-surfactant). The aim of this study is to formulate propolis	
	in SNEDDS dosage form using D-Optimal design. The SNEDDS were	
	prepared by a high-energy method using ultrasonication,	
	spectrophotometer UV-Vis to determine % transmittance, and particle size	
	analyzer to determine particle size and polydispersity index. The best	
	formulations are determined by several parameters test such as %	
	transmittance (80-100%), particle size (20-200nm), and polydispersity	
	index (<0,5). The result showed that the best formulation of propolis	
	contains Capryol-90:Cremophor RH40:PEG400 with ratio 40:46:14	
	respectively. The % transmittance value show 94,6±0,04, particle size	
	value show 26,8±0,4, and polydispersity index value show 0,433±0,03. In	
	conclusion, the formulation of propolis loaded SNEDDS can be used to	
	improve the solubility and bioavailability of propolis.	
T0079	Dissolution Enhancement of Tetrahydrocurcumin Using Optimized	
	Self-Nanoemulsifying Drug Delivery System	
Presentation 3	Ika Yuni Astuti, Tri Suliatin and Retno Wahyuningrum	
(16:30~16:45)	Universitas Muhammadiyah Purwokerto, Indonesia	
``````````````````````````````````````		
	Abstract-Objective: The objective of this study was to optimize and	
	enhance the dissolution of tetrahydrocurcumin (THC) using optimized self	
	nano-emulsifying drug delivery system (SNEDDS). Methods: The	
	optimization was carried out with the D-optimal design using software	
	DesignExpert 7.15. The independent variables were the amount of oil,	
	surfactant and cosurfactant. The dependent variables were the	
	emulsification time, % transmittance and dissolution efficiency at minute	
	15 (DE $_{15}$). The dissolution profile of the THC in optimum formulation	
	compared with the unmodified THC. Results: The optimum formulation of	
	SNEDDS consists of 10% labrafil, 80% kolliphor:labrasol (1:3) and 10%	
	PEG 400. The DE_{15} was 49,45%, significantly higher than the THC	
	unmodified (p<0.05). The estimated responses were not significantly	
	different from the experimental responses. The droplet size of the optimum	
	formula was 53.8 nm, the polydispersity index was 0.043 and the zeta	

	value was -19.4 mV. Conclusion: The D-optimal design was successfully
	determining the optimum formula of THC loaded SNEDDS. The SNEDDS
	formulation was increased the dissolution of THC.
T0081	The Anti-Inflammatory Activity of Essential Oil of Clove (Syzigium
10001	Aromaticum) in Absorption Base Ointmont with Addition of Olaic Acid
Presentation 4	and Propylene Glycol as Enhancer
(16:45~17:00)	Nining Sugihartini, Rani Prabandari, Tedjo Yuwono and Desty Restia
(Rahmawati
	Ahmad Dahlan University, Indonesia
	,,,,
	Abstract. The optimal concentration of assential oil of clove in absorption.
	Abstract—The optimial concentration of essential on of clove in absorption
	base ointment as anti-inflammatory has been studied. The development of
	formulations can be done by adding oleic acid and propylene glycol as
	enhancers. The enhancers that will be used in this study are oleic acid and
	propylene glycol. The purpose of this study was to determine the
	anti-inflammatory activity of the essential oil of clove in absorption base
	ointment formula by adding a mixture of oleic acid and propylene glycol as
	enhancers. In this study the composition of oleic acid and propylene glycol
	were 100% oleic acid (EI) 50% oleic acid and propylene glycol (EII) and
	100% propullance glucol (FIII) The profile of the anti-inflammatory
	100% propynene grycor (111). The prome of the anti-inflammatory
	activity essential oil of clove was carried out by using male of mice Balb/C
	strain which was induced inflammatory with crotton oil on back of skin.
	After treatment it was sacrified and then was taken the back of skin to get
	histopathological prepearation. After that the epidermal thickness, number
	of inflammatory cells and COX-2 expression can be measured. Data was
	analyzed by using simplex lattice design method to find the optimum
	composition of enhancers Based on the results of the test it show that F III
	has the smallest of the amount of COX_2 expression, the number of
	information calls and the aridemial this was as the addition of the
	inflammatory cens and the epidermal thickness so the addition of the
	composition enhancer provides good anti-inflammatory activity.
T0041	Self-Nanoemulsifying Drug Delivery System of Resveratrol Trimethyl
	Ether: Preparation, Characterization and Pharmacokinetic Evaluation
Presentation 5	Yu Dai and Hai-Shu Lin
(17:00~17:15)	National University of Singapore, Singapore
	Abstract Desveroted twinsthed other (DTE
	Abstract—Resveration trimetnyl etner (RIE,
	trans-3,4',5-trimethoxystilbene) is a naturally occurring resveratrol
	(trans-3,4',5-trihydroxystilbene) derivative with potent pharmacological
	activities. Aqueous solubility has been identified as a barrier to its oral
	bioavailability. To facilitate its therapeutic application, a
	self-nanoemulsifying drug delivery system (SNEDDS) was developed and
	characterized The SNEDDS formulation was optimized using
	neardo ternary phase diagram through water titration approach. The
	pseudo-ternary phase diagram unough water utration approach. The
	solubility, thermodynamic stability and in vitro release of RTE-SNEDDS
1	was subsequently assessed. The RTE- SNEDDS displayed a superior

	solubility (30.3 mg/ml). Excellent oral pharmacokinetic profile of
	RTE-SNEDDS was confirmed in Sprague-Dawley rats. The maximal
	plasma concentration (Cmax) and absolute oral bioavailability (F) of RTE
	in SNEDDS was about 4- and 5-fold as high as that in suspension
	formulation (15 mg/kg: Cmax, 600.8 \pm 204.0 ng/ml versus 144.7 \pm 157.2
	ng/ml, p < 0.05; F, 44.8 $\pm 10.6\%$ versus 9.17 ± 8.17 , p < 0.001). Similar to
	a previous study [1], dose- escalation to 60 mg/kg resulted in an increased
	F at higher dose (69.7 \pm 9.63% versus 44.8 \pm 10.6%, p < 0.05). The
	bio-distribution of RTE was also examined after oral dosing of
	RTE-SNEDDS at 40 mg/kg. RTE had favorable tissue distribution profile
	and its exposures to heart, liver, spleen, lung, kidney and brain were found
	to be much more abundant than its plasma exposure. Finally, a
	physiological based pharmacokinetics (PBPK) model was developed to
	predict the pharmacokinetic prome in numan. The concentrations for KTE
	to display in vitto anti-cancer and/or anti-initianinatory enects were achievable and maintainable for significant time period after single oral
	administration for both rats and simulated humans Clearly SNEDDS
	appears to be a practical strategy for the oral delivery of RTE.
T0067	Fabrication and Characterization of Propolis Loaded in Rapidly
	Emulsification using Virgin Coconut Oil as Vehicle
Presentation 6	Siti Asmaliah, Lutfi Chabib and Yandi Syukri
(17:15~17:30)	Universitas Islam Indonesia, Indonesia
(,	
	Abstract—Propolis is a natural resin substance produced by honey bees
	<i>Abstract</i> —Propolis is a natural resin substance produced by honey bees that have biological properties such as antibacterial, antiviral, antioxidant,
	<i>Abstract</i> —Propolis is a natural resin substance produced by honey bees that have biological properties such as antibacterial, antiviral, antioxidant, anti-inflammatory, antitumoral, anticarcinogenic, and hepatoprotective.
	<i>Abstract</i> —Propolis is a natural resin substance produced by honey bees that have biological properties such as antibacterial, antiviral, antioxidant, anti-inflammatory, antitumoral, anticarcinogenic, and hepatoprotective. Propolis contains poorly water-soluble active components. The aim of the
	<i>Abstract</i> —Propolis is a natural resin substance produced by honey bees that have biological properties such as antibacterial, antiviral, antioxidant, anti-inflammatory, antitumoral, anticarcinogenic, and hepatoprotective. Propolis contains poorly water-soluble active components. The aim of the present study is to develop and optimize rapidly emulsification formulation
	<i>Abstract</i> —Propolis is a natural resin substance produced by honey bees that have biological properties such as antibacterial, antiviral, antioxidant, anti-inflammatory, antitumoral, anticarcinogenic, and hepatoprotective. Propolis contains poorly water-soluble active components. The aim of the present study is to develop and optimize rapidly emulsification formulation of water-insoluble propolis to improve its solubility. The ternary phase diagram was constructed using 10,50% of using a construct all (VCO) (ail)
	<i>Abstract</i> —Propolis is a natural resin substance produced by honey bees that have biological properties such as antibacterial, antiviral, antioxidant, anti-inflammatory, antitumoral, anticarcinogenic, and hepatoprotective. Propolis contains poorly water-soluble active components. The aim of the present study is to develop and optimize rapidly emulsification formulation of water-insoluble propolis to improve its solubility. The ternary phase diagram was constructed using 10-50% of virgin coconut oil (VCO) (oil), 10,80% of areamother, BH, 40 (surfactant), and 10,40% of polyathylang
	<i>Abstract</i> —Propolis is a natural resin substance produced by honey bees that have biological properties such as antibacterial, antiviral, antioxidant, anti-inflammatory, antitumoral, anticarcinogenic, and hepatoprotective. Propolis contains poorly water-soluble active components. The aim of the present study is to develop and optimize rapidly emulsification formulation of water-insoluble propolis to improve its solubility. The ternary phase diagram was constructed using 10-50% of virgin coconut oil (VCO) (oil), 10-80% of cremophor RH 40 (surfactant) and 10-40% of polyethylene glycol 400 (PEG 400) (co surfactant). The selected compositions were
	<i>Abstract</i> —Propolis is a natural resin substance produced by honey bees that have biological properties such as antibacterial, antiviral, antioxidant, anti-inflammatory, antitumoral, anticarcinogenic, and hepatoprotective. Propolis contains poorly water-soluble active components. The aim of the present study is to develop and optimize rapidly emulsification formulation of water-insoluble propolis to improve its solubility. The ternary phase diagram was constructed using 10-50% of virgin coconut oil (VCO) (oil), 10-80% of cremophor RH 40 (surfactant) and 10-40% of polyethylene glycol 400 (PEG 400) (co-surfactant). The selected compositions were evaluated and optimized using transmittance globule size and
	<i>Abstract</i> —Propolis is a natural resin substance produced by honey bees that have biological properties such as antibacterial, antiviral, antioxidant, anti-inflammatory, antitumoral, anticarcinogenic, and hepatoprotective. Propolis contains poorly water-soluble active components. The aim of the present study is to develop and optimize rapidly emulsification formulation of water-insoluble propolis to improve its solubility. The ternary phase diagram was constructed using 10-50% of virgin coconut oil (VCO) (oil), 10-80% of cremophor RH 40 (surfactant) and 10-40% of polyethylene glycol 400 (PEG 400) (co-surfactant). The selected compositions were evaluated and optimized using transmittance, globule size, and polydispersity index (PDI) analysis. The result showed that eight
	<i>Abstract</i> —Propolis is a natural resin substance produced by honey bees that have biological properties such as antibacterial, antiviral, antioxidant, anti-inflammatory, antitumoral, anticarcinogenic, and hepatoprotective. Propolis contains poorly water-soluble active components. The aim of the present study is to develop and optimize rapidly emulsification formulation of water-insoluble propolis to improve its solubility. The ternary phase diagram was constructed using 10-50% of virgin coconut oil (VCO) (oil), 10-80% of cremophor RH 40 (surfactant) and 10-40% of polyethylene glycol 400 (PEG 400) (co-surfactant). The selected compositions were evaluated and optimized using transmittance, globule size, and polydispersity index (PDI) analysis. The result showed that eight formulations containing 10-50% of VCO, 40-80% of cremophor RH 40.
