MAHSA UNIVERSITY

MACS
MAHSA ACADEMIC SOLUTIONS

MI-DENT 2022

MAHSA INTERNATIONAL DENTAL CONFERENCE (Mi-Dent) 2022

YouTube LIVE

DATE:

24-25TH JUNE 2022

THEME:

"Dental Education: Current Updates"

* PROGRAMME BOOK *

TENTATIVE PROGRAMME

DAY 1

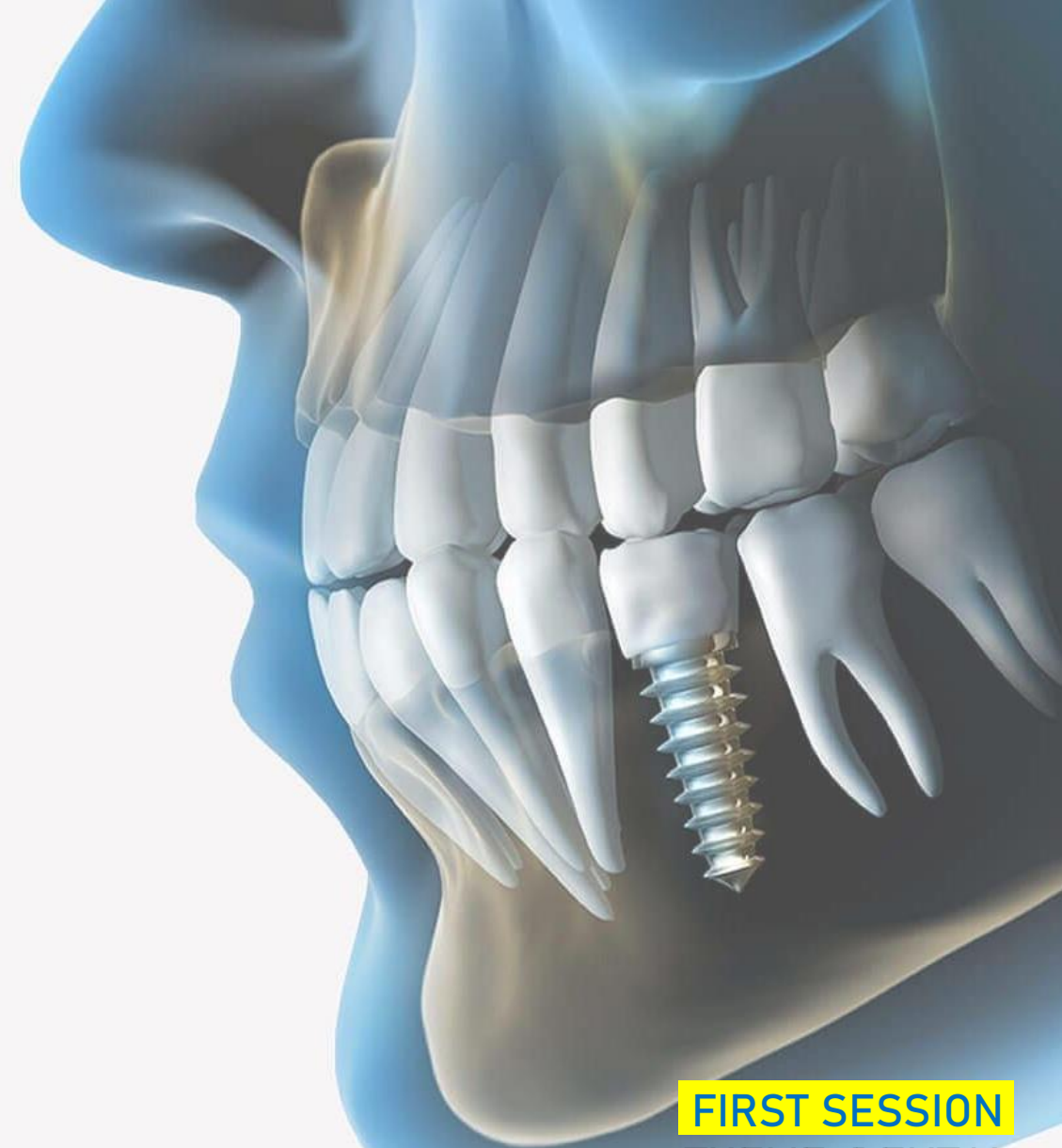
Time	Activities
	FIRST SESSION : DENTAL EDUCATION: PRECLINICAL AND CLINICAL TEACHING AND ASSESSMENTS
9.30am-10.30am	Keynote Lecture 1 Prof. Dr Chun-Hung Chu *Professor, University of Hong Kong* Topic: Global Citizenship in Dentistry
10.30am-11.30am	Doa Recital Welcome Speech by Dean of Faculty of Dentistry Prof Dr Rosnah Md Zain Opening Speech by Director, Postgraduate Studies, Research and Innovation Prof Dr. Srikumar Chakravarthi
11.30am-12.15am	Keynote Lecture 2 Prof. Dr Noor Hayaty Binti Abu Kasim *Visiting Professor, MAHSA University* Topic: Revisiting Preclinical and Clinical Dentistry
12.15pm-12.45pm	Interaction Session on Dental Education *Moderator:* 1. Prof. Dr Noor Hayaty Binti Abu Kasim *Visiting Professor, MAHSA University* 2. Assoc. Prof. Dr. Kranthi Raja Kacharaju *MAHSA University*
12.45pm-2.00pm	Break

