



13th INTERNATIONAL SYMPOSIUM OF HEALTH SCIENCES



i-Sihat

24 - 25th August 2022

**Embracing Resilience in the COVID-19 Pandemic:
Health Sciences to the Forefront**



ORGANISED BY:



IN ASSOCIATION WITH



UNIVERSITAS GADJAH MADA





TENTATIVE PROGRAM

Oral presentation (3 concurrent rooms)			
	ROOM 1	ROOM 2	ROOM 3
11.45 - 12.45 pm (10 min/ person)	Naufal Nordin (OS27)	PM Dr Azhar Abdul Halim (OS6)	Saad Ghaben (OS2)
	Mariah Asem Shehadeh Sadeh Ali (OS30)	Shalini A/P Parthipan (OS16)	Mohd Zamzuri Che Daud (OS78)
	PM Dr Mohd Izuddin Hairol (OS86)	Nur Rasyiqin Binti Rasli (OS25)	Nur Afrizah Binti Abd Hadi (OS77)
	Shazrina Binti Ariffin (OS8)	Dr Jayakumar A/L Murthy (OS5)	Jamiah Binti Mohammad Hanipah (OS39)
	Siti Nur Liyana Binti Ruslan (OS48)	Dr Zanariah Binti Mohd(060)	Sharmila A/P Gopala Krishna Pillai (OS70)
12.50 - 1.15 pm	Industrial Lunch Talk 2 Mr Sayyidi Hamzi Abdul Raub (Pantal Premier Pathology) Title: Role of Scientist in Molecular Science: Past, Present and Future		
1.15 - 2.00 pm	Lunch Break / Poster presentation		
Oral presentation continued (3 concurrent rooms)			
	ROOM 1	ROOM 2	ROOM 3
2.00 - 3.00 pm (10 min/ person)	Clarisse Roswini A/P Kalaman (OS43)	Nur Sabrina Sabela (OS90)	Della Ayu Pratiwi (OS92)
	Dr Irylia Dyuana Shamsudin (OS8)	Sanisha Das (OS87)	Dr Shahrudin bin Mohd Sham (OS9)
	Tan Yee Kee (OS28)	Raveena Vaidheswary A/P Muralitharan (OS45)	Asma' affiah Shamhari (OS20)
	Chu Sin Yee (OS31)	Omchit Surien (OS41)	Muhammad Asyari bin Zakaria (OS5)
	Lim Wen Xin (OS36)	PM Dr. Akmal Sabarudin (OS4)	Nur Erysha Sabrina Bt Jeffer (OS19)
ROOM 1		ROOM 2	
Session 7		Session 8	
Food Matters!		Young Investigator Award	
3.15 - 3.40 pm	Assoc Prof Dr Zahara Abdul Manaf (Universiti Kebangsaan Malaysia, Malaysia) Title: Weight Reduction Programme for Employees Before and During the COVID-19 Pandemic: Opportunities and Challenges		Nor Diyana Hani binti Ghani (OS10 YIA)
	Assoc Prof Dr Chin Yit Siew (Universiti Putra Malaysia, Malaysia) Title: Dietary Practices and Body Weight Status during COVID-19 Pandemic: Findings from the MyNutriLifeCOVID-19 online survey		Sharifah Nadhira Binti Syed Annuar (OS12 YIA)
3.40 - 4.20 pm			Nur Syahriah Binti Che Razali (OS13 YIA)
			Fatin Farhana binti Jubaidi (OS37 YIA)
			Lishantini Pearanpan (OS68 YIA)
4.30 - 5.00 pm			Mary A/P Thomas (OS74 YIA)
			Rajasegar Anamallay (OS82 YIA)
Break/ Judges deliberation			
ROOM 1			
5.00 - 5.10 pm	Closing Ceremony - Welcoming Remarks (MC) - Award Winner Announcement		
5.10 - 5.15 pm	Closing Ceremony Speech by Prof Dr Suzana Shahar Dean Faculty of Health Sciences, Universiti Kebangsaan Malaysia		
5.15 - 5.20 pm	Closing Remarks Video		
5.20 pm	End day 2		

LIST OF SPEAKERS

KEYNOTE 1 BEYOND HIPPOCRATIC OATH & COVID-19

Dr. Renzo Quinto
(Sunway University, Malaysia)

KEYNOTE 2 PRECISION PUBLIC HEALTH FOR A RESILIENT SOCIETY

Prof Dr Chang-Chuan Chan
(National Taiwan University)