	<i>Abstract</i> —Propolis is a natural resin substance produced by honey bees that have biological properties such as antibacterial, antiviral, antioxidant, anti-inflammatory, antitumoral, anticarcinogenic, and hepatoprotective. Propolis contains poorly water-soluble active components. The aim of the present study is to develop and optimize rapidly emulsification formulation of water-insoluble propolis to improve its solubility. The ternary phase diagram was constructed using 10-50% of virgin coconut oil (VCO) (oil), 10-80% of cremophor RH 40 (surfactant) and 10-40% of polyethylene glycol 400 (PEG 400) (co-surfactant). The selected compositions were evaluated and optimized using transmittance, globule size, and polydispersity index (PDI) analysis. The result showed that eight formulations containing 10-50% of VCO, 40-80% of cremophor RH 40, and 10-40% of PEG 400 were found to be optimal propolis loaded in
	<i>Abstract</i> —Propolis is a natural resin substance produced by honey bees that have biological properties such as antibacterial, antiviral, antioxidant, anti-inflammatory, antitumoral, anticarcinogenic, and hepatoprotective. Propolis contains poorly water-soluble active components. The aim of the present study is to develop and optimize rapidly emulsification formulation of water-insoluble propolis to improve its solubility. The ternary phase diagram was constructed using 10-50% of virgin coconut oil (VCO) (oil), 10-80% of cremophor RH 40 (surfactant) and 10-40% of polyethylene glycol 400 (PEG 400) (co-surfactant). The selected compositions were evaluated and optimized using transmittance, globule size, and polydispersity index (PDI) analysis. The result showed that eight formulations containing 10-50% of VCO, 40-80% of cremophor RH 40, and 10-40% of PEG 400 were found to be optimal propolis loaded in rapidly emulsification with clear dispersion, no precipitation, and the
	<i>Abstract</i> —Propolis is a natural resin substance produced by honey bees that have biological properties such as antibacterial, antiviral, antioxidant, anti-inflammatory, antitumoral, anticarcinogenic, and hepatoprotective. Propolis contains poorly water-soluble active components. The aim of the present study is to develop and optimize rapidly emulsification formulation of water-insoluble propolis to improve its solubility. The ternary phase diagram was constructed using 10-50% of virgin coconut oil (VCO) (oil), 10-80% of cremophor RH 40 (surfactant) and 10-40% of polyethylene glycol 400 (PEG 400) (co-surfactant). The selected compositions were evaluated and optimized using transmittance, globule size, and polydispersity index (PDI) analysis. The result showed that eight formulations containing 10-50% of VCO, 40-80% of cremophor RH 40, and 10-40% of PEG 400 were found to be optimal propolis loaded in rapidly emulsification with clear dispersion, no precipitation, and the transmittance of more than 90 %. The globule size of the formulations
	<i>Abstract</i> —Propolis is a natural resin substance produced by honey bees that have biological properties such as antibacterial, antiviral, antioxidant, anti-inflammatory, antitumoral, anticarcinogenic, and hepatoprotective. Propolis contains poorly water-soluble active components. The aim of the present study is to develop and optimize rapidly emulsification formulation of water-insoluble propolis to improve its solubility. The ternary phase diagram was constructed using 10-50% of virgin coconut oil (VCO) (oil), 10-80% of cremophor RH 40 (surfactant) and 10-40% of polyethylene glycol 400 (PEG 400) (co-surfactant). The selected compositions were evaluated and optimized using transmittance, globule size, and polydispersity index (PDI) analysis. The result showed that eight formulations containing 10-50% of VCO, 40-80% of cremophor RH 40, and 10-40% of PEG 400 were found to be optimal propolis loaded in rapidly emulsification with clear dispersion, no precipitation, and the transmittance of more than 90 %. The globule size of the formulations ranged from 9±0.00 nm to 19.63±0.15 nm, and PDI showed value from
	Abstract—Propolis is a natural resin substance produced by honey bees that have biological properties such as antibacterial, antiviral, antioxidant, anti-inflammatory, antitumoral, anticarcinogenic, and hepatoprotective. Propolis contains poorly water-soluble active components. The aim of the present study is to develop and optimize rapidly emulsification formulation of water-insoluble propolis to improve its solubility. The ternary phase diagram was constructed using 10-50% of virgin coconut oil (VCO) (oil), 10-80% of cremophor RH 40 (surfactant) and 10-40% of polyethylene glycol 400 (PEG 400) (co-surfactant). The selected compositions were evaluated and optimized using transmittance, globule size, and polydispersity index (PDI) analysis. The result showed that eight formulations containing 10-50% of VCO, 40-80% of cremophor RH 40, and 10-40% of PEG 400 were found to be optimal propolis loaded in rapidly emulsification with clear dispersion, no precipitation, and the transmittance of more than 90 %. The globule size of the formulations ranged from 9±0.00 nm to 19.63±0.15 nm, and PDI showed value from 0.16±0.01 to 0.43±0.01. The results indicated that propolis loaded in
	Abstract—Propolis is a natural resin substance produced by honey bees that have biological properties such as antibacterial, antiviral, antioxidant, anti-inflammatory, antitumoral, anticarcinogenic, and hepatoprotective. Propolis contains poorly water-soluble active components. The aim of the present study is to develop and optimize rapidly emulsification formulation of water-insoluble propolis to improve its solubility. The ternary phase diagram was constructed using 10-50% of virgin coconut oil (VCO) (oil), 10-80% of cremophor RH 40 (surfactant) and 10-40% of polyethylene glycol 400 (PEG 400) (co-surfactant). The selected compositions were evaluated and optimized using transmittance, globule size, and polydispersity index (PDI) analysis. The result showed that eight formulations containing 10-50% of VCO, 40-80% of cremophor RH 40, and 10-40% of PEG 400 were found to be optimal propolis loaded in rapidly emulsification with clear dispersion, no precipitation, and the transmittance of more than 90 %. The globule size of the formulations ranged from 9 \pm 0.00 nm to 19.63 \pm 0.15 nm, and PDI showed value from 0.16 \pm 0.01 to 0.43 \pm 0.01. The results indicated that propolis loaded in rapidly emulsification, with enhanced solubilization and nanosizing, has
	Abstract—Propolis is a natural resin substance produced by honey bees that have biological properties such as antibacterial, antiviral, antioxidant, anti-inflammatory, antitumoral, anticarcinogenic, and hepatoprotective. Propolis contains poorly water-soluble active components. The aim of the present study is to develop and optimize rapidly emulsification formulation of water-insoluble propolis to improve its solubility. The ternary phase diagram was constructed using 10-50% of virgin coconut oil (VCO) (oil), 10-80% of cremophor RH 40 (surfactant) and 10-40% of polyethylene glycol 400 (PEG 400) (co-surfactant). The selected compositions were evaluated and optimized using transmittance, globule size, and polydispersity index (PDI) analysis. The result showed that eight formulations containing 10-50% of VCO, 40-80% of cremophor RH 40, and 10-40% of PEG 400 were found to be optimal propolis loaded in rapidly emulsification with clear dispersion, no precipitation, and the transmittance of more than 90 %. The globule size of the formulations ranged from 9 \pm 0.00 nm to 19.63 \pm 0.15 nm, and PDI showed value from 0.16 \pm 0.01 to 0.43 \pm 0.01. The results indicated that propolis loaded in rapidly emulsification, with enhanced solubilization and nanosizing, has the potential to improve the solubility of propolis.
T0060	Abstract—Propolis is a natural resin substance produced by honey bees that have biological properties such as antibacterial, antiviral, antioxidant, anti-inflammatory, antitumoral, anticarcinogenic, and hepatoprotective. Propolis contains poorly water-soluble active components. The aim of the present study is to develop and optimize rapidly emulsification formulation of water-insoluble propolis to improve its solubility. The ternary phase diagram was constructed using 10-50% of virgin coconut oil (VCO) (oil), 10-80% of cremophor RH 40 (surfactant) and 10-40% of polyethylene glycol 400 (PEG 400) (co-surfactant). The selected compositions were evaluated and optimized using transmittance, globule size, and polydispersity index (PDI) analysis. The result showed that eight formulations containing 10-50% of VCO, 40-80% of cremophor RH 40, and 10-40% of PEG 400 were found to be optimal propolis loaded in rapidly emulsification with clear dispersion, no precipitation, and the transmittance of more than 90 %. The globule size of the formulations ranged from 9 \pm 0.00 nm to 19.63 \pm 0.15 nm, and PDI showed value from 0.16 \pm 0.01 to 0.43 \pm 0.01. The results indicated that propolis loaded in rapidly emulsification, with enhanced solubilization and nanosizing, has the potential to improve the solubility of propolis. Efficacy of Simvastatin Reduces Oxidized Low Density Lipoprotein Level
T0060 Presentation 7	Abstract—Propolis is a natural resin substance produced by honey bees that have biological properties such as antibacterial, antiviral, antioxidant, anti-inflammatory, antitumoral, anticarcinogenic, and hepatoprotective. Propolis contains poorly water-soluble active components. The aim of the present study is to develop and optimize rapidly emulsification formulation of water-insoluble propolis to improve its solubility. The ternary phase diagram was constructed using 10-50% of virgin coconut oil (VCO) (oil), 10-80% of cremophor RH 40 (surfactant) and 10-40% of polyethylene glycol 400 (PEG 400) (co-surfactant). The selected compositions were evaluated and optimized using transmittance, globule size, and polydispersity index (PDI) analysis. The result showed that eight formulations containing 10-50% of VCO, 40-80% of cremophor RH 40, and 10-40% of PEG 400 were found to be optimal propolis loaded in rapidly emulsification with clear dispersion, no precipitation, and the transmittance of more than 90 %. The globule size of the formulations ranged from 9 \pm 0.00 nm to 19.63 \pm 0.15 nm, and PDI showed value from 0.16 \pm 0.01 to 0.43 \pm 0.01. The results indicated that propolis loaded in rapidly emulsification, with enhanced solubilization and nanosizing, has the potential to improve the solubility of propolis. Efficacy of Simvastatin Reduces Oxidized Low Density Lipoprotein Level in Newly Dianosed Dyslipidemia Treatment

	ICPPS 2019 CONFERENCE ADSTRACT
(17:30~17:45)	Dhurakij Pundit University, Thailand
(17:30~17:45)	Dhurakij Pundit University, Thailand <i>Abstract</i> —Objective: This present study aimed to evaluate the effect of simvastatin on oxidized low density lipoprotein (ox-LDL) levels in the treatment of newly diagnosed early dyslipidemia. Methods: A prospective study, forty patients with newly diagnosed early dyslipidemia receiving 10 mg of simvastatin were included. Plasma lipid profiles, glucose, renal and liver function test, total creatine kinase (CK), and ox-LDL were measured at baseline and after 4 weeks of treatment. Data was analyzed using descriptive statistics and paired-t test. Results: The simvastatin significantly improved total cholesterol, triglyceride, HDL, and LDL (P = 0.001), and reduced glucose and ox-LDL levels. The ox-LDL levels were reduced by 11.77% (P = 0.001) after simvastatin treatment. Conclusion:
	Our study demonstrates that 10 mg/d simvastatin therapy reduces plasma ox-LDL level after newly diagnosed dyslipidemia treatment. Plasma ox-LDL may be a more powerful predictor than serum or plasma LDL for
	cardiovascular disease (CVD) outcome. Therefore, assay of plasma
	ox-LDL should be added as a predictor among the panel of conventional
	biomarkers in the treatment of newly diagnosed dyslipidemia.
10066	Formulation and Characterization of Propolis Loaded Self-Nano Employed Self-Nano Englishing Castor Oil Collinhor EL and PEC 400 as Vahiala
Presentation 8	Muthiah Idrati, Yandi Syukri and Lutfi Chabib
(17:45~18:00)	Universitas Islam Indonesia, Indonesia
	<i>Abstract</i> —Self-Nano Emulsifying (SNE) is known as a new method to improve the solubility of a poorly water-soluble. The poorly water soluble, propolis nowadays very widely used as traditional medicine because it has many benefits like antioxidant, antibacterial, and many others. This research aimed to develop and optimize SNE formulation of water-soluble propolis in order to improve its solubility. The ternary phase diagram was constructed by mixing 10-50% Castor oil, 10-80% Colliphor EL (surfactant) and 10-50% PEG 400 (co-surfactant). The composition in nanoemulsion areas was loaded with propolis and then evaluated the characterization by using transmittance, particle size analysis, and zeta potential. The result showed that eleven formulations give transmittance more than 80%, particle size and zeta potential less than 200 nm and -30 mV. The particle size average was 21,19±9,68 nm and the average of zeta potential value was -39,96±2,86 mV. This result proved that propolis in SNE formulation using Castor Oil, Colliphor EL and PEG 400 as vehicle has a potential to enhance the solubility of propolis with reducing the particle size.

Tips: The schedule for each presentation is for reference only. In order not to miss your presentation, we strongly suggest that you attend the whole session.

Afternoon, March 29, 2019 (Friday)

Time: 16:00~18:00

Venue: Room C6 (17th Floor)

Topic: "Microbiology and Biochemical Analysis"

Session Chair: Assoc. Prof. Md. Altaf-Ul-Amin

T2002	Study on Stress Resistance of <i>n</i> -Hexadecane Degrading Bacteria under
Presentation 1	High Salt Stress
	Shaojun Zhang, Mingyu Wang, Chunxiao Jiang, Enrui Zhao and Jianqiang
(16:00~16:15)	Shi
	Shandong Jiaotong University, China
	Abstract—The main reason that bioremediation cannot be widely applied
	to marine oil pollution treatment is that petroleum hydrocarbon degrading
	bacteria cannot cope with complex marine environment, and salinity is one
	of the most important factors. Adding betaine as an osmotic pressure
	release agent for petroleum hydrocarbon degrading bacteria from an
	external source, add betaine to different salinity environments, found that
	when the betaine content is less than 0.2% , the salt tolerance of petroleum
	hydrocarbon degrading bacteria group LQI is continuously improved, at a
	content of 0.2%, the effect of resistance to stress is most obvious, increase
	the samity tolerance of the bacterial group LQ1 from 2% to 6%. In the
	range of saminty where microorganisms normally degrade on in the marine
	stross resistance improvement is not obvious. By improving the resistance
	of petroleum hydrocarbon degrading bacteria to adapt to the marine
	environment it has opened up a new way for the application of
	bioremediation in the field of marine oil pollution treatment
T2007	Electrochemical DNA Sensor Based on Graphene/Zirconia Nanocomposite
12007	for Label-Free Detection of Exon-19 Mutations in Lung Cancer: A
Presentation 2	Preliminary Study
(16.15~16.30)	Lih Poh Lin, Michelle Tien Tien Tan And Hwei San Loh
(10.15-10.50)	Tunku Abdul Rahman University College, Malaysia
	Abstract-In this study, a specific impedimetric DNA sensor based on

	graphene/zirconia nanocomposite has been developed to serve as a simple
	and rapid method for epidermal growth factor receptor (EGFR) mutations
	testing, necessary to guide the treatment regime of tyrosine kinase
	inhibitors (TKIs) therapy. The graphene/zirconia nanocomposite was
	synthesized via a green method without the use of harsh chemicals. The
	as-synthesized nanocomposite was characterized with scanning electron
	microscopy (SEM), X-ray diffractometry (XRD) and energy dispersive
	X-ray spectroscopy (EDX) to evaluate its morphology, crystallinity and
	composition. The nanocomposite was functionalized with 1-pyrenebutyric
	acid N-hydroxysuccinimide ester (PSE) and dropped casted on screen
	printed electrode (SPCE) to provide amide bonding with single-stranded
	probe-DNA that is complementary to exon-19 wild-type DNA sequence.