DAY 1 (Cont')

Time	Activities
	SECOND SESSION : APPLICATION OF INNOVATIVE STRATEGIES IN ENHANCING LEARNING AND RESEARCH
2.00pm-2.20pm	Invited Lecture 1 Dr. Irma Josephina Savitri *Universitas Airlangga, Indonesia* TOPIC: An overview of teaching at Airlangga
2.20pm-2.40pm	Invited Lecture 2 Prof. Dr. L Krishna Prasad *Sibar Institute of Dental Sciences, India* TOPIC: Novel teaching practice in SIBAR
2.40pm-3.00pm	Invited Lecture 3 Dr. Zahra Naimie *University of Malaya, Malaysia* TOPIC: Innovative approaches of dental Education
3.20pm-3.40pm	Invited Lecture 4 Dr. Maria Angela Gonzalez *National University College of Dentistry, Philippines* TOPIC: Innovative practice and research in dental education
3.40pm-4.00pm	Invited Lecture 5 Assoc. Prof. Dr. Santhosh Kotian *MAHSA University, Malaysia.* TOPIC: Student directed Case-based Reasoning (SD-CBR). The MAHSA experience.
4.00pm-4.20pm	Invited Lecture 6 Assoc. Prof. Dr. Deepak Pateel G.S. *MAHSA University, Malaysia* TOPIC: Role of formative assessment in dental education. MAHSA experience
4.20pm-4.40pm	FORUM ON DENTAL EDUCATION Moderator: Assoc. Prof. Dr. Kranthi Raja Kacharaju
4.40pm-5.00pm	SUMMARY FOR DAY 1 BY THE CHAIRPERSON Prof. Dr. Rosnah Md Zain

DAY 2

Time	Activities
9.00am-11.30am	FREE PAPER PRESENTATION/COMPETITION
	SESSION 3: EXPERIENTIAL LEARNING AND MICRO-CREDENTIALING IN DENTAL /MEDICAL EDUCATION
11.30am-12.00pm	Special Lecture 1 Assoc. Prof. Dr. Syazwani Binti Mohd Fadzil *Faculty of Science and Technology, Universiti Kebangsaan Malaysia* TOPIC: Experiential Learning - an Alternate Pathway towards Higher Education
12.00pm-12.30pm	Special Lecture 2 Prof Dr Rosnah Md Zain *MAHSA University, Malaysia* TOPIC: An Insight into Micro-credentialing for Medical and Health Sciences
12.30pm-1.00pm	Special Lecture 2 Prof. Dato' Dr Mohammed Ibrahim Abu Hassan *University Technology Mara (UITM), Malaysia* TOPIC: Micro-credentialing in Dental Postgraduate Education
1.00pm-1.30pm	CLOSING CEREMONY ANNOUNCEMENT OF WINNERS OF THE FREE PAPER PRESENTATIONS CLOSING REMARKS



FIRST SESSION

THEME: DENTAL EDUCATION: PRECLINICAL AND CLINICAL TEACHING AND ASSESSMENTS

KEYNOTE LECTURE 1

Prof. Dr. Chun-Hung Chu
Professor, University of Hong Kong

ABOUT THE SPEAKER

Dr Chu is a Professor and Associate Dean of the Faculty of Dentistry, The University of Hong Kong (HKU). He is the President of the Society of Preventive Dentistry of Hong Kong, the President of the Asia Academy of Preventive Dentistry, a Member of the FDI World Dental Federation Public Health Committee, the Vice President of the Asian-Oceanian Federation of Conservative Dentistry and the Immediate Past President of the South East Asians Association for Dental Education. Dr Chu was conferred with a BDS, PDipDS, MDS and PhD from HKU, which was ranked 2nd by the QS World Ranking 2022 by subject. He is a Master of the Academy of General Dentistry (AGD) and received the prestigious AGD lifelong learning and service recognition award. Dr Chu was the dentist in charge of the HKU Health Service. He is a fellow of the Hong Kong College of Dental Surgeons, a dental fellow of the Hong Kong Academy of Medicine and a registered dental specialist in Family Dentistry in Hong Kong. Through overseas examinations, Dr Chu became a fellow of the Royal Australasians College of Dental Surgeons (RACDS) in Sydney, a dental fellow of the Royal College of Surgeons (RCSEd) in Edinburgh, and a diplomate of the American Board of General Dentistry in Chicago. He was elected as a fellow of the Faculty of Dental Trainers RCSEd for his eminence in teaching, fellow of the Academy of Dental Materials for his excellence in research and fellow of the International College of Dentists for his dedication in community services. Dr CHU published extensively with a Scopus h index of 40. He is a section chief editor of Frontiers in Oral Health and Dentistry Journal. He is an editor of International Dental Journal, JDR Clinical Translational Research, BMC Oral Health and International Journal of Environmental Research & Public Health. As the principal investigator, Dr Chu received more than US$ 9M grants. He teaches restorative dentistry for dental students and supervises research for PhD students and post-doctoral fellows. Dr Chu is a dental examiner of the RCSEd and a member of specialist board in dental public health of the RACDS.