PLENARY 1 COVID-19: UPDATES AND LESSONS FOR THE FUTURE OUTBREAKS

Dr Ravindran Thayan
(Institute of Medical Research)

PLENARY 2 CO-EXISTING WITH COVID-19 SAFELY: REDUCING THE RISK OF TRANSMISSION OF COVID-19

Prof Dr Sasheela a/p Sri La Ponnampalavanar
(University Malaya Medical Centre)

PLENARY 3 FUNCTIONAL QUALITY OF T-CELL PHENOTYPES AND NEUTRALIZING ANTIBODIES IN SARS-COV-2 INFECTION

Prof Dr Shankar Esaki Muthu
(Central University of Tamil Nadu, India)



LIST OF ORAL PARTICIPANTS

- OS19** EVNOL SUPRABIO™ AMELIORATES THE TESTICULAR AND PROSTATE MORPHOLOGY VIA REGULATING THE REPRODUCTIVE HORMONE IN BISPHENOL F-INDUCED SPRAGUE DAWLEY RATS
Nur Erysha Sabrina Binti Jeffer
Centre of Diagnostic, Therapeutic & Investigative Studies, Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Jalan Raja Muda Aziz, 50300 Kuala Lumpur, Malaysia.
- OS20** BISPHENOL F EXPOSURE INDUCES ESTROGEN-LIKE EFFECT ON THE TESTIS OF SPRAGUE-DAWLEY RATS
Asma' Affiah Shamhari
Centre of Diagnostic, Therapeutic & Investigative Studies (CODTIS), Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Jalan Raja Muda Abdul Aziz, 50300, Kuala Lumpur
- OS21** EC USERS' PROFILE AND ITS ASSOCIATION WITH IDENTIFIED IMPACTS OF COVID-19 ON VAPING
Rawaida Mat Salih
Centre for Community Health Studies (ReaCH), Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia
- OS25** CYTOTOXICITY, APOPTOSIS AND GENOTOXICITY STUDY OF TRIPHENYLTIN(IV) DITHIOCARBAMATE COMPOUND ON REN. CHILDHOOD LEUKEMIA CELLS
Nur Rasyiqin Rasli
Programme of Biomedical Science, Center for Toxicology & Health Risk Study (CORE), Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Jalan Raja Muda Abdul Aziz, 50300 Kuala Lumpur, Malaysia
- OS26** CHLOROQUINE-INDUCED LYSOSOMAL DYSFUNCTION INCREASED AMYLOID-BETA EXPRESSION IN HUMAN BRAIN ENDOTHELIAL CELLS (HBECS)
Hafiz Nadiyah Laili
Centre for Toxicology and Health Risk Studies (CORE), Programme of Biomedical Science, Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Jalan Raja Muda Abdul Aziz, 50300 Kuala Lumpur, Malaysia.
- OS27** EFFECTS OF INTERVENTION ON VISUAL-MOTOR INTEGRATION AND VISUOSPATIAL SKILLS OF TYPICAL PRESCHOOL CHILDREN WITH REDUCED VISUAL-MOTOR INTEGRATION SKILLS
Naufal Nordin
Centre for Community Health Studies (ReaCH), Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia
- OS28** RISK AND PROTECTIVE FACTORS OF TRAUMA AND SUICIDE POTENTIAL AMONG UNIVERSITY STUDENTS
Tan Yee Kee
Centre for Community Health Studies (ReaCH), Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Jalan Raja Muda Abdul Aziz, 50300, Kuala Lumpur, Malaysia.
- OS30** VISUAL PERCEPTUAL SKILLS OF MALAYSIAN PRESCHOOL CHILDREN WITH THE TVPS-4: COMPARISON WITH US NORMS
Mariah Asem Shehadeh Saleh Ali
Centre for Community Health Studies, Faculty of Health Sciences, Universiti Kebangsaan Malaysia
- OS31** PERCEIVED STRESS OF COVID-19 TOWARDS THE BURDEN OF CARE AND PSYCHOLOGICAL DISTRESS AMONG CAREGIVERS OF HAEMODIALYSIS PATIENTS
Sin Yee Chu
Centre for Healthy Ageing and Wellness (H-Care), Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia.
- OS32** HEALTH-RELATED QUALITY OF LIFE AND EMOTIONAL DISTURBANCE: A CROSS-SECTIONAL STUDY OF STROKE SURVIVORS
Deepak Thazhakkattu Vyas
Center for Rehabilitation and Special Needs Studies, Faculty of Health Sciences, Universiti Kebangsaan Malaysia Jalan Raja Muda Abdul Aziz, 50300, Kuala Lumpur