	Electrochemical responses of each assembly step of the sensing platform
	were characterized by electrochemical impedance spectroscopy (EIS) and
	cyclic voltammetry (CV). Deposition of PSE-functionalized
	graphene/zirconia and immobilization of single-stranded DNA on the
	electrode were reflected by the increment of electron transfer resistance
	(Rct) in EIS analysis as well as the reduction of peak current $\left(i_{p}\right)$ in CV
	analysis. The modified electrodes were hybridized with different target
	DNAs and the difference in electrochemical impedance before and after
	hybridization (normalized value) was adopted as the measurement for
	label-free DNA hybridization detection. The developed genosensor
	demonstrated strong distinction between the Rct for exon-19 wild-type
	DNA to exon-19 mutated DNA, leading to promising quantitation of DNA
	mutations. The biosensor also exhibited high specificity to exon-19
	sequence with clear discrimination against non-complementary target. The
	developed biosensor is disposable and requires no labelling of probe or
	target, making it beneficial in terms of simplicity and efficiency.
T0102	The Effect of Psychological Stress on Oocyte Maturation Promoting Factor
Presentation 3	Expression
Tresentation 5	Revi Gama Hatta Novika, Budi Santoso and Widjiati
(16:30~16:45)	Airlangga University, Indonesia
	Abstract—Objective: The purpose of this study was to analyze the effects of
	psychological stress on maturation promoting factor (MPF) which is a
	mediator for oocyte maturation. Methods: Experimental laboratory research
	with Randomized Post Test Only Control Group Design was carried out on
	mice oocytes. Divided into two groups, namely treatment and control
	groups. The treatment group was given a 95 dB 2hours/day noisy exposure
	for 5 consecutive days which was analogous to psychological stress in
	humans while the control group was not given noisy exposure.
	Furthermore, both groups were examined for cortisol levels to ensure
	stress in experimental animals. Heat shock protein 70 (HSP70) expression
	was examined as the main regulatory protein for stress response and

	examination of expression promoting factor (MPF) which is a mediator for
	oocyte maturation. Results: Psychological stress by giving 95 dB/2 hr/day
	noise for 5 consecutive days also significantly increased serum cortisol
	house for 5 consecutive days also significantly increased setum contisor levels in experimental enimals $(n = 0.000)$ and also significantly increased
	levels in experimental annuals ($p = 0,000$) and also significantly increased
	HSP/0 expression ($p=0,000$). Increased cortisol levels and HSP/0
	expression significantly caused a decrease in MPF expression ($p=0,000$).
	Conclusion: The results of this study indicate that psychological stress as
	indicated by increased serum cortisol levels and expression of Heat Shock
	Protein 70 (HSP70) in oocytes results in a decrease in expression of
	maturation promotion factor (MPF). So it can be concluded that
	psychological stress affects MPF activity in oocytes.
T2004	Biodegradation of <i>n</i> -Hexadecane by P. Aeruginosa with Treatment of
12001	Rhampolipid Bio-Surfactant
Presentation 4	Fang Xue Shanjun Zhang Wenchao Cui Yuehong Gong and Yuehong
(16.45, 17.00)	Gong
(10:45~17:00)	Shandong Jiaotong University China
	Shandong vinotong on forsky, ennin
	<i>Abstract</i> —Bio-surfactant rhamnolipid produced by Pseudomonas
	aeruginosa was investigated in the process of biodegradation of the
	<i>n</i> -hexadecane. The result showed that the solubility of <i>n</i> -hexadecane have a
	linear relationship with rhamnolipid when below or above the critical
	micelle concentration (CMC). The concentration of rhamnolipid showed
	stronger solubility when below CMC than above CMC. Then,
	Pseudomonas aeruginosa strains treated by rhamnolipid were applied in
	degradation. The results showed that the growth of bacterium was inhibited
	when treated with 75 mM (1 CMC) rhamnolipid. However, the bacterial
	treated with 750 mM (10 CMC) rhamnolipid accelerated the degradation.
	There was no degradation phenomenon occurred without being treated
	with the rhamnolipid. This result showed that the cells could not
	biodegradate <i>n</i> -hexadecane directly. We can deduce from the experiment
	that rhamnolipid improve the degradation efficiency by increasing the
	solubility of carbohydrates. This conclusion is significant for the evaluation
	of rhamnolipid surfactant in the remediation of <i>n</i> -hexadecane contaminated
	sites.
T3017	Development of High Efficiency Screening Instrument for Nucleic Acid
	Aptamer of Tumor Cells Based on Disposable Cartridge
Presentation 5	Wang Chao and He NongYue
$(17.00 \sim 17.15)$	Southeast University, China
	Abstract—Cell based systematic evolving of ligands by exponential
	enrichment (Cell-SELEX) can screen high-affinity and high-specificity
	nucleic acid aptamers that bind to target cells. In order to solve the problem
	of aerosol pollution and its negative effects on screening results in
	screening experiments for the nucleic acid aptamer of tumor cells, a closed

	and disposable cartridge for the nucleic acid aptamer screening is designed.
	With the help of automated instrument designed by our research group, the
	single round of screening experiment for the nucleic acid antamer of tumor
	calls can be completed automatically and afficiently by the cartridge
	cens can be completed automatically and enficiently by the cartiloge,
	which greatly reduces the aerosol pollution generated during the
	experiment and ensures the reliability of the experimental results. The
	cartridge is mainly composed of reagent bottom plate, pipetting module,
	horizontal and vertical motion module, cell culture dish adapter and air
	filter. During the experiment, all the operations, such as the sucking and
	discharging liquid, can be completed by function modules inside the
	cartridge and the automated instrument. Finally, the nucleic acid antamers
	of HenG2 cells are screened by the cartridge, and the results show that the
	or hepoz cens are screened by the cartridge, and the results show that the
	cartridge can complete the screening experiment of the nucleic actu
	aptamer quickly and efficiently.
T2003	Microbial Degradation Kinetics of Polyphenanthrene Phenanthrene
	Bingbing Liu, Mingyu Wang, Linghao Bian, Junsheng Meng and Deyu Li
Presentation 6	Shandong Jiaotong University, China
(17.15~17.30)	
(17.15 17.50)	Abstract—Isolation of oil degrading strains from oil spill Beach
	Pseudomonas sp. Polyphenanthrene (PAHs) phenanthrene is used as a
	model for degradation research. The degradation of phenanthrene accords
	with first order kinetics. When the concentration of phenanthrone is low
	with hist-order kinetics. When the concentration of phenanthrene is low,
	the degradation kinetics of both free and immobilized strains conformed to
	the linear simplified form of the classical Monod equation of biological
	treatment. When the concentration of phenanthrene is high, the degradation
	rate is greater than the maximum reaction rate of equation v . The
	The is greater than the maximum reaction rate of equation "max. The
	semi-saturated constant $K_c = 65.11 \text{ mg/L}$ and the maximum reaction rate
	$v_{max} = 17.42 \text{ d}^{-1}$, for the degradation kinetics equation of free strains. The
	kinetic equation is: $v = \frac{17.425}{17.425}$ Kinetic equation of calcium alginate
	65.11+S
	immobilized strain: semi saturation constant: $K_s = 60.02 \text{ mg/L}$
	Maximum reaction rate: $v_{max} = 60.97 \text{ d}^{-1}$. The kinetic equation is:
	$w = \frac{60.975}{100}$. The degradation kinetics equation shows that the degradation
	$v = \frac{1}{60.02+s}$. The degradation kinetics equation shows that the degradation
	officiency of immediation is much law of the thet of fraction
F2 010	enciency of immobilized strains is much larger than that of free strains.
T3018	A Study of Using Tetrapolar and Eight-polar Electrode System to Detect
Presentation 7	Fat by Bioelectrical Impedance Analysis (BIA) Technique
i resentation /	Taweechai Ouypornkochagorn, Apichada Sillaparaya and Piyaorn

ICPPS 2019 CONFERENCE ABSTRACT		
(17:30~17:45)	Piyapongjarat	
	Srinakharinwirot University, Thailand	
	Srinakharinwirot University, Thailand <i>Abstract</i> —Bioelectrical Impedance Analysis (BIA) is a technique to estimate the total fat mass of a body. Tetrapolar and eight-polar electrode system are conventionally used to measure transimpedance computed from skin voltage information. Each system has different sensitivity of voltage measurement to the presence of fat in the different part of the body. Consequently, each system may have limitations to detect fat residing in different regions. In this studies, these limitations were investigated by simulation. Three current schemes and three measurement positions were simulated to detect the increase of fat in the whole body. The result showed that the tetrapolar system was able to detect fat only the half limb of the body. On the other hand, the eight-polar system can detect fat in the whole body. However, fat residing in the arms, the hip, the thighs, and the bottom may influence the accuracy of the fat mass estimation, because the bioimpedance of these regions is used as both the bioimpedance of the trunk and that of the legs or the arms. It is also found that the breast which is mostly fat had less influence in the estimation. This means the estimation	
	for the fat mass of women may be not accurate and may be less in	
	correlation to the breast size as well	
T3038	Study of Fluid Flow Measurement Using Positron Annihilation Technology	
10000	Guo Ruipeng Oi Ya'nan. Zhao Min and Yao Min	
Presentation 8	Naniing University of Aeronautics and Astronautics. China	
(17:45~18:00)	Abstract—Positron annihilation technology is used to study the behavior of flow and an algorithm is proposed to track tracer particle without a priori knowledge of the initial location of the particles. The features points is extracted from the original slice image group, the trajectory is linked by using Kuhn-Munkres algorithm and smoothed by using Kalman filter algorithm, and the 3D motion trajectory image and the average velocity value can be obtained finally. A series of experiments is performed to test the effectiveness of the approach. Experimental results show that positron annihilation technology is capable as a means of examining characteristics of flow regime.	

Tips: The schedule for each presentation is for reference only. In order not to miss your presentation, we strongly suggest that you attend the whole session.

Afternoon, March 29, 2019 (Friday)

Time: 16:00~18:00

Venue: Room 403N (3rd Floor)

Topic: "Biomedical Image Processing"

Session Chair: Assoc. Prof. Achmad Munir

T3035	Improved PET Image Reconstruction Using Time-of-Flight (TOF)
Presentation 1	Information
	Min Zhao, Zhipeng Pan, Mingwei Zhu, Min Yao And Ruipeng Guo
(16:00~16:15)	Nanjing University of Aeronautics and Astronautics, China
	Abstract—Positron emission tomography (PET) is an important clinical imaging technology, the image reconstruction of it is important. In this paper the time of flight (TOF) information of γ photon is added in two ways in our TOF-PET reconstruction algorithm. In the first approach, we add TOF information into the system matrix, which is called SM-TOF. In the second approach, we add TOF information into the sinogram data, which is called SD-TOF. The Monte Carlo simulations with Derenzo phantom are applied to compare the efficiency of different algorithms. Images are compared in terms of Peak Signal to Noise Ratio and Structural Similarity Index for both reconstruction methods, and the results show that the proposed methods perform better than the traditional algorithms and SD-TOF approach has a better image quality compared with SM-TOF approach.
T3022	A New Look at the Essence of the Array Photoplethysmograph
Presentation 2	Wei Ru Han, Yang Ming Chou, Chih Yuan Chuang, Chung Yuo Wu and Sen Huang Huang
(16:15~16:30)	PixArt Imaging Inc., Taiwan
	<i>Abstract</i> —Photoplethysmography (PPG) has been widely used to investigate various cardiovascular conditions. Previous studies have demonstrated the effects of temperature of the measurement environment. However, an integrated evaluation has not been established in environments with gradual air temperature variations. This study was conducted to determine the correlation between the activity frequency (AF)

	of array PPG image and the changes in skin surface temperature (SST) by environment temperature control. The study participants were 13 company employees aged between 27 and 48 years (mean age: 35.6 years) who were treated with an IR heater to increase the skin temperature for approximately 15 min. Measurements of finger array PPG and finger SST were obtained before infrared heating as baseline, and the intervention of 15-min infrared heating was continued in the left hand as the experiment group. The right hand was not subjected to heating, which served as the control group. The results showed that the local fingertip SST increase affected the local AF of the array PPG image, which could be related to the biphasic skin blood flow response. The array PPG image could be used for monitoring the activity control of microcirculation or endothelial function.
T3039	Strabismus Classification Using Digital Image Processing and Horizontal
Presentation 3	Analyn N. Yumang, Jocelyn F. Villaverde, Edrick B. Cuevas, Daniel Patrick
(16:30~16:45)	C. Marquez and Kenneth Charles N. Yamson
	Mapua University, Philippines
	<i>Abstract</i> —The study is centered around creating a system that uses digital image processing via OpenCV-Python and the central corneal light reflex (CCLR) test, or Hirschberg test, as the basis for HOCORC. This is an algorithm that would determine whether patients have strabismus and what type of strabismus found, whether esotropia or exotropia. CCLR processing of HOCORC resulted in an accuracy of 97.5% and an error rate of 2.5% for the detection of strabismus of patients. HOCORC produced an accuracy of 97.5% and an error rate of 2.5% for strabismus classification. These results indicate that the system using the proposed HOCORC algorithm is a viable means of detecting and classifying strabismus.
T3030	An Innovative Approach to Safe Surgical Suturing Part I: Experimental
Presentation 4	Alexandre Levy, Julie Msellati and Andrea De Muer
(16:45~17:00)	ECE Paris, France
	Abstract—Non-invasive robotized surgery is nowadays largely in action for most interventions because of its very beneficial advantages in terms of patient health and material efficiency. However, the still recurrent problem of guaranteeing the quality of suturing action (ie avoiding thread breaking) in all robotized interventions is recurrently impairing the overall results from this approach, mainly due to defective haptic information on threads available to the surgeons from the robot. To improve the efficiency of robot-surgeon collaboration, the problem of communicating relevant and reliable information on threads used by surgeons during suturing is addressed in present and subsequent papers. Here, an experimental setup reproducing the sequence of actions undertaken by a surgeon for a suture

	obtained for different types of threads according to a prescribed protocol.