KEYNOTE LECTURE 1

Prof. Dr. Chun-Hung Chu
Professor, University of Hong Kong

TOPIC: GLOBAL CITIZENSHIP IN DENTISTRY

In dentistry, developing global citizenship and intercultural communication among students is becoming increasingly important. Dental graduates may choose to practice in places other than their own countries. Even within their own countries, they will serve clients from other countries and cultural backgrounds. Knowing different practices and school of thoughts as well as being able to communicate properly with different people are essential competencies. The development of these competencies should be part of our dental education. The Global Citizenship in Dentistry (GCD) project is developed to enable the development of these competencies at home. An online platform of GCD is provided for students to enter into a professional community with other dental students from other universities worldwide. Peer interactions are one of the best ways for students to learn about the practices in other countries. With this online platform, there is no need to travel while student interactions are guaranteed through a set of meaningful tasks. A major benefit to students is their better awareness of different approaches to the same clinical problem and the rationale behind these approaches. Being exposed to a variety of approaches and rationales, students are more capable of reflecting on their own operative work and gradually become more confident in their own school's education. Their increased confidence is evident in their performance in defending conclusions in an evidence-based format. An additional learning outcome for students is to use multimedia tools for professional purposes, for example, processing clinical photographs. The rewards of GCD are not limited to students. Faculty members also greatly benefit from being involved in the process. They not only have a better understanding of the different school of thoughts and procedures, but also enhance their pedagogical development in the aspects of facilitating peer learning and professional development. Based on the GCD project and the learning process, internationalsation and interdisciplinarity can add great value to dental education.

KEYNOTE LECTURE 2

Prof. Dr. Noor Hayaty Binti Abu Kasim
Visiting Professor, MAHSA University

ABOUT THE SPEAKER

Dr. Noor Hayaty is currently a Visiting Professor at the Faculty of Dentistry, MAHSA University. Her 35 years of clinical practice has been interspersed by research, teaching, and management roles. Recently she completed her term as the Dean, Faculty of Dentistry, Universiti Kebangsaan Malaysia. She was the Dean of Wellness Research Cluster at Universiti Malaya, where she facilitates an interdisciplinary network of researchers involved in a broad range of research areas and innovation.
She also contributed towards promoting dental research through IADR Regional Development Program in countries such as Indonesia, Philippines, Vietnam, Myanmar and Cambodia. Her research interests include biomaterials, prosthodontics, regenerative medicine and dental education. As a dedicated teacher, she involves herself in dental education research where soft skills, reflective teaching and learning, and clinical competencies are amongst her area of interest. She often takes time to reflect and engaged in endless discussions to make teaching and learning interesting and fruitful for her students.

KEYNOTE LECTURE 2

Prof. Dr. Noor Hayaty Binti Abu Kasim
Visiting Professor, MAHSA University

TOPIC: RE-VISITING PRECLINICAL AND CLINICAL DENTISTRY

Dental education has always been challenging and complex. Acquisition of psychomotor skills by students is an important step towards becoming a successful dental professional. Dental students undergo pre-clinical training prior to performing invasive and/or irreversible procedures. For the last few years, it has often been said that today's dental students are different from those in the past. We cannot deny that many of today's students are digital natives, but surely their instinct to learn should not be any different from those of non-natives.As educators, we should aksed ourselves if it is necessary to comprehend their characteristics and behaviors, to better understand how they can learn and how to improve their academic development and potential. This generation of students is considered to be most diverse, and requires closer mentorship from lecturers, who must be ready to assist students to manage their time and resources efficiently.Hence, revisiting and aligning preclinical and clinical training is timely to ensure they are equipped with suitable level of skills to enable them to treat patients in the clinics. This lecture will look into the possibility of reflective teaching and learning as an alternative educational tool, a strategy that could provide guided and independent learning for dental students.

SECOND SESSION

THEME: APPLICATION OF INNOVATIVE STRATEGIES IN ENHANCING LEARNING AND RESEARCH

LECTURE 1

TOPIC: AN OVERVIEW OF TEACHING AT AIRLANGGA

Dr. Irma Josephina Savitri
Universitas Airlangga, Indonesia

One biggest problem in Indonesia during this pandemic are many patients afraid to have their dental treatment, likewise with the great risk for doctors and nurses and patients themselves. This condition leads to the challenge in dental education and require the strategy and innovation. Transformation from requirement based to competence based is the most optimal strategy recently. Requirement based means that students complete their education program by completing numbers of requirements. Meanwhile, competence based, students are equipped with adequate theory and psychomotor so that they are eligible to become a dentist in accordance with national standards in Indonesia. All dental school in Indonesia perform the similar program, as well as Universitas Airlangga. Competence based is manage by carrying out tiered activities, named grades A, B and C. Grade A, online learning, carried out on models, videos, discussions. Grade B, blended learning, carried out by on mannequins. Grade C is carried out with integrated blended learning, directly on the patient. All grades are evaluated by OSCE and SOCA. To enrich the skills, the students are performed independent learning (Merdeka belajar). The student mandatory joins several special programs like student exchanges, internships, teaching assistance, research, humanitarian projects, entrepreneurship, independent projects and village development. To observe various cases, the undergraduate students also learn along with specialist program candidates. The output is that students are able to determine which cases are their competence, and which ones should be referred. The output of competency-based learning is to produce competent dentists and a stable number of graduates during National board final examination (UKMP2DG).