LIST OF ORAL PARTICIPANTS

- OS33** MULTI-KERNEL MACHINE LEARNING-BASED MULTI-STRUCTURAL MRI CLASSIFICATION OF ALZHEIMER'S DISEASE AND HEALTHY CONTROL
Albert D. Piegson
Universiti Kebangsaan Malaysia, Faculty of Health Sciences, Diagnostic Imaging & Radiotherapy Program, Jalan Raja Muda Abdul Aziz, 50300 Kuala Lumpur, Wilayah Persekutuan Kuala Lumpur, Malaysia
- OS36** VALIDITY AND RELIABILITY OF WORK INTENTION QUESTIONNAIRE AMONG WORKING ADULTS IN KLANG VALLEY DURING COVID-19 PANDEMIC
Lim Wen Xin
Occupational Therapy Programme, Center for Rehabilitation & Special Needs Faculty of Health Sciences, The National University of Malaysia
- OS37** POLYPHENOL-RICH EXTRACT OF ROSELLE CALYX (HPE) MITIGATED DIABETES-INDUCED CARDIAC FUNCTION AND STRUCTURE DETERIORATION VIA AMELIORATION OF OXIDATIVE STRESS, APOPTOSIS AND INFLAMMATION
Fatin Farhana Jubaidi
Center for Diagnostic, Therapeutic and Investigative Studies, Faculty of Health Sciences, Universiti Kebangsaan Malaysia, 50300 Kuala Lumpur, Malaysia
- OS39** DOES HEALTH LITERACY PREDICT COGNITIVE FRAILTY? ANSWER FROM AGELESS TRIAL
Jamiah Hanipah
Center for Healthy Aging and Wellness, Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Jalan Raja Muda Abdul Aziz, 50300 Kuala Lumpur, Malaysia
- OS40** POTENTIAL PHOTOCHEMOPREVENTIVE EFFECT OF FATTY ACIDS AND TERPENOID-RICH LEAF EXTRACT OF SAKARIUH (ODONTOPHYLLUM MID. ON UVB-INDUCED IMMORTALIZED HUMAN KERATINOCYTES (HACAT) SKIN CANCER MODEL
Muhammad Wahidul Haswan Abdul Aziz
Center for Toxicology and Health Risk Studies (CORE), Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Jalan Raja Muda Abdul Aziz, 50300 Kuala Lumpur, Malaysia.
- OS41** EFFECTS OF ORALLY ADMINISTERED PTEROSTILBENE IN DMBA/TPA INDUCED MULTISTAGE SKIN SQUAMOUS CELL CARCINOMA MOUSE MODEL
Omchit Surien
Center for Toxicology and Health Risk Studies (CORE), Faculty of Health Sciences, Universiti Kebangsaan Malaysia (UKM), Kuala Lumpur, Malaysia.
- OS42** GAIT SPEED, FALLS RISK, AND SELF-EFFICACY AMONG COMMUNITY-DWELLING STROKE SURVIVORS DISCHARGED FROM PHYSIOTHERAPY SERVICES: A PROSPECTIVE CROSS-SECTIONAL STUDY
Chong Zui Kee
Physiotherapy Program & Center for Rehabilitation and Special Needs - Faculty of Health Sciences, Universiti Kebangsaan Malaysia, 50586 Kuala Lumpur, Malaysia
- OS43** MEDICAL ADHERENCE AMONG ADOLESCENT PSYCHIATRIC PATIENTS: A MULTICENTRE STUDY
Clarisse Roswini Kalaman
Center for Healthy Ageing and Wellness (H-Care), Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia
- OS45** ESTABLISHING A UVB-INDUCED SKIN PHOTOAGING BALB/C MICE MODEL
Raveena Vaidheswary Muralitharan
Center for Toxicology and Health Risk Studies (CORE), Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Jalan Raja Muda Abdul Aziz, 50300 Kuala Lumpur
- OS48** PREVALENCE OF COMPUTER VISION SYNDROME (CVS) AND ITS ASSOCIATED RISK FACTORS AMONG INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA KUANTAN UNDERGRADUATES
Siti Nur Liyana Ruslan
Department of Biomedical Science, Kulliyah of Allied Health Sciences, International Islamic University Malaysia, Jalan Sultan Ahmad Shah, Bandar Indera Mahkota, 25200, Kuantan, Pahang