	From them, the maximum strength and the maximum elongation of a
	suture before breaking during robotic surgery will be predicted by machine
	learning predictive analysis developed in Part II to help the surgeon by
	giving him a visual return during the operations.
T3031	An Innovative Approach to Safe Surgical Suturing Part II: Data Machine
15051	Learning Predictive Analysis
Presentation 5	Alexandra Lawy Julia Mealleti and Andrea De Muer
	ECE Daria, Erange
(17:00~17:15)	
	Abstract—Non-invasive robotized surgery is nowadays largely in action
	for most interventions because of its very beneficial advantages in terms of
	patient health and material efficiency. However, the still recurrent problem
	of guaranteeing the quality of suturing action (ie avoiding thread breaking)
	in all robotized interventions is recurrently impairing the overall results
	from this approach, mainly due to defective haptic information on threads
	available to the surgeons from the robot. To improve the efficiency of
	robot-surgeon collaboration, the problem of communicating relevant and
	reliable information on threads used by surgeons during suturing is
	addressed in present paper. From collected data on an experimental setup
	designed for the study described in Part I machine learning predictive
	designed for the study described in Fart 1, machine learning predictive
	analysis is built-up in present Part. The approach helps understand the
	influence of different parameters on the suture ruptures and determine the
	safety zone in which the surgeon can pull the thread without danger. A
	display can be added to give the surgeon a visual return during the
	operations. Results obtained for different types of threads show up to 99%
	predictive accuracy, especially concerning maximum strength and
	maximum elongation of a suture before breaking.
T3085	Augmented Reality Aided Analysis of Customer Satisfaction based on
	Taste-Induced Facial Expression Recognition using Affdex Software
Presentation 6	Developer's Kit
$(17.15 \ 17.20)$	Jessie R Balbin Charmaine C Paglinawan Mary Josanne A de Castro
(17:15~17:50)	Jared Kobe C. Llamas, Mikka Ellah T. Madina, John Jomal O. Dangilinan
	and Elondolizo I. Volionto
	Mapua University, Philippines
	Abstract—Customer satisfaction is one of the main determinants in the
	success of a business or establishment. In food chains and restaurants, the
	food taste plays a major role in customer satisfaction. Different
	technologies are being adapted by businesses in order to improve the
	customer experience and provide ease to their employees but there is still
	no available alternative method which can obtain customer satisfaction for
	food taste automatically while being non-intrusive. To address the problem.
	this research aims to provide a device which can analyze customer
	satisfaction based on the taste-induced facial expressions and in real-time
	satisfaction based on the taste-induced facial expressions and in real-time.

	For the facial expression recognition, Affdex SDK was used. The Affdex
	SDK is known for its reliability in emotion recognition due to its large and
	spontaneous facial dataset. The accuracy shown in the results indicates the
	effectiveness of this study. This device can benefit the food industry with
	its ease-of-use and real-time results.
T3036	Assessment of Line-of-Response Probability Density Function System
	Matrix for PFT
Presentation 7	Min Van Oishan Lin Min Zhao Buinang Guo And Visalai Wang
	Naniina Universitas ef Assessmentias and Astronomical China
(17:30~17:45)	Nanjing University of Aeronautics and Astronautics, China
	Abstract—System matrix is an essential element to build the iterative PET
	image reconstruction algorithm. In this paper, the analytical calculation
	method and Monte Carlo method are respectively used to generate the
	system matrices. The obtained system matrices are verified in GATE with
	the simulation model according to the actual PET. The reconstructed
	images obtained by these two methods are compared according to image
	avality avaluation percentation of DEND and SEIM. Simulation results show
	quality evaluation parameters of PSINK and SSINI. Simulation results show
	that the quality of the reconstructed image by Monte Carlo method is much
	better. But it takes much long time to build the Monte Carlo system matrix,
	and the reconstructed image by Monte Carlo method degenerates greatly
	with the iteration time increasing.
T3090	Identification of Various Osteichthyes Class of Fishes through Gaussian
	Mixture Model, Kalman Filter, Pyramid Histogram of Visual Words and
Presentation 8	Support Vector Machine
	Pamon C. Carola Flordaliza I. Valianta Charmaina C. Daglinawan Jonan
(17:45~18:00)	Kanion O. Oarcia, Flordenza L. Vanence, Chaimanne C. Faginiawan, Johen
	Lery L. Ioanez, Jenney I. Macadangdang, John Edward G. Macario and
	Paola Jamie V. Uy
	Mapua University, Philippines
	Abstract—This paper proposes a prototype that can identify the species in
	the Osteichthyes class of fishes. This paper is mainly focused on five
	species, namely Glossogobius celebius (Celebes goby), Trichopodus
	trichonterus (Three-spot Gourami) Poe'cilia Latininna (Sailfin Molly)
	Oracchromic piloticus (Nile Tilania) and Clarias batrachus (Philippine
	officially the management involved in the identification included detection
	catisn). The processes involved in the identification included detection,
	tracking, and identifying and classifying the fishes' respective species.
	Detection is performed using the GMM, which is based on background
	subtraction method. Tracking, on the other hand, is performed using the
	Kalman Filter. Identification of the species of the fish can be attained using
	the Pyramid Histogram of Visual Words (PHOW) and lastly, the
	classification process utilizes the Support Vector Machine (SVM). These
	four algorithms were utilized on the raw data collected to obtain the
	desired results. The prototype underwant controlled testing to perform
	initial tests and solibrations and then must the
	initial tests and calibrations, and then went through uncontrolled testing at
	the Mt. Makiling Forest Reserve located at UPLB, Laguna, Philippines

using the aid of the Philippine Journal of Science's paper, Freshwater Fish
Fauna in Watersheds of Mt. Makiling Forest Reserve, Laguna Philippines.
The proposed system can detect and track fishes with 57.5% accuracy in
videos and identify the species with 92.5% accuracy in high-resolution still
images. As for videos, the system can perform with 72.5% accuracy in
identifying the species of the fishes at low quality videos.

Tips: The schedule for each presentation is for reference only. In order not to miss your presentation, we strongly suggest that you attend the whole session.

Afternoon, March 29, 2019 (Friday)

Time: 16:00~18:00

Venue: Room 403N (3rd Floor)

Topic: "Botanical Antimicrobial Agents"

Session Chair: Assoc. Prof. Yusnita Rifai

T0095	Antibacterial Activities of Sapodilla Fruit Extract Inhibiting Salmonella
Presentation 1	Typhi on Mice balb/c
	Hasta Handayani Idrus, Mochmammad Hatta, Ami Febriza and Vivien
(16:00~16:15)	Novarina A. Kasim
	University Muslim of Indonesia, Indonesia
	Abstract—Global data found the incidence of typhoid fever every year
	reaches 12-22 million cases, and in many cases it is found in people with
	middle to lower income. The first choice of treatment for this disease still
	uses fluorquinolone antibiotics such as levofloxacin, ciprofloxacin and
	ofloxacin. However, the high incidence of antibiotic resistance, especially in
	the South Asian region, makes researchers feel the need to consider seeking
	a new strategy in controlling typhoid fever by using herbal plants. The aim
	of this study was to see the effectiveness of brown manifa extract in
	minibiling the growth of Salmonella typin thy bacteria in peritoneal fluid
	design study. We use menile Menile extract which has been obtained from
	extraction of the maceration method and uses the Plate Count Agara (PCA)
	method to calculate the number of colonies after conducting bacterial
	culture before and after the intervention. Each data obtained in this study
	was analyzed using SPSS 25 statistical analysis. We analyzed our data using
	the Friedman test repeated ANOVA test Wilcoxon test t-Paired tets
	ANOVA test, and Kruskal Wallis tets. We consider the value of $P < 0.05$ as a
	significant value. The results obtained were a significant decrease of
	bacterial colonies after administration of manila manila extract 510 mg /
	kgBW value $p = 0.009$ and extract of brown manila 750 mg / kgBB value $p =$
	0.007. Giving extract of mano manila 510 mg / kgBB and 750 mg / kgBB
	has effectiveness in suppressing the growth of Salmonella thypi Thy1.
	The Antibacterial Activity of Bawang Dayak (Eleutherine Bulbosa (Mill.)

T0032	Urb.) from Central Kalimantan Against Acne-Causing Bacteria
Presentation ?	Susi Novaryatiin and Syahrida Dian Ardhany
Fresentation 2	Universitas Muhammadiyah Palangkaraya, Indonesia
(16:15~16:30)	Abstract—Objective: The objective of this research was to investigate the antibacterial activity of Bawang Dayak from Central Kalimantan against acne-causing bacteria namely <i>Propionibacterium acnes, Staphylococcus epidermidis,</i> and <i>Staphylococcus aureus.</i> Methods: The preliminary phytochemical constituents were qualitatively analyzed. Antibacterial activity of Bawang Dayak ethanol extract was performed using disc diffusion technique, with five variations of concentration of 1.25%, 2.5%, 5%, 10%, and 20%. Results: Bawang Dayak extract contained flavonoids, alkaloids, saponins, and tannins. The inhibition zones of Bawang Dayak ethanol extract in five various concentrations (1.25%, 2.5%, 5%, 10%, and 20%) were 7.0 ± 1.3 mm, 8.5 ± 0.6 mm, 9.9 ± 0.3 mm, 11.2 ± 0.1 mm, and 11.9 ± 0.3 mm (against <i>Propionibacterium acnes</i>), 18.8 ± 3.3 mm, 21.9 ± 3.3 mm, 20.8 ± 0.6 mm, 22.0 ± 0.2 mm, and 23.1 ± 0.6 mm (against <i>Staphylococcus epidermidis</i>), 14.3 ± 3.1 mm, 13.5 ± 0.9 mm, 14.7 ± 1.5 mm, 16.1 ± 1.0 mm, and 20.1 ± 0.6 mm (against <i>Staphylococcus aureus</i>), respectively. Conclusion: In this present study showed that Bawang Dayak ethanol extract was active against all the tested acne-causing bacteria. The highest antibacterial activity was produced by 20% of Bawang Dayak ethanol extract against
T 0007	Staphylococcus epidermidis.
10097	Effect of Lime Peel Extract (Citrus Aurantifolia) on the Colonization of
Presentation 3	Vivien Novarina A. Kasim, Ami Febriza Achmad, Hasta Handayani Idrus
(16:30~16:45)	and Muhammad Hatta
	Gorontalo State University, Indonesia
	<i>Abstract</i> —The resistance of <i>Salmonella typhi</i> bacteria brings to the new treatment of traditional plant adjuvant therapy as an antimicrobial. One of them is lime (<i>Citrus aurantifolia</i>). Lime peel contains active ingredients that can provide antibacterial effects. The aim of the study was to look at the effectiveness of lime peel extract against the colonization of <i>Salmonella typhi</i> bacteria. To see the colonization of the bacteria <i>S.typhi</i> using the Plate Count method by taking 0.5 cc peritoneum fluid from the mice and putting it in NaCl 0.9% sterile with 3 dilutions. Lime peel extraction (LPE) using maceration method with 95% ethanol. The study sample of 10 mice consisted of 2 groups, group (1) intervention LPE 750 mg/kgBB of mice and group (2) administration of levofloxacin antibiotics 98 mg/kgBB of mice. Interventions for 5 days of administration and colony count were carried out 3 times pre, post 5 days and 30 days after treatment. The results showed that in group 1 there was a significant difference in the number of

	(P = 0.0005). There were no significant differences between the two groups, but there were differences in the number of bacterial colonies after the fifth day intervention, in group 1 the mean = 4.50×10^3 cfu / ml and the group 2 mean = 6.50×10^3 cfu / ml. The conclusion is that the effect of LPE on the number of <i>S.typhi</i> colonies and the growth of bacterial colonization is less compared to the group given L evoflox cacin antibiotics.
T0020	Antibacterial Activity of Ethanolic Extract Bawang Davak (Eleutherine
Presentation 4	Bulbosa (Mill.)urb) in Cream Against Propionibacterium Acnes Syahrida Dian Ardhany and Susi Novaryatiin
(16:45~17:00)	Muhammadiyah University of Palangkaraya, Indonesia
	<i>Abstract</i> —Objective: The aims of this present study were to formulate anti acne cream consist ethanolic extract of bawang dayak and evaluate antibacterial activity of cream on day-0 and day-7 to see stability activity and preparation. Methods: Cream Formula of Bawang dayak was evaluated organoleptic characteristics, homogenity, pH, adhesion test, dispersion test and in vitro antibacterial against P. acnes. Results: The results of evaluate cream homogeneity was F3 and F4 on day-7 separate and non homogen but all formula pH suitable for topical application. This antibacterial activity, showed cream on day-0, F1 and F2 in category weak activity, F3 and F4 moderate activity, on day-7 zone of inhibition of all cream formula decrease but still can inhibit. Conclusion: All Cream Formula potential against P. acnes but this research must be improved both of preparation and stability activity.
T0028	Antibacterial Activity of Celery Leaves (Apium Graveolens L.) Formulated
Presentation 5	in Toothpaste Against Streptococcus Mutans
Tresentation 5	Erza Genatrika, Fita Satriani and Indri Hapsari
(17:00~17:15)	Universitas Muhammadiyah Purwokerto, Indonesia
	<i>Abstract</i> —Objective: The objective of this research was to determine the antibacterial activity of the toothpaste from an extract of celery leaves on <i>Streptococcus mutans</i> . Methods: The toothpaste was formulated with various concentrations of celery leaves, FI with concentration of extract (6,25%), F2 (12,5%) and F3 (25%). Each formula was tested the physical characteristics and antibacterial activity towards <i>Streptococcus mutans</i> . The antibacterial activity was determined by the agar-well diffusion method using BHI-A plates. Futhermore, the antibacterial activities were assessed by the presence or absence of inhibition zones after the plates were incubated at 37° c for 24 hours. Results: The results from this test illustrate that all toothpaste under study at various concentrations of celery leaves extract exhibited antibacterial activity. Maximum inhibition zone in antibacterial activity test was shown by F2 (12,5%). Therefore we can use these toothpaste as natural antibacterial on prevention of dental caries caused <i>Streptococcus mutans</i> . Conclusion: The toothpaste from an extract

	of celery leaves showed significant antibacterial activity against <i>Streptococcus mutans</i> .