LECTURE 2

TOPIC: NOVEL TEACHING PRACTICE IN SIBAR

Prof. Dr. L Krishna Prasad
Sibar Institute of Dental Sciences, India

At SIBAR Institute of Dental Sciences, we offer Bachelor of Dental Sciences, Master of Dental Sciences and the PhD Courses. The syllabus and curriculum for the UG & PG courses is set by the Dental Council of India and the State Health Universities, which are the national and state level apex bodies governing the Dental education in India. Apart from the established protocol, we, at SIBAR have been trying to implement other novel teaching-learning methodologies to make it more learner-centered, than being teacher-controlled. We believe and have been observing that these approaches are improving the knowledge gaining potential, creativity and analytical skills of the students. n this presentation, I will be highlighting these various teaching -learning methodologies introduced by us in the institution and the resultant advantages observed by us, while following these methods.

LECTURE 3

TOPIC: RESEARCH ON DENTAL EDUCATION: WHY IT IS BENEFICIAL?

Dr. Zahra Naimie
University of Malaya, Malaysia

With the increase in oral health awareness, the demand for dental health care services has expanded tremendously over the years. This has resulted in the mushrooming of dental schools in both developed and developing countries. Have you ever thought if dental students are facing any issues in their curriculum? Is learning and teaching a smooth journey for them? Should we do any research to find out more? Do u think we can use those findings /feedback to improve our curriculum?

LECTURE 4

TOPIC: INNOVATIVE PRACTICE AND RESEARCH IN DENTAL EDUCATION

Dr. Maria Angela Gonzalez
National University College of Dentistry, Philippines

The College of Dentistry, National University was closed on March 23, 2020 for two weeks to prepare for online classes for both lecture and practical work. Limited face to face (50%) was allowed in November 28, 2021 by the Commission on Higher Education (CHED) with no patient treatment. During this period, clinicians were asked to work on typodonts to maintain their knowledge and manual skills. Patient treatment begins September 2022 with satisfactory completion of COVID proofing of the facility. Online classes, specifically practical sessions, proved very challenging. Modifications in teaching material preparation and teaching approaches showed flexibility and adaptation of the teaching staff. It was recognized that not all learning objectives will be attained. Checking online had its limitations such as inability of the instructor to completely check cavity preparation based on the criteria. Assessment of students will be performed to determine if expected levels of learning were attained. Revisions are planned to make up for identified deficiencies in teaching and learning.

LECTURE 5

TOPIC: STUDENT DIRECTED CASE-BASED REASONING (SD-CBR). THE MAHSA EXPERIENCE.

Assoc. Prof. Dr. Santhosh Kotian
MAHSA University, Malaysia.

Various forms of continuous assessments are conducted during a course module to keep the students engaged throughout the module whilst providing opportunities to the students to improve their performance. This can be not only be done by grading the students' work, but also by providing a chance to the students to act on the feedback given to them. The Student-Directed Case Based Reasoning is an innovative learning method where students learn the process of conducting and answering the assessment at the same time. This lecture will discuss the objectives and conduction of this unique form of assessment.

LECTURE 6

TOPIC: ROLE OF FORMATIVE ASSESSMENT IN DENTAL EDUCATION. MAHSA EXPERIENCE

Assoc. Prof. Dr. Deepak Pateel G.S.
MAHSA University, Malaysia

Formative assessment is believed to be an integral part of learning process and plays and essential role in medical and dental education. Feedback is an integral part of formative assessment and to some extent supports and helps to close the gaps between expected and actual performance and thus determines the success and purpose of the formative assessment. The presentation will highlight the key aspects of formative assessment and feedback. The presentation will share the research projects associated with the topic briefly and the highlight the teaching methods conducted at the faculty which have utilized these principals of formative assessment and feedback.

THIRD SESSION

THEME: DENTAL EDUCATION: EXPERIENTIAL LEARNING AND MICRO-CREDENTIALING IN DENTAL/MEDICAL EDUCATION

THIRD SESSION
THEME: DENTAL EDUCATION: EXPERIENTIAL LEARNING AND MICRO-CREDENTIALING IN DENTAL/MEDICAL EDUCATION

SPECIAL LECTURE 1

TOPIC: EXPERIENTIAL LEARNING - AN ALTERNATE PATHWAY TOWARDS HIGHER EDUCATION

Assoc. Prof. Dr. Syazwani Binti Mohd Fadzil
Faculty of Science and Technology,
Universiti Kebangsaan Malaysia.

ABSTRACT

Accreditation of Prior Experiential Learning (APEL) has been an alternative method of learning aiming for senior people or people with less requirement to access the academic programme, or waived some of the course using their experience, or get a degree with their experience. These three options of APEL method were defined as APEL.A for accessing the programme for people who do not fulfill the admission requirement as in conventional method; APEL.C for students with intention to waived some of the course credit by credit transfer from their work experiences; and APEL.Q is aimed for qualified students to get a degree by using their work experiences without going taking conventional courses to fulfill the requirement. APEL.Q acknowledge formal, informal and non-formal learning experience from the candidate throughout their working journey. The focus of this sharing session is more on APEL.Q requirement, assessment and implementation for universities and prospect students. As a conclusion, students and universities have more option to use this alternative way of learning adapting their knowledge during work experience and fulfilled the assessment for graduation.