ABSTRACT BOOK

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The lockdown implementation during the COVID-19 pandemic has led to deterioration in adolescent mental health, particularly adolescent psychiatric patients, partly due to high treatment drop-out rates. This study aimed to investigate whether medical adherence influenced adolescent psychiatric patients' mental health in Malaysia. A cross-sectional study using the convenient sampling method was conducted among 150 adolescent psychiatric patients, aged between 11 to 19 years old from five Malaysian hospitals across Peninsular Malaysia. The Perceived Stress Scale modified for COVID-19 (COVID-PSS-10), Generalized Anxiety Questionnaire

(GAD-7), Patient Health Questionnaire-9 (PHQ-9), and Malaysia Medical Adherence Assessment Tool (MyMAAT) were used to measure perceived stress, anxiety, depression, and medical adherence, respectively. Results revealed that moderately severe to severe depression levels were seen in 68 (43.9%) participants, and severe anxiety and high levels of stress were seen in 29 (18.7%) and 33 (21.3%) adolescents, respectively. The multiple regression analyses showed that higher medical adherence significantly was associated with lower depression symptoms ($R^2=.16$, $F(6,148)=3.73$, $\beta=.37$, $p=.000$), anxiety symptoms ($R^2=.15$, $F(6,148)=4.22$, $\beta=.31$, $p=.01$), and perceived stress ($R^2=.13$, $F(6,148)=3.79$, $\beta=.28$, $p=.002$), after adjusting for age, gender and race. The results revealed that participants with higher levels of medical adherence demonstrated better mental health. In conclusion, this study highlights the importance of medical adherence as a protective factor on psychiatric adolescent mental health during the COVID-19 pandemic. Therefore, implementing adherence interventions may increase mental health in the treatment of adolescents with psychiatric disorders.

Keywords: mental health, medical adherence, adolescent psychiatric patient, COVID-19, Malaysia

OS45 i-SIHAT 2022

Establishing a UVB-induced skin photoaging BALB/c mice model

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Prolonged ultraviolet (UV) exposure on the skin results in photoaging. Hence, our study aimed to establish a UVB-induced skin photoaging BALB/c mice model. About 16 female mice (7 weeks old) were divided into 2 equal groups. Group 1 was not exposed to UVB, while Group 2 was exposed to UVB. For the first 2 weeks, mice were given a daily oral treatment of corn oil via oral gavage, without UVB exposure. This was followed by 8 weeks with UVB exposure (Group 2 only) 3 times a week at increasing doses, totalling 3.7 J/cm². During the same 8 weeks, skin elasticity was measured once a week using a pinch test, which showed that Group 2 (5.071 ± 0.459 seconds) skin took significantly longer ($p < 0.01$) to return to its normal conformation compared to Group 1 (3.203 ± 0.186 seconds), indicating skin elasticity loss. Next, dorsal skin were observed just before the mice were sacrificed, whereby Group 1 showed fine wrinkles and no skin redness and Group 2 showed coarse wrinkles, skin redness and peeling. Histopathological changes were then identified via Hematoxylin & Eosin (H&E) staining and epidermal thickness was measured using ImageJ. Group 2 showed a significant increase ($p < 0.05$) in epidermal thickness (51.849 ± 7.461 µm) compared to Group 1 (15.172

± 0.736 µm). In conclusion, a UVB-induced skin photoaging BALB/c mice model has been established.

Keywords: skin, photoaging, oral, ultraviolet, UVB

OS48 i-SIHAT 2022

Prevalence of Computer Vision Syndrome (CVS) and its Associated Risk Factors among International Islamic University Malaysia Kuantan Undergraduates