	1
T0093	The Effects of Curcumin and Vitamin D Combination as Inhibitor Towards
Presentation 6	Salmonella Thypi Bacteria Growth in Vivo
(17:15~17:30)	Ami Febriza , Vivien Novarina A. Kasim, Hasta Handayani Idrus and Mochmammad Hatta
	University of Muhammadiyah Makassar, Indonesia
	<i>Abstract</i> —Objectives: The prevalence of typhoid fever was reportedly high, especially in the Asian continent, as many as 80% of cases came from slums in Bangladesh, China, India, Indonesia, Laos, Nepal, Pakistan and Vietnam [1]. Due to many cases of antibiotic resistance in typhoid fever, various efforts have been made by combining antibiotic therapy or active compounds with adjuvants and herbs. Curcumin is an active compound found in many herbal plants, especially in the Asian Continent. Curcumin has an antimicrobial effect, presumably due to its ability to bind vitamin D receptors (VDR) as a potential ligand. This condition increases the expression of Cathelicidin antimicrobial peptides (CAMP) and eradicates bacteria. Vitamin D will definitely bind to VDR as well, on this basis, this study wants to prove the effect of the combination of curcumin and vitamin D therapy in inhibiting the growth of Salmonella thypi. Method: This study is a true experimental pre-post test design using colony calculation method to investigate the effectiveness of curcumin and Vitamin D in suppressing the growth of Salmonella typhi bacteria in peritoneal fluid male mice strain balb / c. Mice were divided into 5 groups randomly, namely the negative control groups, group I (Curcumin 200 mg/BB/day), group II (Curcumin 400 mg/BB/day), group III (Curcumin 200 mg/BB/day and Vit.D 200 IU/day), and the positive control groups (antibiotic Levofloxacin). The intervention was carried out for five days. After the fifth day, mice were then maintained for 3 weeks to determine the
	amount of colony growth in the post-intervention period. Results: The Comparison of the results between each group gave significance in the average number of bacterial colonies of intraperitoneal fluid. Each group
	gave a significance difference of <0.05. Curcumin has an activity as an antimicrobial, the higher the dose, the greater number of bacteria inhibited growth. After curcumin therapy 200 mg/Kg and 400 mg/Kg for 5 down
	decrease in the number of bacterial colonies in intraperitoneal fluid was
	found. This study concluded that curcumin has an antimicrobial effect on
	Salmonella thypi. The groups with a combination therapy of vitamin D and
	curcumin intervention also gave the same results. Conclusion: Based on the
	results of this study the combination of curcumin and vitamin D is able to
	inhibit the growth of S Thuri bacteria, even up to 20 days after infection
	minut the growth of 5.1 hypr bacteria, even up to 50 days after infection.

ICPPS	2019	CONFERENCE	ABSTRACT
ICI I D	2017	COLU LIGLICE	

T0043	Antibacterial, in Vitro Cytotoxic, and Antioxidant Activities of
Presentation 7	Asmiventi Dialiasrin Dialil. Elza Sundhani, Retno Wahvuningrum, Dwi
$(17.30 \sim 17.45)$	Hartanti and Suwandri
(17.30-17.43)	Universitas Muhammadiyah Purwokerto, Indonesia
	Abstract—Objective: Electrolyzed oxidizing/reducing water is popular as a
	health beneficial water in Indonesia. In this study, we examined the level
	of antibacterial, anticancer, and antioxidant activity of the electrolyzed
	water. Methods: The efficacy of electrolyzed water produced by Enagic®
	at six level pH (2.5, 6.0, 7.0, 8.5, 9.0, and 9.5) was investigated.
	Antibacterial activity was evaluated by using a macro dilution method. The
	anticancer activity was performed against human breast cancer (T47D) cell
	lines by using MTT assay. Moreover, the antioxidant activity was
	determined by using antioxidant model, 1,1-diphenyl-2picryl hidrazyl
	(DPPH) radical scavenging activity. Results: The results show that
	electrolyzed water exhibited antibacterial activity against
	Propionibacterium acnes and Staphylococcus epidermidis. Among six
	level pH, electrolyzed water at pH 2.5 showed the highest antibacterial
	activity. The in vitro cytotoxic activity of electrolyzed water showed a
	potential moderate cytotoxicity. The activity tends to be higher in alkaline
	electrolyzed water. However, the electrolyzed water showed free radical
	scavenging activity. Conclusion: Electrolyzed water that marked in
	Indonesia has some potential health benefits. The activity dependent on
T1017	pH.
T1017	The Degree of Secretory Immunoglobulin a in Burn Patients with Probiotic
Presentation 8	Therapy Lynda Harjani Irawan Wahyudi Iswinarno Dososanutro and
(17.45 19.00)	M Siaifuddin Noer
(17.43~18.00)	Universitas Airlangga, Indonesia
	Abstract-Background: one of the problems with burn patients is the
	impairment of host immunity, which makes difficult to treat. In burns,
	Immunoglobulin A has demonstrated to decrease. Immunoglobulin A is the
	main product of mucous immune system, which increase viral clearance
	and decrease bacterial adhesion in the intestine. Probiotics consists living
	intestine Instead of producting organic component increasing the acidity
	of intestine, mucin and bacteriocin, they also activate the intestinal immune
	system and secretory Immunoglobulin A. The goal of this study was to
	propose that regular intake of probiotic might help to improve the mucous
	immune system, especially secretory IgA in intestines in burn patients.
	Methods: an experimental, double blind, controlled clinical trial was
	carried out in 33 burn patients. Those patients were divided into 2 groups

The first group was given daily probiotic and the second group was given
only placebo for 10 days. The treatment began on the fourth day
admission, and then the degree of secretory IgA was evaluated before
treatment and day 14 from faecal specimen. Result: significant differences
between probiotic and control group were observed (p<0,0001). The
degree of secretory IgA in the probiotic group increased 61,25% and in the
control group it decreased to 36,80%. Conclusion: the mucous immune
system, especially secretory immunoglobulin A increases by probiotic
intake.

Poster Session 2

Tips: The schedule for each presentation is for reference only. In order not to miss your presentation, we strongly suggest that you attend the whole session.

Afternoon, March 29, 2019 (Friday)

Time: 13:20~17:30

Venue: Lounge of Room C5 (17th Floor)

Topic: "Biomedical Engineering and Clinical Pharmacy"

T0057	Antioxidant and Free Radical Scavenging Activity of Hibiscus Acetosella
Doctor 1	Leaves Extracts
Poster 1	Thisakorn Dumrongphuttidecha, Suradwadee Thungmungmee,
	Warachate Khobjai, Nakuntwalai Wisidsri and Surachai Techaeoi
	Rajamangala University of Technology Thanyaburi, Thailand
	Abstract—Objective: Hibiscus acetosella or Chaba Maple is native plant
	and cultivated in tropical western in Africa and north of America. The
	characteristics of Hibiscus acetosella are red to purple in stem, leaf and
	flower that are the pigment of antioxidant compound as anthocyanins.
	Anthocyanins are in the group of flavonoid and have the role as functional
	foods which have several health benefits such as obesity and diabetes
	control, cardiovascular disease prevention, and others. So, the aim of this
	study was to investigate the antioxidant and free radical scavenging activity
	of Hibiscus acetosella leaves extracts. Methods: Hibiscus acetosella
	(Chaba Maple) leaves were collected in Pathumthani province, Thailand
	and were dried and extracted by maceration technique with three solvents;
	water, ethanol and methanol. The antioxidant properties of extracts were
	carried out using ABTS radical scavenging assay and Ferric reducing
	antioxidant power (FRAP) assay. The extracts were examined for their
	scavenging effect on hydroxyl radical (•OH) using Hydroxyl radical
	scavenging assay and nitric oxide radical (•NO) using nitric oxide radical
	scavenging assay. Results: For ABTS, FRAP, and hydroxyl radical
	scavenging assay, ethanol extract showed the highest antioxidant property
	which the percentage inhibitions were 69.04%, 2,381.84 μ M/mg extract,
	and 62.88 mg/ml, respectively. For nitric oxide scavenging activity,
	methanol extract showed highest ability to scavenge NO which percentage
	inhibition was 101.28±0.73 mg/ml. Conclusion: The results of this study
	showed ethanolic, methanolic, and water extract of Hibiscus acetosella
	leaves had scavenge and reducing antioxidant properties.
	Cyclooxygenase Inhibitor and Apoptotic Effect of Octacosanol in

ICPPS 2019 CONFERENCE ABSTRACT		
T0046	Colorectal Cell Line	
	Nuntiya Somparn, Suphaket Saenthaweeuk and Pornrat Rabintossaporn	
Poster 2	Thammasat University, Thailand	
	Abstract—Epidemiological and clinical studies suggest that	
	cyclooxygenase-2 (COX2) has frequently been reported to promote tumor	
	occurrence and development. Non-steroidal anti-inflammatory drugs	
	(NSAIDs), which inhibit COX enzyme, reduce the risk of developing	
	cancer. Policosanol, a mixture of eight primary aliphatic alcohols purified	
	from sugar cane wax, contains octacosanol as major component. It has	
	been reported that policosanol has an anti-inflammatory effect by	
	inhibition of cyclooxygenase (COX) enzyme activities. Therefore, it was	
	aportotic effects of extracesanel in human coloractal call line (HT 20). In	
	the present study exposure to octacosanol results in cell death in a	
	dose-dependent manner (IC50: Octacosanol 190.44 mM Celecoxib 75.12	
	M). In order to identify the cells that had undergone apoptosis, cultured	
	cells were stained with fluorescent dyes Acridine orange and ethidium	
	bromide. Octacosanol induced-apoptotic and necrotic cell death were	
	observed and this result was consistent with the cell viability from	
	cytotoxic assay. Moreover, Inhibition of COX activity and suppression of	
	COX2 protein expression was detectable in octacosanol treated cells.	
	Taken together, our results showed apoptotic effect of octacosanol in HT29	
	and this effect could be attributable to inhibition of COX activity.	
T0019	Effects and Mechanisms of Novel Amiloride Derivates on P-Glycoprotein	
Poster 3	Efflux Function	
	Ching-I Hsu, Meng-Hsuan Lin and Chin-Chuan Hung	
	China Medical University, Taiwan	
	Abstract Multidrug resistance (MDP) associated with the overexpression	
	of P glycoprotein is one of the major hindrance to chemotherapy. The aim	
	of this study is to evaluate the effect of novel amiloride derivatives on	
	efflux function of human P-glycoprotein. We demonstrated three novel	
	amiloride derivatives (A, B, C) are potent P-glycoprotein inhibitors by	
	screening. SRB assay results of these three compounds showed no	
	cytotoxicity under 8 μ M and calcein accumulation assay showed that they	
	inhibited the efflux function of P-glycoprotein. Moreover, A, B and C	
	inhibited P-glycoprotein efflux via uncompetitive inhibition in rhodamine	
	123 efflux assay. On the other hand, A and C inhibited P-glycoprotein	
	efflux via competitive inhibition, while B via noncompetitive inhibition in	
	doxorubicin assay. The basal ATPase activities of P-glycoprotein were all	
	inhibited by A, B and C. Results of MDR1 shift assay exhibited the three	
	derivatives were not substrate of P-glycoprotein. A and B showed no	
	Influence on mRNA expression of P-glycoprotein. In addition, compound	
	A corrected with pacificate significantly increased the percentage of KBvin	

7	
	apoptosis cells in comparing to each treated only. To sum up, these three
	novel amiloride derivatives are potent P-glycoprotein inhibitors and may
	consider as notential chemo re-sensitizers in MDR cancers
T0047	Antimuliferative Effect of Octoopsenol in Human Colon Conser
10047	Antipromerative Effect of Octacosanol in Human Colon Cancer
Poster 4	Suphaket Saenthaweeuk, Nuntiya Somparn and Pornrat Rabintossaporn Thammasat University, Thailand
	Abstract—Policosanol, a mixture of eight primary aliphatic alcohols
	purified from sugar cane wax, contains octacosanol as major component.
	Policosanol has been reported to inhibit sterol biosynthesis possibly by the
	regulation of HMGCoA reductase (HMGCoA) activity Recently there are
	emerging interests in using HMGCoA inhibitor such as Statin drugs as
	anticancer agents based on preclinical evidence of their antiproliferative
	and are aportatio affacts. Therefore it was our interact to evoluate
	and pro-apoptotic effects. Therefore, it was our interest to evaluate
	antiproliferative and pro-apoptotic effects of octacosanol in human
	colorectal cell line (HT 29). In the present study, we demonstrated that
	octacosanol inhibited the growth of HT29 in a dose-dependent manner. The
	IC50 value of octacosanol on HT29 at 24 h was 190.44 mM whereas the
	IC50 of Atrovastatin was 37.43 mM. We observed that treatment with
	octacosanol resulted in reduction of HMGCoA activity. Moreover, the
	disturbance of the mitochondrial membrane potential was detectable in
	octacosanol treated cells. Taken together, our results showed that the
	mechanism of antiproliferative effect of octacosanol in HT29 may be
	attributable to modulate the activity of HMGCoA and dissipation of the
	mitochondrial electrochemical potential gradient which is known as an
	early event leading to apoptosis.