ABOUT THE SPEAKER

She is a Senior Lecturer in Department of Applied Physics, Faculty of Science and Technology, Universiti Kebangsaan Malaysia (UKM). She has been with UKM since her student years from 2005 for bachelor in 2008 and master in 2011. She did her PhD in Pohang University of Science and Technology (POSTECH), South Korea in 2016 producing dissertation on crystallinity study of waste glass as function of temperature and composition. She was appointed as Head of Programme in Master in Industrial Safety Management which was an executive programme in UKM from 2017 until 2021. The programme was one of the programme in UKM that obtained APEL.Q to be enrolled by potential candidate. Currently, she was APEL.Q Coordinator for UKM.

THIRD SESSION
THEME: DENTAL EDUCATION: EXPERIENTIAL LEARNING AND MICRO-CREDENTIALING IN DENTAL/MEDICAL EDUCATION

SPECIAL LECTURE 2

TOPIC: AN INSIGHT INTO MICRO-CREDENTIALING FOR MEDICAL AND HEALTH SCIENCES.

Prof Dr Rosnah Binti Mohd Zain.
MAHSA University, Malaysia

ABSTRACT

Traditionally, higher education providers design curriculum that provides knowledge skills and values over 3 to 4 years of study to enable graduates to enter the job market. Moving into the digital era, online and e-learning modes have greatly expanded into Massive Open Online Courses (MOOCs) which offers high value courses in collaboration with higher education providers(HEP). The need for upskilling and reskilling at more affordable costs and shorter study periods, have led to more personalised courses/modules to suit the adult learners. The higher education providers (HEP) have long been conducting short courses as a continual professional development (CPD) and executive courses without providing qualifications or awards. There is now a shift towards branding these short courses into micro-credentials (MC) as opposed to the traditional awards or qualifications. This presentation will present an insight into MC and the potential of its use in the medical and health education.

ABOUT THE SPEAKER

Professor Dr Rosnah Zain is currently the Dean of Faculty of Dentistry, MAHSA University. She has previously served the University of Malaya as an academic and in various administrative positions at the Dental Faculty for about 34 years. She has been involved in teaching and Learning, Undergraduate and Postgraduate Curriculum Development. She conducted research and has published widely in the areas of Oral Cancer, Oral Potentially Malignant Disorders, Oral Pathology and Oral Medicine.

THIRD SESSION
THEME: DENTAL EDUCATION: EXPERIENTIAL LEARNING AND MICRO-CREDENTIALING IN DENTAL/MEDICAL EDUCATION

SPECIAL LECTURE 3

TOPIC: MICRO-CREDENTIALING IN DENTAL POSTGRADUATE EDUCATION.

Prof Dato' Dr Mohammed Ibrahim Abu Hassan
University Technology Mara (UITM), Malaysia

ABSTRACT

Currently, delivery of knowledge had expanded to a different way of delivery from the traditional face-to-face mode. With the introduction of MOOCS and online learning, courses or programme can be delivered differently. With the Pandemic COVID 19, delivery of teaching and learning had evolved tremendously. The philosophy of long life learning demand a change of the process teaching and leanring. Micro credentialing accredited courses to be delivered incrementally and when the candidate accumulated accrued adequate credits or courses, a certificate can be awarded. This presentation will share how a dental course can be conducted through micro credential.

ABOUT THE SPEAKER

Dr Mohamed Ibrahim graduated from University of Malaya in 1984 and obtained his Master's Degree in Restorative Dentistry form the University of Leeds, United Kingdom in 1988. He then furthers his career to a doctorate degree at University of Bristol, United Kingdom in Dental Materials in 1995 and obtained his PhD in 1999. In 2018, he was awarded the fellowship from Royal College of Physician and Surgeons of Glasgow, FDSRCPS (Glasgow). Dr Mohamed Ibrahim has more 30 years teaching experience first at University of Malaya and then University Teknologi MARA where he is currently working and also the founding dean of the faculty. He was Chairman of Malaysian Dental Dean's Council Chairman of Joint Technical Committee of Dental Specialty Programme. He is also appointed member of the Malaysian Dental Council and Malaysia Dental Association. Internationally, he was the President of SEAADE from 2014-2016 and currently an ex-officio. He is also the Regent of Fellow international College of Dentist (FICD) Region 33 for Malaysia & Brunei apart from being appointed as the Chairman of Education Committee International College of Dentist Section XV. He was also the Council Member of International Dental Collaboration of Mekong River (IDCMR). Due to his contribution to the University Dr Mohamed Ibrahim were awarded Academic Leader Award in 2013 and Distinguish Academic Award in 2018 by the University. He was awarded the Distinguish Fellow of International College of Dentist in 2016 (FICD). In 2019 Professor Dato' Dr Mohamed Ibrahim was awarded the prestigious Fellow of Academy Science of Malaysia (FASc) in 2019 from Academy of Science Malaysia. He was also granted the state award Darjah Setia Pangkuan Negeri (DSPN) with the title of Dato' by Governor of Penang in 2018.