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Excessive computer use has increased among workers and students, particularly during the COVID-19 pandemic. Computer vision syndrome (CVS) has previously impacted a large number of Malaysian undergraduates. However, International Islamic University Malaysia (IIUM), Kuantan has no prior or current data on CVS among their university students, raising the question of whether or not students are experiencing CVS symptoms when using computers, particularly during online teaching and learning. Thus, a cross-sectional study was conducted at IIUM Kuantan to determine the prevalence of CVS and its associated risk factors among undergraduates. A convenience sampling method was employed to recruit study participants,

and data was collected using a self-administered validated questionnaire. The prevalence of CVS was calculated and its association with ergonomics and non-ergonomic risk factors was determined using statistical analysis. The data showed that the CVS prevalence was 69.3%, with a higher prevalence among female ($p=0.003$) and Kulliyah of Medicine students ($p=0.048$) than other kulliyahs. The majority of CVS cases were classified as mild, with tired eyes (89.9%), neck and shoulder pain (88.7%), and headache (73.4%) among the most commonly reported symptoms. The severity of the CVS symptoms was found to be significantly correlated with ergonomics practices ($r= -0.137$, $p=0.034$). Despite good ergonomics practices reported by the participants, a weak correlation between these factors raises the question of whether the participants have a correct practice of computer ergonomics. Hence, the present findings suggest that training in good computer ergonomics practices is necessary.

Keywords: prevalence, computer vision syndrome, undergraduates

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The Effectiveness of Orthokeratology in Reducing Axial Length of Myopic Children Living in Kuala Lumpur

Bariah Mohd Ali¹, Low Yu Chen¹, Mizhanim Mohamad Shahimin¹, Nortaili Arif¹, Wan Haslina Wan Abdul Halim², Hamzaini Abdul Hamid³, Siti Salasiah Mokri⁴, Aqilah Baseri Huddin⁴, Norhani Mohidin⁵

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High myopia can lead to blindness, thus controlling myopia progression is essential. Myopia progression is monitored by changes in axial length (AL). Orthokeratology (OK) is shown to be effective in reducing myopia, but limited reports are available with reference to Malaysian population. This study examined changes in AL in local myopic children undergoing OK treatment within 12 months and compared to single vision spectacles (SVS). Inclusion criteria was age ranged 7 to 9 years, myopia < -5.00 DS, astigmatism ≤ 1.50 D, best corrected vision acuity (BCVA) 6/6 in each eye, no history of ocular or systemic diseases and never undergoing any myopia treatment prior to this study. Cycloplegic refraction, high and low contrast VA, corneal topography and AL were measured throughout the study. Results were analysed using t-test and ANOVA. 70 myopic children (45 OK, 25 SVS) with mean age 8.31 ± 0.37 years participated in this study. Mean refraction at baseline

for OK and SVS were -3.22 ± 1.11 D and -3.03 ± 1.35 D respectively ($p>0.01$). At 12 months myopia had increased by -1.26 ± 1.01 D in SVS ($p<0.01$) and -0.06 ± 0.12 D in OK ($p<0.01$). No significant change was found in high and low contrast VA ($p>0.01$). AL increased by 0.48 ± 0.47 mm in SVS ($p<0.01$) but decreased by 0.18 ± 0.38 mm in OK ($p<0.01$). This study concludes that OK lens is effective in reducing AL without compromising visual functions and should be considered by Optometrists when managing myopic children.

Keywords: myopia, axial length, orthokeratology

054 I-SIHAT 2022

Radiomics Features Classification of Atherosclerosis in Coronary Computed Tomography Angiography (CCTA) Images Using Automated Machine Learning (TPOT) Algorithms

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Radiomics is the process of extracting numerous quantitative features of high-dimensional data that allow automated classification of the disease including atherosclerotic. This research aimed to evaluate radiomic features extracted from segmented regions of Coronary CT Angiography (CCTA) images and to determine the performance of quantitative information in classifying the atherosclerotic plaques. In accordance with inclusion criteria, 202 CCTA images were collected retrospectively from Institut Jantung Negara (IJN), Malaysia. 3 main coronary arteries were segmented on the axial view which resulted in a sum of 606 volume of interest (VOI). The Automated machine learning (AutoML) method via Tree-based Pipeline Optimisation Tool (TPOT) was utilized to construct 4 types of classification models with different input datasets, namely Model 1, Model 2, Model 3 and Model 4 corresponding to first-order, second-order, shape-order features, and control group, respectively. The supervised classification performance was evaluated in terms of heatmap confusion matrix, recall (sensitivity), precision (PPV), F1-score, accuracy, receiver operating characteristic (ROC) and area under the curve (AUC). Overall, model 1 had the best performance with the highest accuracy of 77%, as well as the highest weighted average of precision, recall, and F1-score at 0.77 respectively compared to that of other models. We also observed the superiority of first-order features in classifying the normal coronary arteries and abnormal as well