T0080	Evaluation of Acetylcholinesterase Activity and Cytotoxicity of Different
10000	Parts of <i>Nelumbo Nucifera</i> Gaertn on Human Neuroblastoma Cell Line
Poster 5	(SH-SV5V)
	Khamiira Jarmkom Surachai Tachaoai Nakuntwalai Wisideri and
	Warachate Khobiai
	Paiaman zala University of Tashnala ay Thenyshuri. Thailand
	Kajamangala University of Technology Thanyaburi, Thanand
	Abstract—Objective: Cognitive deterioration occurring in patients with
	probable Alzheimer's disease (AD) is associated with a progressive loss of
	cholinergic neurons and a consequent decline in levels of acetylcholine
	(ACh) in the brain. This study aimed to evaluate the acetylcholinesterase
	(AChE) inhibitory effects and cytotoxicity in SH-SY5Y cells of different
	parts of three lotus extracts Methods: AChE activity was quantified by
	spectrophotometry and Cytotoxicity by flow MTT assay in SH-SV5V cells
	exposed to extracts. Results: All of extracts had inhibitory effects to
	B_{2} control to extracts. Results. All of extracts had initiality effects to apartulabelinesteress at B_{2} 0.05 but Dessum Discuss stars at the stars of apartulable.
	activities of the second state of the second state $r < 0.03$, but Koseum Plenum stem extract could in the second state $r < 0.03$. The second state $r < 0.03$ is the second state $r < 0.03$.
	inhibit acetylcholinesterase more than 30% (P<0.05). The all of extracts
	could be an increase SH-SY5Y cell proliferation, while Album Plenum
	flower extract could be cytotoxic on SH-SY5Y cells. Conclusion: The

	extracts of lotus could be supplemented compound for cognitive
	deterioration or Alzheimer's patients.
T0100	Evaluation of Cefoperazone/Sulbactam and Vitamin K Use in Patients with
	Bacterial Infections
Poster 6	Theeranong Seesin Pitinong Pengsunsin Sarawut Weesanhen Peerava
	Criphong Usenang Limpong rengsupon, Barawat Weesaphen, reeraya
	Sriphong, Uaepong Limpapanasit and Sirin Bhongchirawattana
	Mahasarakham University, Thailand
	<i>Abstract</i> —Objective: The objective of this study was to evaluate the effects
	of vitamin K use for blooding or coordulenthies prevention and to assess
	of vitamin K use for biccome of coaguopatities prevention and to assess
	the occurrence of drug related problems in patients receiving
	cefoperazone/sulbactam. Methods: The prospective study was conducted
	between January and April 2018 at 5 general medicine wards in
	Mahasarakham Hospital, Thailand. Patients above 18 years of age with
	hacterial infections who received cefonerazone/sulhactam concurrent with
	vitamin K was included. Date of blooding according this and drug
	vitanini K were included. Kate of bleeding, coagulopatiles and drug
	related problems were evaluated. Results: Forty-three eligible patients
	enrolled in this study. Most were women (72.1%), average ages were 64.7
	years old and 93.0% had co-morbidities (most were diabetes, hypertension
	and chronic kidney disease). High doses cefoperazone/sulbactam have
	been used in 35 patients (81.4%). Gastrointestinal bleeding occurred in one
	notionts (8,20/) 24 notionts had malanged mothamhin time (55,00/) and
	patients (8.5%), 24 patients nad prolonged protinformbin time (55.8%), and
	8 patients had prolonged activated partial thromboplastin time (18.6%).
	Anticipated risk factors were not associated with bleeding. Drug related
	problems were missing of dose adjustment for cefoperazone/sulbactam in
	natients with renal impairment (4.7%) drug interactions between warfarin
	patients with renar impairment (4.776) , and give alleres (2.200) . Conclusions This study
	and vitamin K (4.7%) , and drug anergy (2.3%) . Conclusion: This study
	found that cefoperazone/sulbactam aggravated bleeding and
	coagulopathies despite using vitamin K for prevention. We support the use
	of vitamin K for the prevention of bleeding in high risk patient such as
	elderly who receive cefonerazone/sulhactam
T0019	Effects of ABCB1 Delementions on D on Labilition Mechanisms of
10018	Effects of ABCBT Polymorphisms on P-gp minibition Mechanisms of
Poster 7	Novel 2-Aminobenzofuran Derivatives
1 05001 7	Jou-An Chen, Chin-Min Lin and Chin-Chuan Hung
	China Medical University, Taiwan
	Abstract—Multidrug resistant is one of the major obstacles in cancer
	shows the maintain the maintain had a source of the major obstacles in called
	chemomerapy. The relationship between over-expression of ABC
	transporter subfamily B member (ABCB1/P-gp) and resistant cancers has
	been well established. Genetic polymorphisms in P-gp may influence
	interactions between inhibitors and P-gp. The aim of the present study is to
	investigate the effects of $ABCB1$ polymorphisms on P-op inhibition
	mechanisms of noval 2 aminohonzofirran derivatives. A wild two (ADCD)
	mechanishis of novel 2-animobenzoruran derivatives. A wild-type (ABCBT
	1236C-2677G-3435C) and 2 variant-type of $ABCB1$ ($ABCB1$)
	1236T-2677T-3435T and ABCB1 1236T-2677A-3435T) were used to

	investigate the effect and mechanism of CB167, which showed the most
	significant inhibition of P-gp efflux function among the novel
	2-aminohenzofuran derivatives Results of calcein-AM untake assay
	rhodomine 123 afflux assay and doxorubicin afflux assay indicated that
	CD_{167} significantly inhibited all type of D on afflux function with a
	CB107 significantly innoned an type of P-gp enfux function with a
	concentration-dependent manner. Moreover, strongest inhibition for
	ABCB1 12361-267/1-3435T was showed. In terms of doxorubicin efflux,
	CB167 modulated ABCB1 1236C-2677G-3435C and ABCB1
	1236T-2677A-3435T through competitive inhibition, while for ABCB1
	1236T-2677T-3435T was uncompetitive inhibition. In conclusion, this
	study characterized the inhibition mechanisms of the novel
	2-aminobenzofuran derivatives were influenced by the common haplotypes
	in the ABCB1 gene.
T3005	Implantable Device Actuated by Magnetic Forces for On-demand Insulin
	Administration
Poster 8	Young Bin Choy
	Seoul National University College of Medicine, Republic of Korea
	Abstract—Many implantable systems have been actively sought to permit
	pulsatile insulin release in an on-demand manner without invasive multiple
	skin punctures. However, they often require electrical power supplies (e.g.,
	batteries) and are thus too large for implantation. Moreover, when the
	battery expires, device explantation is inevitable and requires additional
	major surgery. Therefore, in this work, we developed an implantable pump
	enabled with patient-driven, on-demand insulin release without electric
	power sources, thus allowing semi-permanent use after implantation. For
	this we designed the pump to be actuated by an externally applied
	magnetic field (i.e., a magnetically driven numn (MDP)). We prenared the
	nump by simple assembly of magnets and constituent units. The pump
	comprises a drug reservoir and an actuator to store and infuse insulin
	comprises a drug reservoir and an actuator to store and muse mount,
	respectively. To assess in vivo performance, the MDP was subcutaneously
	implanted in streptozotocin (STZ)-induced diabetic rats, and
	pharmacokinetics and pharmacodynamics studies were performed over a
	30-day period. Our pump herein can release an accurate amount of insulin
	only when a magnetic field is applied outside the body. The insulin
	concentrations and decreased blood glucose levels between the pump and
	S.C. injection groups were similar. Therefore, we conclude that the system
	proposed in this work is promising for noninvasive, on-demand pulsatile
	insulin administration for diabetic treatment.
T3013	Effect of Dynamic Mechanical Stimulation on Chondrocytes and Stem
Destan	Cells Co-Cultured in 3D Elastic Scaffolds
Poster 9	Chang-Yi Kuo, Chih-Hao Chen, and Jyh-Ping Chen
	Chang Gung University, Taiwan
	Abstract—In this study, we used bionic 3D elastic scaffold of cartilage,

	which showed total recovery from large strains during repeated
	compression cycles, as 3D scaffolds to study the effects of cyclic dynamic
	compressive loading on chondrocyte gene expression and extracellular
	matrix production. Dynamic culture of chondrocytes was studied at 1 Hz,
	10% to 40% strain and 1 to 9 h/day stimulation duration, in a dynamic
	bioreactor for 14 days. From the experimental results, we could identify the
	optimum dynamic culture condition (20% and 3 h/day) to enhance the
	chondrocytic phenotype of chondrocytes from the expression of marker
	(Col I, Col II, Col X, TNF-a, TGF-b1 and IGF-1) genes by real-time PCR
	and production of ECM by biochemical analysis and immunofluorescence
	staining. With up-regulated growth factor (TGF-b1 and IGF-1) genes,
	co-culture of chondrocytes with porcine adipose-derived stem cells (ASCs)
	was employed to facilitate chondrogenic differentiation of ASCs during
	dynamic culture in 3D scaffolds. By replacing half of the chondrocytes
	with ASCs during co-culture, we could obtain similar production of Col II,
	but reduced expression of Col I, Col X and TNF-a. This combined
	co-culture/dynamic culture strategy is expected to cut down the amount of
	donor chondrocytes needed for cartilage-tissue engineering.
T3052	Numerical Study of the Thermal Performance of A Novel Multi-Electrode
10002	Spiral Catheter System for Renal Sympathetic Denervation
Poster 10	Oun Nan. Yanyan Cheng, Zhen Tian and Xiang Gao
	Beijing University of Technology. China
	Abstract—To investigate the efficacy and safety of a novel multi-electrode
	<i>Abstract</i> —To investigate the efficacy and safety of a novel multi-electrode spiral catheter renal dependence system (Iberis) for the the system (Iberis) for the system the system (Iberis) for the system the system (Iberis) for the system (Iberis) for the system the system (Iberis) for (Iberis) for the system (Iberis) for (Iberi
	<i>Abstract</i> —To investigate the efficacy and safety of a novel multi-electrode spiral catheter renal denervation system (Iberis) for therapy Resistant Hypertension. The electrosurgical device overcomes the difficulty of
	<i>Abstract</i> —To investigate the efficacy and safety of a novel multi-electrode spiral catheter renal denervation system (Iberis) for therapy Resistant Hypertension. The electrosurgical device overcomes the difficulty of previous unipolar electrode system achieving simultaneous multi-point
	<i>Abstract</i> —To investigate the efficacy and safety of a novel multi-electrode spiral catheter renal denervation system (Iberis) for therapy Resistant Hypertension. The electrosurgical device overcomes the difficulty of previous unipolar electrode system achieving simultaneous multi-point comprehensive ablation for sympathetic nerve denervation in four
	<i>Abstract</i> —To investigate the efficacy and safety of a novel multi-electrode spiral catheter renal denervation system (Iberis) for therapy Resistant Hypertension. The electrosurgical device overcomes the difficulty of previous unipolar electrode system achieving simultaneous multi-point comprehensive ablation for sympathetic nerve denervation in four quadrants. In this study, we obtained the heat distribution via simulation
	<i>Abstract</i> —To investigate the efficacy and safety of a novel multi-electrode spiral catheter renal denervation system (Iberis) for therapy Resistant Hypertension. The electrosurgical device overcomes the difficulty of previous unipolar electrode system achieving simultaneous multi-point comprehensive ablation for sympathetic nerve denervation in four quadrants. In this study, we obtained the heat distribution via simulation study on numerical model of this surgical system after denervation therapy
	<i>Abstract</i> —To investigate the efficacy and safety of a novel multi-electrode spiral catheter renal denervation system (Iberis) for therapy Resistant Hypertension. The electrosurgical device overcomes the difficulty of previous unipolar electrode system achieving simultaneous multi-point comprehensive ablation for sympathetic nerve denervation in four quadrants. In this study, we obtained the heat distribution via simulation study on numerical model of this surgical system after denervation therapy. A three-dimensional renal artery tissue and multi-electrode catheter model
	<i>Abstract</i> —To investigate the efficacy and safety of a novel multi-electrode spiral catheter renal denervation system (Iberis) for therapy Resistant Hypertension. The electrosurgical device overcomes the difficulty of previous unipolar electrode system achieving simultaneous multi-point comprehensive ablation for sympathetic nerve denervation in four quadrants. In this study, we obtained the heat distribution via simulation study on numerical model of this surgical system after denervation therapy. A three-dimensional renal artery tissue and multi-electrode catheter model was established. A temperature–controlled protocol with a target
	Abstract—To investigate the efficacy and safety of a novel multi-electrode spiral catheter renal denervation system (Iberis) for therapy Resistant Hypertension. The electrosurgical device overcomes the difficulty of previous unipolar electrode system achieving simultaneous multi-point comprehensive ablation for sympathetic nerve denervation in four quadrants. In this study, we obtained the heat distribution via simulation study on numerical model of this surgical system after denervation therapy. A three-dimensional renal artery tissue and multi-electrode catheter model was established. A temperature–controlled protocol with a target temperature of 60° C and ablation time of 120s was used in the study
	<i>Abstract</i> —To investigate the efficacy and safety of a novel multi-electrode spiral catheter renal denervation system (Iberis) for therapy Resistant Hypertension. The electrosurgical device overcomes the difficulty of previous unipolar electrode system achieving simultaneous multi-point comprehensive ablation for sympathetic nerve denervation in four quadrants. In this study, we obtained the heat distribution via simulation study on numerical model of this surgical system after denervation therapy. A three-dimensional renal artery tissue and multi-electrode catheter model was established. A temperature–controlled protocol with a target temperature of 60°C and ablation time of 120s was used in the study.