FREE PAPER PRESENTATION ABSTRACT

FP 01

Ummacademy : A Recent Advances and Applications of Online Medical Platform in Clinical and Preclinical Teaching on the Role of Students and Dentists

A.A. Sutadi Saputra, Aris Setyawan
Diponegoro University, Indonesia

Various digital technology applications guide the transformation of clinical and preclinical teaching in dentistry. Ummacademy is an education technology startup that focuses on online courses in medicine, dentistry, and health sciences for preclinical and clinical students to access anytime and anywhere with affordable fees, adaptive learning, and interactive tutors. Ummacademy encourages students and dentists to think of more information about course materials, case reports, dental treatments, and therapies. Therefore, this study aims to investigate the digital transformation of dentistry teaching from the advanced technology of Ummacademy. We focus on the impact of new learning method with approached research and clinical question that builds upon the opportunities of digital transformation and explore how digital transformation has changed the processes and structure of incumbents. Our product focus on learning support services through interactive live classes and adaptive content in various department of dental clinicians. Our observations from 24 months suggest the complexity of interacting by platforms with super-modular/super-additive value creation. Our results indicate 4 new roles within the teaching process, namely: lecturing engagement, adaptive content materials, critical and creative thinking, and futuristic teachers. It can be concluded that online medical platforms have new opportunities to be better informed and increased the professional empowerment of students and dentists.
Keywords: Clinical, Medical Platforms, Preclinical, Teaching, Ummacademy

FP 02

The Study of Liposomes As an Stimulants For Extracellular Vesicles Production

Jzit Weii Chen[1], Fong Fong Liew[2], Hsiao Wei Tan[3], Ivy Chung[1]
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Extracellular vesicles (EVs) are nanosized vesicles that are spontaneously released by cells. Nevertheless, naturally secreted EVs have limited yield. The use of liposomes might be an intriguing strategy to increasing EV yield. In this study, adipose-derived mesenchymal stem cells (AD-MSCs) were treated with anionic, chitosan-coated anionic and cationic liposomes. The physicochemical properties of the different types of liposomes were investigated. The structural characteristics of liposomes were evaluated using transmission electron microscopy (TEM). The size for all types of liposomes was found to increase slowly for the first 7 days of storage time and remained unchanged on from day 14-21. The TEM image clearly showed that all the liposomes were spherical in shape. The EVs secretion was found increased when it was treated with anionic liposomes in a dose-dependent manner. However, when the liposomes surface was modified with chitosan, no increase in EVs secretion were found. These observation suggested that liposome-cell interactions would be one of the factors contributing to EV stimulation.
Keywords: chitosan-coated, extracellular vesicles, liposomes, therapeutics

FP 03

Detection of genetic alterations in oral squamous cell carcinoma using multiplex ligation-dependent probe amplification (MLPA)

Lee Peng Karen-Ng[1], Zachary Wei Ern Yong[1], Thomas George Kallarakkal[1,2], Siti Mazlipah Ismail[1,2], Rosnah Binti Zain[1,3], Zuraiza Mohamad Zain[1,2]

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2 Department of Oral and Maxillofacial Clinical Sciences, Faculty of Dentistry, University of Malaya, 50603 Kuala Lumpur, Malaysia;
3 Faculty of Dentistry, MAHSA University, Bandar Saujana Putra, 42610 Jenjarom, Selangor, Malaysia

Deletions and amplifications of many genes often occur during the multistep progression from oral pre-cancer, seen as oral epithelial dysplasia (OED) to cancerous stage. These genetic alterations could be used as markers to aid in detection of oral squamous cell carcinomas (OSCC). In this study, we explored the use of multiplex ligation-dependent probe amplification (MLPA) technique in detecting OSCC and OED-specific genetic alterations. MLPA was used to detect gains and losses of 106 genes using DNA extracted from frozen tissue samples of 10 OSCC and 10 non-cancer patients. In addition, four biopsies of OED were analyzed to explore the alterations in oral potentially malignant disorders (OPMD). The upper and lower limits of the 99.99% confidence interval were used to determine the cut-off point for copy number gains and losses. We found that there was significant difference ($p<0.001$) in the number of alterations between OSCC vs non-cancer tissue and dysplastic vs non-cancer samples. The most frequently altered genes were PTP4A3, RECQL4, ATM, and KLK3 (60%). Five genes (MYC, SLA, TNFRSF1A, MESDC1, and MIF) were altered in 50% of OSCC samples. All nine genes were specific to OSCC samples ($p<0.05$). Some genes including MYB, MET, CASP2, SLA and PTEN occurred in 50% of the OED samples. MLPA was able to detect genetic alterations, which are present only in the OSCCs samples and showed the potential to be used as an adjunctive tool in early diagnosis of OSCC.

Key words: Biomarkers; DNA copy number; Dysplasia; Chromosome alteration

FP 04

The Role of General Practitioner in Early Detection Carcinoma of Tongue with The Etiology of Mechanical Trauma Due to Sharp Teeth

Zhavira Dwiyanti, Rizki Nurida, Winda Kumalasari, Alfi Dian, Rima Talitha, Aris Setyawan

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Oral Squamous Cell Carcinoma occurred approximately 95% in people older than 40 years old, usually it was diagnosed lately at 60 years old average. The etiology of OSCC is multifactorial. Chronic mechanical trauma due to sharp teeth has been also suggested as a possible etiology of oral squamous of the tongue.
A 49 year-old female patient was presented to Dental Departement of Mardi Rahayu Hospital with a painful and swollen stomatitis since 2 months ago. No submandibular lymph nodes was palpable. An indurated ulceration and sharp teeth on the right region of the jaw was obtained from intraoral examination. Malignancy was concluded from FNAB and MRI radiography results. Multiple extraction was chosen to eliminate the etiology of mechanical trauma due to sharp teeth, and patient underwent hemiglossectomy with keyhole method. Oral maxillofacial surgeon diagnosed the patient with oral squamous cell carcinoma (OSCC) of the tongue after histopathology postoperative examination. This case report aimed to describe the etiology of OSCC resulted from sharp teeth and to prevent further metastatic by correctly diagnosing the lesion earlier even by a general practitioner. Patient is currently in the 2nd cycle of chemotherapy by hematologists-oncologists. A long-term clinical evaluation is needed to determine recurrence of oral squamous cell carcinoma.

Key Words: Carcinoma of tongue, oral cancer, sharp teeth, chronic trauma.

FP 05

The use of Educational Crossword Puzzles for learning undergraduate oral surgery at a private University during MCO due to COVID 19 pandemic.

Wan Mahadzir Mustafa

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Correspondence: wanmaha54@yahoo.com

Objectives: To use crossword puzzle as a learning tool in oral and maxillofacial surgery and evaluate students' perception about the same. Methodology: Suitable topics were selected from oral and maxillofacial surgery (OMFS) syllabus and a crossword puzzle based on those topics were created using a free internet resource. The final year dental students were given the crossword puzzles for solving on line. Student perceptions of the crossword puzzle were then analyzed using a pre-validated questionnaire. Results: Majority of students felt that crossword puzzle facilitated better learning and understanding of the topic and favoured incorporation of the same in the OMFS curriculum. Conclusion: Use of crossword puzzle as a learning tool in OMFS can be a replacement for the traditional classroom atmosphere during COVID 19 pandemic.

Key words: Crossword Puzzle, COVID 19,learning tool.

FP 06

Apoptosis induction and immunomodulation in a human oral cancer cell line, ORL-204 by Lignosus rhinocerus TM02® via a proposed intervention of TNF signaling

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c Oral Cancer Research and Coordinator (OCRCC), Faculty of Dentistry, University of Malaya, 50603 Kuala Lumpur, Malaysia
d Department of Oral and Maxillofacial Clinical Sciences, Faculty of Dentistry, University of Malaya, 50603 Kuala Lumpur, Malaysia
e Medicinal Mushroom Research Group (MMRG), Department of Molecular Medicine, Faculty of Medicine, University of Malaya, 50603 Kuala Lumpur, Malaysia

Oral cancer is life-threatening and its treatment comprises surgery, chemotherapy or radiation and the tumor necrosis factor (TNF) alpha has long been associated with cancer in a paradoxical manner. In this study, cytotoxicity of L. rhinocerus TM02® (termed TM02®) sclerotial extracts against a panel of human oral cancer cell lines and the capability of bioactive fractions in regulating several molecules associated with its TNF pathway were investigated. MTT proliferation assay indicated that ORL-48 (derived from gingiva), ORL-188 (derived from tongue), and ORL-204 (derived from buccal mucosa) were more responsive towards TM02® sclerotial cold water extract and its high-molecular-weight fraction (HMW). HMW treatment on ORL-204 further induced its apoptosis and G0/G1-phase cell cycle arrest through caspase-3/7 cleavage. Activities of MIP2 and COX-2 were downregulated by 0.2- and 4.6-fold respectively in the HMW-treated ORL-204 cells. HMW, a multi-components fraction may have intervened the TNF pathway at various network sites in its manifestation as an anti-cancer agent. TM02® possesses potential as a natural adjunct therapeutic to conventional cancer treatment. However, further investigations are needed to establish the proposed molecular mechanism.

Key Words: Lignosus rhinocerus, oral cancer, apoptosis, cell cycle, COX-2, MIP2

FP 07

The Effect of Spit No Rinse Toothbrushing Technique on Plaque Index of Children

Dr. Maria Cherry B. Serrano, PhD
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Plaque control is a basic principle of preventive dentistry. Mechanical removal of plaque through toothbrushing remains to be the foundation of home oral hygiene and effective patient care. Toothbrushing with fluoride dentifrices not only controls plaque formation but also promotes remineralization of the enamel. Spit no rinse toothbrushing technique allows longer contact period of fluoridated toothpaste with the tooth surface thus, utilizes its full potential. This study determined the effect of spit no rinse toothbrushing technique on plaque index of children. The oral hygiene status of 33 children aged 3-13 yrs. old from Morong, Rizal was recorded according to plaque index systems of Silness and Loe. The subjects were provided with a toothbrush smeared with pea size of toothpaste and were taught the proper toothbrushing technique followed by spit and no rinse. They were instructed to continue the technique at home every morning and before bedtime for one week. They were recalled after seven days, and plaque index was checked. A decrease in Plaque index from 1.14 to 0.65 was recorded after a week of using the technique. The T-test resulted to a p-value which is less than 0.01 significant level, indicating a significant difference. The result of the study suggests that spit no rinse tooth brushing technique is a favorable method for removal of dental plaque.

Keywords: Spit no rinse, fluoridated toothpaste, toothbrushing technique, plaque index

FP 08

Adverse effects following COVID-19 vaccination: Does vaccine type matter?