	<i>Abstract</i> —To investigate the efficacy and safety of a novel multi-electrode spiral catheter renal denervation system (Iberis) for therapy Resistant Hypertension. The electrosurgical device overcomes the difficulty of previous unipolar electrode system achieving simultaneous multi-point comprehensive ablation for sympathetic nerve denervation in four quadrants. In this study, we obtained the heat distribution via simulation study on numerical model of this surgical system after denervation therapy. A three-dimensional renal artery tissue and multi-electrode catheter model was established. A temperature–controlled protocol with a target temperature of 60°C and ablation time of 120s was used in the study. Meanwhile, we compared the thermal performance with the single-electrode system through simulations.
	Abstract—To investigate the efficacy and safety of a novel multi-electrode spiral catheter renal denervation system (Iberis) for therapy Resistant Hypertension. The electrosurgical device overcomes the difficulty of previous unipolar electrode system achieving simultaneous multi-point comprehensive ablation for sympathetic nerve denervation in four quadrants. In this study, we obtained the heat distribution via simulation study on numerical model of this surgical system after denervation therapy. A three-dimensional renal artery tissue and multi-electrode catheter model was established. A temperature–controlled protocol with a target temperature of 60°C and ablation time of 120s was used in the study. Meanwhile, we compared the thermal performance with the single-electrode system through simulations. Based on the simulation results we found that the temperature increased to 47° C-52 8°C at the
	Abstract—To investigate the efficacy and safety of a novel multi-electrode spiral catheter renal denervation system (Iberis) for therapy Resistant Hypertension. The electrosurgical device overcomes the difficulty of previous unipolar electrode system achieving simultaneous multi-point comprehensive ablation for sympathetic nerve denervation in four quadrants. In this study, we obtained the heat distribution via simulation study on numerical model of this surgical system after denervation therapy. A three-dimensional renal artery tissue and multi-electrode catheter model was established. A temperature–controlled protocol with a target temperature of 60°C and ablation time of 120s was used in the study. Meanwhile, we compared the thermal performance with the single-electrode system through simulations. Based on the simulation results, we found that the temperature increased to 47°C-52.8°C at the sympathetic nerves to 40.6°C at the inter wall and to 43.9°C at the outer
	Abstract—To investigate the efficacy and safety of a novel multi-electrode spiral catheter renal denervation system (Iberis) for therapy Resistant Hypertension. The electrosurgical device overcomes the difficulty of previous unipolar electrode system achieving simultaneous multi-point comprehensive ablation for sympathetic nerve denervation in four quadrants. In this study, we obtained the heat distribution via simulation study on numerical model of this surgical system after denervation therapy. A three-dimensional renal artery tissue and multi-electrode catheter model was established. A temperature–controlled protocol with a target temperature of 60° C and ablation time of 120s was used in the study. Meanwhile, we compared the thermal performance with the single-electrode system through simulations. Based on the simulation results, we found that the temperature increased to 47° C-52.8°C at the sympathetic nerves, to 40.6° C at the inter wall and to 43.9° C at the outer wall. While under similar conditions
	Abstract—To investigate the efficacy and safety of a novel multi-electrode spiral catheter renal denervation system (Iberis) for therapy Resistant Hypertension. The electrosurgical device overcomes the difficulty of previous unipolar electrode system achieving simultaneous multi-point comprehensive ablation for sympathetic nerve denervation in four quadrants. In this study, we obtained the heat distribution via simulation study on numerical model of this surgical system after denervation therapy. A three-dimensional renal artery tissue and multi-electrode catheter model was established. A temperature–controlled protocol with a target temperature of 60°C and ablation time of 120s was used in the study. Meanwhile, we compared the thermal performance with the single-electrode system through simulations. Based on the simulation results, we found that the temperature increased to 47°C-52.8°C at the sympathetic nerves, to 40.6°C at the inter wall and to 43.9°C at the outer wall. While under similar conditions, for the unipolar electrode system, the temperature increased to 45° C-51.4°C at the sympathetic nerves to 42.3°C
	Abstract—To investigate the efficacy and safety of a novel multi-electrode spiral catheter renal denervation system (Iberis) for therapy Resistant Hypertension. The electrosurgical device overcomes the difficulty of previous unipolar electrode system achieving simultaneous multi-point comprehensive ablation for sympathetic nerve denervation in four quadrants. In this study, we obtained the heat distribution via simulation study on numerical model of this surgical system after denervation therapy. A three-dimensional renal artery tissue and multi-electrode catheter model was established. A temperature–controlled protocol with a target temperature of 60°C and ablation time of 120s was used in the study. Meanwhile, we compared the thermal performance with the single-electrode system through simulations. Based on the simulation results, we found that the temperature increased to $47^{\circ}C-52.8^{\circ}C$ at the sympathetic nerves, to $40.6^{\circ}C$ at the inter wall and to $43.9^{\circ}C$ at the outer wall. While under similar conditions, for the unipolar electrode system, the temperature increased to $45^{\circ}C-51.4^{\circ}C$ at the sympathetic nerves, to $42.3^{\circ}C$ at the inter wall and to $43.9^{\circ}C$ at the outer wall.
	<i>Abstract</i> —To investigate the efficacy and safety of a novel multi-electrode spiral catheter renal denervation system (Iberis) for therapy Resistant Hypertension. The electrosurgical device overcomes the difficulty of previous unipolar electrode system achieving simultaneous multi-point comprehensive ablation for sympathetic nerve denervation in four quadrants. In this study, we obtained the heat distribution via simulation study on numerical model of this surgical system after denervation therapy. A three-dimensional renal artery tissue and multi-electrode catheter model was established. A temperature–controlled protocol with a target temperature of 60°C and ablation time of 120s was used in the study. Meanwhile, we compared the thermal performance with the single-electrode system through simulations. Based on the simulation results, we found that the temperature increased to 47°C-52.8°C at the sympathetic nerves, to 40.6°C at the inter wall and to 43.9°C at the outer wall. While under similar conditions, for the unipolar electrode system, the temperature increased to 45°C-51.4°C at the sympathetic nerves, to 42.3°C at the inter wall and to 46.6°C at the outer wall. The results suggests that the novel multi-electrode could affectively disconnect periphered
	Abstract—To investigate the efficacy and safety of a novel multi-electrode spiral catheter renal denervation system (Iberis) for therapy Resistant Hypertension. The electrosurgical device overcomes the difficulty of previous unipolar electrode system achieving simultaneous multi-point comprehensive ablation for sympathetic nerve denervation in four quadrants. In this study, we obtained the heat distribution via simulation study on numerical model of this surgical system after denervation therapy. A three-dimensional renal artery tissue and multi-electrode catheter model was established. A temperature–controlled protocol with a target temperature of 60°C and ablation time of 120s was used in the study. Meanwhile, we compared the thermal performance with the single-electrode system through simulations. Based on the simulation results, we found that the temperature increased to $47^{\circ}C-52.8^{\circ}C$ at the sympathetic nerves, to $40.6^{\circ}C$ at the inter wall and to $43.9^{\circ}C$ at the outer wall. While under similar conditions, for the unipolar electrode system, the temperature increased to $45^{\circ}C-51.4^{\circ}C$ at the sympathetic nerves, to $42.3^{\circ}C$ at the inter wall and to $46.6^{\circ}C$ at the outer wall. The results suggests that the novel multi-electrode could effectively disconnect peripheral sympathetic nerves with lass damage to the artericl walls.
73083	<i>Abstract</i> —To investigate the efficacy and safety of a novel multi-electrode spiral catheter renal denervation system (Iberis) for therapy Resistant Hypertension. The electrosurgical device overcomes the difficulty of previous unipolar electrode system achieving simultaneous multi-point comprehensive ablation for sympathetic nerve denervation in four quadrants. In this study, we obtained the heat distribution via simulation study on numerical model of this surgical system after denervation therapy. A three-dimensional renal artery tissue and multi-electrode catheter model was established. A temperature–controlled protocol with a target temperature of 60°C and ablation time of 120s was used in the study. Meanwhile, we compared the thermal performance with the single-electrode system through simulations. Based on the simulation results, we found that the temperature increased to 47°C-52.8°C at the sympathetic nerves, to 40.6°C at the inter wall and to 43.9°C at the outer wall. While under similar conditions, for the unipolar electrode system, the temperature increased to 45°C-51.4°C at the sympathetic nerves, to 42.3°C at the inter wall and to 46.6°C at the outer wall. The results suggests that the novel multi-electrode could effectively disconnect peripheral sympathetic nerves with less damage to the arterial walls.
T3083	<i>Abstract</i> —To investigate the efficacy and safety of a novel multi-electrode spiral catheter renal denervation system (Iberis) for therapy Resistant Hypertension. The electrosurgical device overcomes the difficulty of previous unipolar electrode system achieving simultaneous multi-point comprehensive ablation for sympathetic nerve denervation in four quadrants. In this study, we obtained the heat distribution via simulation study on numerical model of this surgical system after denervation therapy. A three-dimensional renal artery tissue and multi-electrode catheter model was established. A temperature–controlled protocol with a target temperature of 60°C and ablation time of 120s was used in the study. Meanwhile, we compared the thermal performance with the single-electrode system through simulations. Based on the simulation results, we found that the temperature increased to 47°C-52.8°C at the sympathetic nerves, to 40.6°C at the inter wall and to 43.9°C at the outer wall. While under similar conditions, for the unipolar electrode system, the temperature increased to 45°C-51.4°C at the sympathetic nerves, to 42.3°C at the inter wall and to 46.6°C at the outer wall. The results suggests that the novel multi-electrode could effectively disconnect peripheral sympathetic nerves with less damage to the arterial walls.
T3083 Poster 11	Abstract—To investigate the efficacy and safety of a novel multi-electrode spiral catheter renal denervation system (Iberis) for therapy Resistant Hypertension. The electrosurgical device overcomes the difficulty of previous unipolar electrode system achieving simultaneous multi-point comprehensive ablation for sympathetic nerve denervation in four quadrants. In this study, we obtained the heat distribution via simulation study on numerical model of this surgical system after denervation therapy. A three-dimensional renal artery tissue and multi-electrode catheter model was established. A temperature–controlled protocol with a target temperature of 60°C and ablation time of 120s was used in the study. Meanwhile, we compared the thermal performance with the single-electrode system through simulations. Based on the simulation results, we found that the temperature increased to $47^{\circ}C-52.8^{\circ}C$ at the sympathetic nerves, to $40.6^{\circ}C$ at the inter wall and to $43.9^{\circ}C$ at the outer wall. While under similar conditions, for the unipolar electrode system, the temperature increased to $45^{\circ}C-51.4^{\circ}C$ at the sympathetic nerves, to $42.3^{\circ}C$ at the inter wall and to $46.6^{\circ}C$ at the outer wall. The results suggests that the novel multi-electrode could effectively disconnect peripheral sympathetic nerves with less damage to the arterial walls. Carpal Tunnel Syndrome after Steroid Treatment Followed by Ultrasound Assessment of Median Nerve Mobility

	ICPPS 2019 CONFERENCE ABSTRACT
	Hungkuang University, Taiwan
	<i>Abstract</i> —Carpal tunnel syndrome (CTS) is the common entrapment neuropathy that occurs due to compression of the median nerve at the wrist. However, the degree of improvement in patients after steroid treatment is always subjectively quantified. Therefore, the objective of this study was to evaluate median nerve mobility by ultrasound after oral steroid treatment and to determine the parameters that are able to depict improvement across the severity spectrum of CTS. A total of 30 mild to moderate CTS patients confirmed by nerve conduction studies. The CTS patients will be randomly divided into 2 treatment arms: (1) 2 weeks of prednisolone 20 mg daily followed by 2 weeks of prednisolone 10 mg daily, and (2) 2 weeks of acerin 20 mg daily followed by 2 weeks of acerin 10 mg daily. During finger flexion and extension, all the average lateral displacement, which was curve-fitted by polynomial function. The amplitude of the fitted curve was computed to evaluate the maximum value of the fit. Compared to the acerin group, the steroid group had higher amplitude estimates. A significant difference from baseline for weeks 2 and 4 were observed for the steroid group.
T3084	Block Compressed Sensing Magnetic Resonance Imaging
Poster 12	Academia Sinica, Taiwan
	Abstract—Compressed sensing Magnetic resonance imaging (CSMRI) has become a breakthrough of reducing the acquisition time by undersampling of □-space, leading to only few samples being acquired. But, it suffers from slow reconstruction due to solving ℓ 1-norm minimization. In fact, some real-time clinical applications, including surgery monitoring and cardiac MRI, demand faster reconstruction. In view of such problem, we study block compressive sensing MRI (block CSMRI), where the reconstruction of MR images is conducted in a block-by-block manner. The main difficulty is that traditional block-based methods in CS requires specific hardware support for block-wise acquisition, which is inherently infeasible for MRI. The contributions of block CSMRI are: 1) It requires no extra hardware support, namely acquisition being conducted in the way similar to CSMRI. It implies block CSMRI can be directly applied to existing MRI scanners; 2) It can be combined with any existing acceleration techniques; 3) It achieves faster reconstruction than and comparable reconstruction quality with CSMRI; 4) It possesses theoretical performance guarantee. Experimental results show that given the number of blocks is 16, block CSMRI is faster about 260x times than CRMRI in terms of reconstruction time Residual Behaviour in Milk of Rifaximin in Dairy Cows Following
	Administration of Uterine Infusion

ICPPS 2019 CONFERENCE ABSTRACT		
T0091	Fei Xu, Xiaojie Chen, Huili Huang, Lingyu Jiang and Xiubo Li	
D (12	Chinese Academy of Agricultural Sciences, China	
Poster 13		
	Abstract—The administration of antimicrobial drugs by the uterine route	
	offers a convenient option for the treatment of bovine endometritis. In this	
	paper, a new uterine infusion containing rifaximin (RIF) was prepared, and	
	the residual depletion in milk of dairy cows treated by the RIF infusion	
	were evaluated. Twelve healthy dairy cows were selected by random and	
	treated by RIF uterine infusion at a dosage of 25g/head (contain RIF187.5	
	mg). Milk samples were collected before and at different time intervals (6,	
	12, 18, 24, 36, 42, 48, 60, 72, and 96 h) after treatment. The samples were	
	analysed by a Utra-high Performance Liquid Chromatography. The results	
	showed that the LOD and LOQ of UPLC-MS/MS were 0.5 μ g/kg and 1.0	
	μ g/kg, respectively. The residues of rifaximinin in the milk samples from 6	
	h to 96 h after administration were not detected, which were lower than	
	LOQ (1.0 µg/kg) and lower than MRLs (60µg/kg in milk). This study	
	indicated that administration of RIF by uterine routine has a minimal	
	disposition rate into the milk and may be used in lactating cows with zero	
	milk-withdrawal period.	
T3091	How Carpal Tunnel Release Affects Reaction Force of Flexor Tendon	
D 14	Hsiao-Feng Chieh, Chien-Ju Lin, Li-Chieh Kuo, Po-Ting Wu, Chun-Ta	
Poster 14	Lai, I-Ming Jou and Fong-Chin Su	
	National Cheng Kung University, Taiwan	
	Abstract—The common surgical treatment of Carpal tunnel syndrome	
	(CTS) is carpal tunnel release (CTR). After CTR, the increased space in the	
	carpal tunnel would cause the volar migration of flexor digitorum	
	superficialis (FDS) tendons. The purpose of this study was to investigate	
	the effect of CTR on the interaction force between tendons and	
	surrounding tissue in the carpal tunnel. Five freshly frozen cadaver hands	
	with intact extrinsic flexors were used. The specimens underwent the	
	experiments in the pre-CTR and post-CTR conditions at wrist neutral and	
	30° flexion postures. The middle FDS tendon was applied loadings from 0	
	to 300/700 grams to simulate the finger flexion motion. The loadcell was	
	securely positioned on the carpal tunnel in transverse plane with the same	
	initial contact forces. The reaction forces during different loadings on the	
	middle FDS tendon were measured and analyzed at each condition. Results	
	showed that the higher tendon loadings and greater wrist angles could	
	significantly induce higher reaction force after CTR. Before CTR, no	
	significant difference was found between different tendon loadings. Hence,	
	our findings indicated that the CTR treatment could increase the higher	
	interaction forces between tendons and surrounding tissue and further	
	induce higher friction forces during tendon gliding.	
	Self-Oxygen Supporting Hydrogel for Photosensitizer Delivery and Its	
	Therapeutic Effects On Rheumatoid Arthritis	

ICPPS 2019 CONFERENCE ABSTRACT		
T0016	Ye Yang, Dengke Yin, Yingying Hu, Xue Rui, Jingjing Wu	
Poster 15	Anhui University of Chinese Medicine, China	
	Abstract—Rheumatoid arthritis (RA) is an immune-mediated inflammatory	
	disease. Compared with the surgical removal of inflamed synovium and the	
	there are a relatively positive and contle alternative method. However	
	the lack or depletion of oxygen in local tissue is the main limiting factor	
	for its therapeutic effects. In the present study a photosensitizer loaded	
	self-oxygen supporting hydrogel had been designed, with the matrix	
	material of PLGA-PEG-PLGA, the oxygen release compound of calcium	
	peroxide and the photosensitizer of hematoporphyrin monomethyl ether	
	(HMME), and named as GelCaO2-HMME. In RA rat model with optical	
	excitation, the GelCaO2-HMME could increase the singlet oxygen (1O2)	
	release throughout the treatment and inhibit inflamed synovial invasion,	
	cartilage erosion and proinflammatory cytokines expression. Therefore, the	
	novel R A treatment modality	
T0024	Verruca Plantaris Prophylaxis–Early Results	
	Mark Kauffman, Lake Erie College of Osteopathic Medicine, USA	
Poster 16	Michele Roth-Kauffman, Gannon University, USA	
	Abstract—Verruca Plantaris, plantar warts of the feet, are caused by human	
	papillomavirus. Estimated annual incidence is 14%. We hypothesize that	
	primary incidence can be decreased through topical anti-viral prophylaxis,	
	representing a shift in paradigm from treating after occurrence to primary	
	prevention. We initiated a double-blinded study $(n = 161)$ of adult	
	participants randomized into Control-topical lotion/emollient or	
	lotion to the feet once daily Examination occurred at 3 6 9 and 12	
	months. With the estimated 14% annual incidence, new lesions were	
	expected. ^{1,2} None occurred potentially suggesting lotion alone may	
	improve skin health and decrease incidence. Identifying the lack of a study	
	arm with no lotion for comparison, a second study (n=118) was started	
	with randomization into one of three arms: No Treatment (NT)-nothing	
	applied to feet, Control-emollient only and Treatment-herbal/vitamin.	
	the NT group. Continued follow-up and expanding enrollment is required	
	to reach statistical significance	

Listener Name List

L1	Sam Skellern Curra Community Pharmacy, Australia
L2	Shanxi Medical University, China
L3	Damian Teo
	Latrobe University, Australia
L4	Araya Supawat
	Ramkhamhaeng University, Thailand
L5	Narttaya Chaiwiang
	Ramkhamhaeng University, Thailand
L6	Kewei Tian
	Zhejiang University, China
L7	Camille Hoornaert
	Universit élibre de Bruxelles, Belgium
L8	Benjamin Maes
	Belgium
L9	Daniel Miralles
	France
L10	Ting Sun
	Minzu University of China, China
L11	Xixi Li
	Minzu University of China, China
L12	Aihua Du
	Tongji hospital, Tongji Medical College Huazhong University of Science
	& Technology, China
L13	Chang Shu
	Tongji hospital, Tongji Medical College Huazhong University of Science
T 1 4	& Technology, China
L14	Chengliang Zhang Tongii hospital Tongii Madical College Huazhong University of Science
	& Technology China
L15	Hong Liu
	Tongji hospital, Tongji Medical College Huazhong University of Science
	& Technology, China
L16	Hua Xu
	Tongji hospital, Tongji Medical College Huazhong University of Science
	& Technology, China
L17	Jun Xia
	Tongji hospital, Tongji Medical College Huazhong University of Science
ICPPS 2019 CONFERENCE ABSTRACT

	& Technology, China		
L18	Wenhua LiuTongji hospital, Tongji Medical College Huazhong University of Science& Technology, China		
L19	Mudiana Muhamad Universiti Teknologi MARA, Malaysia		
L20	Sharaniza Ab Rahim Universiti Teknologi MARA, Malaysia		
L21	Xiaojie Chen Chinese Academy of Agricultural Sciences, China		
L22	Fiona Geraghty Elsevier, UK		
L23	Woon-Seng Choong Lawrence Berkeley National Laboratory, USA		
L24	Hyun Jung Jin Korea Science Academy of KAIST, Republic of Korea		
L25	Xiaocheng Zhang Aier Eye Hospital (Chongqing), China		
L26	Jianjian Cheng Henan Provincial People's Hospital, China		
L27	Li Chen Taihe Hospital, China		
L28	Jun Peng Hebei Yanda Hospital, China		
L29	Waranya Krongkaew NCI Hospital, Thailand		
L30	Weenarat Senawin Sawanpracharak Hospital, Thailand		
L31	Jantana Undhisote Kaisuranaree Hospital, Thailand		
L32	Anong Poomipak Kai Kritsriwala Hospital, Thailand		
L33	Panida Srisongkram Rajburi Hospital, Thailand		
L34	Phojana Komesmuneeborirak Siriraj Hospital, Thailand		
L35	Narakorn Naratikornrit Saraburi Hospital, Thailand		
L36	Wuttipong Akkamanung Mahasarakam Hospital, Thailand		

ICPPS 2019 CONFERENCE ABSTRACT

L37	Siriluk Boonmee Sirikit Hospital, Thailand
L38	Sanikan Thepkanjana Anandamahidol Hospital, Thailand
L39	Nattapat Pratuangsatabadee Bumrungrad Hospital, Thailand
L40	Thurdsak Piriyakakul Rajburi Hospital, Thailand

Dinner		
18:30~20:00	Lounge of Room C5	



Conference Venue



Global Front, Surugadai Campus, Meiji University, Tokyo, Japan

http://www.meiji.ac.jp/cip/english/about/campus/surugadai.html



Surugadai Campus is the traditional home to Meiji University. The campus is located in the Kanda Surugadai area which, while retaining a strong atmosphere of a students' town, is located in proximity to Kasumigaseki, Otemachi, and other areas that are home to companies and government ministries and agencies that are pivotal to Japan's politics and economy. The campus houses various educational and research facilities centering around the Liberty Tower, which has become a landmark, and the Academy Common. In January 2013, the Global Front was completed, where liberal arts graduate schools, research facilities, Organization for the Strategic Coordination of Research and Intellectual Properties, and Organization for International Collaboration are gathered under the concept of "a state-of-the-art research cultivation hub that transmits to the world."





Direction:

- 3 minutes on foot from JR Chuo/Sobu Line and Subway Marunouchi Line, Ochanomizu Station
- 5 minutes on foot from Subway Chiyoda Line, Shin-Ochanomizu Station
- 5 minutes on foot from Subway Mita, Shinjuku, and Hanzomon Lines, Jimbocho Station
- URL: http://www.meiji.ac.jp/koho/campus_guide/suruga/access.html

Academic Visit & Tour 9:00~19:00, March 30, 2019 (Saturday)

Tips: 1. Gathering at Global Front, 1st Floor before 8:50 a.m.

2. The following places are for references, and the final schedule should be adjusted to the actual notice.

3. The lunch of March 30, 2019 is covered, and the other paid items such as tickets of Tokyo Skytree and Tokyo Tower should be covered by participants themselves.

Time	Specific Arrangement
9:00-12:30	1. Departure at Meiji University; 2. Tokyo Skytree; 3. Senso-ji Temple; 4. Ueno Park
12:30-13:30	5. Lunch
13:30-19:00	6. Akihabara; 7. Tokyo Tower; 8. Odaiba Marin Park; 9. Arrival in Meiji University

The Tokyo Skytree is a television broadcasting tower and landmark of Tokyo. It is the centerpiece of the Tokyo Skytree Town in the Sumida City Ward, not far away from Asakusa. With a height of 634 meters (634 can be read as "Musashi", a historic name of the Tokyo Region), it is the tallest structure in Japan and the second tallest in the world at the time of its completion. A large shopping complex with aquarium is located at its base. The highlight of the Tokyo Skytree is its two observation decks which offer spectacular views out over Tokyo. The two enclosed decks are located at heights of 350 and 450



meters respectively, making them the highest observation decks in Japan and some of the highest in the world.



Senso-ji Temple is located in Taito Ward, Tokyo, is Japan's existing with "Edo style" of the public recreational land. According to legend, the Empress Suiko Sanshiliunian, there are two fishermen fishing in the Palace Togawa, picked up a gold one, 5.5 cm of Avalokitesvara, the vicinity of people built a temple to raise funds dedicated to the Buddha statues, and this is Senso-ji Temple.

Ueno Park is a large public park next to Ueno Station in central Tokyo. The park grounds were originally part of Kaneiji Temple, which used to be one of the city's largest and wealthiest temples and a family temple of the ruling Tokugawa clan during the Edo Period. Kaneiji stood in the northeast of the capital to protect the city from evil, much like Enryakuji Temple in Kyoto. Ueno Park is one of Tokyo's most popular and lively cherry blossom spots with more than 1000 cherry trees lining its central pathway.



ICPPS 2019 CONFERENCE ABSTRACT



Tokyo Tower is the world's tallest, self-supported steel tower, standing 333 meters high in the center of Tokyo, and it is 13 meters taller than its model, the Eiffel Tower. A symbol of Japan's post-war rebirth as a major economic power, Tokyo Tower was the country's tallest structure from its completion in 1958 until 2012 when it was surpassed

by the Tokyo Skytree. In addition to being a popular tourist spot, Tokyo Tower serves as a broadcast antenna. The tower's main deck at 150 meters is reached via elevator or a 600-step staircase (both paid). Thanks to the tower's central location, the observatory offers an interesting view of the city despite being only at a relatively moderate height.

Odaiba Marin Park is an artificial seaside park that can enjoy the views of the Tokyo coastline. Swimming is prohibited here, but it's available for visitors play on the coast and reef, you can also enjoy the windsurfing, overlooking the Rainbow Bridge across the street and other beautiful scenery



Note		

Note		

Note		

Note		



Feedback Information

(Please fill this form and return it to conference specialist during the conference days.)

Personal Information					
Conference Name					
and Paper ID					
Full Name					
E-mail Address					
Area of Research					
Affiliation					
Please indicate	your overa	ll satisfactio	n with this	conference w	vith "√"
	Very Satisfied	Somewhat Satisfied	Neutral	Somewhat Dissatisfied	Very Dissatisfied
Conference Content					
Presentation and Paper					
Value					
Registration Process					
Venue					
Food and Beverage					
Are You A Member of	Yes 🗆	No 🗆			
CBEES	(If	"No", you	may ap	ply members	ship from
	http://www.c	bees.org/member.	htm)		
Do You Willing to	Yes□	No			
Receive CBEES Future					
Conferences					
Information Via E-mail					
Where did you get the conference information?					
Would you please					
specify the main reason					
for attending this					
conference?					

ICPPS 2019 CONFERENCE ABSTRACT

-		
	Did the conference fulfill your reason for attending?	Yes- AbsolutelyYes- But not to my full extentNo(If "No", please tell us the main reason)
	Would you please list the top 3 to 5 universities in your city?	
	Other Field of Interest	
	Any Other Suggestions/Comments	

Thank you for taking time to participate in this conference evaluation. Your comments will enable us to execute future conferences better and tailor them to your needs!