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Objective: To investigate and compare the adverse effects (AEs) of COVID-19 vaccination between different types of vaccine. Methodology: This was an online, self-administered questionnaire survey conducted among staff members and students of the Health Sciences Faculties, SEGi University. This study assessed the type of vaccine received, AEs experienced, duration of AEs and management of the AEs. AEs were categorized into systemic, local and allergic. The time frame to record the AEs was one week post-vaccination. Chi-square test was used to analyze the AEs among the different types of vaccines received. Results: A total of 347 participants were recruited into the study. For systemic AEs, headaches (44.6%), fever (62.2%) and chills (75.0%) were significantly more commonly experienced among those receiving AstraZeneca, while myalgias were more commonly reported by those receiving Pfizer-BioNTech (41.1%) following the administration of the first dose. However, upon completion of the second dose, the occurrence of headaches (51.8%), fatigue (50.5%), fever (58.6%), myalgia (51.6%) and chills (65.9%) were found to be the highest among recipients of Pfizer-BioNTech vaccine as compared to the rest. For local AEs, pain at the injection site (45.2%) and swelling (50.0%) were significantly more commonly experienced among the Pfizer-BioNTech group, whereas warmth (50.0%) was most commonly experienced by those receiving AstraZeneca. Recipients of Astra-Zeneca experienced the longest duration of AEs whereas Pfizer-BioNTech recipients experienced the shortest AEs duration. Conclusions: There are slight differences in the prevalence of AEs among the different types of vaccine that is currently being used in Malaysia.

Keywords: adverse effects, COVID-19, vaccine

FP 09

Perceptions of Interprofessional Education Among Clinical Healthcare Students at Universiti Teknologi Mara (UiTM)

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Interprofessional education (IPE) has been advocated to prepare future healthcare professionals for collaborative practice, aimed at improving quality of patient care and overall health outcome. Objectives: This study aimed to investigate the perceptions of clinical healthcare students at Universiti Teknologi MARA on IPE. Methods: A validated questionnaire, developed from previous studies, was distributed online to selected final year students of 10 clinical programs from medical, dental, pharmacy and health sciences faculties (n=420). Quantitative data was analysed via chi square test (significance value $p<0.05$) using SPSS. Qualitative data was analysed via thematic analysis. Results: The overall response rate was 91.2% (n=383). About 63.2% respondents reported having experienced IPE, which was conducted as lectures (32.1%), and online course/webinars (36.2%). Most respondents provided positive feedback on various aspects of IPE. There was a significant difference among respondents across all programs in terms of their perception towards its importance, support for its implementation and preference for multidisciplinary lecture as a mode to conduct IPE. Most students agreed that challenges in conducting IPE include time constraint (83%), communication difficulties (70.8%) and lack of skills (57.4%), with no significant difference across programs. Students opined that IPE was beneficial in providing exposure to other disciplines, encouraging peer interactions, developing new skills and improving overall learning experience. However, some reported challenges in integrating with other students, while others cited compromised experience due to problems with crowd control. Conclusion: Students' support for IPE provides positive implications for future implementation, with areas for improvement and further development.

Keywords: Interprofessional Education, health profession education, clinical healthcare student, collaborative study, interprofessional team

FP 10

Remains - Reminds To Resolve.

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Forensic Odontology is a branch of Forensic medicine, which in the interest of justice deals with the proper handling and examination of dental evidence and with the proper evaluation and presentation of dental findings. Forensic Odontology utilizes facial bones and teeth for identification of individuals. Whereas, Forensic Anthropology is a branch concerned with the identification of human remains and associated skeletal trauma related to manner of death in legal context. Forensic Anthropology considered as a subcontractor, Responsible for identifying and analysing the remains in which there is a loss of soft tissue or much older remains with less tissues. There exist number of scenarios where combined forensic odontology and forensic anthropology techniques are employed to resolve the mysteries from identification to cause of death. Here in this paper various case scenarios pertaining to utility of both forensic anthropology and forensic odontology techniques are discussed. This will pave a way for development of newer techniques and newer insights in knowing the causation of Injury, resolving the mysteries and redefining the history.

KEY WORDS: Forensic Odontology, Forensic Anthropology, Forensic pathologist

FP 11

Effects of aqueous Durian fruit extract in liver and testicular functions on hypercholesterolemic male Wistar rats

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Hypercholesterolemia is the condition of abnormally elevated levels of cholesterol in the blood. This leads several adverse effects on human health. Changes in liver and gonadal functions are among these. Incidence of hypercholesterolemia related reproductive dysfunction and chronic liver damage is increasing in both developing and developed nations. This work was aimed to investigate the effect of hypercholesterolemia on male reproductive and hepatic functions and possible protective effect of Durian fruit extract with the dose levels of 200 and 400mg/kg body weight daily single dose orally for 13 and 26 days in male albino Wistar rats. The hypercholesterolemia induced and Durian extract fed rats were examined for body weight, testis weight, epididymal weight, serum levels of antioxidants activity, malondialdehyde, alkaline phosphatase, serum aspartate aminotransferase, alanine aminotransferase, cholesterol, triglyceride, high density lipoproteins, low density lipoprotein, total protein, sperm count. Blood antioxidants level, such as superoxide dismutase, catalase was also estimated. Experimentally hypercholesterolemia was produced by injecting Triton single dose. In all the hypercholesterolemic group's total body weight gain was highly significant ($p<0.001$). Hypercholesterolemia resulted in a significantly increase in malondialdehyde level, decrease in total protein levels and rise in serum aspartate aminotransferase, alanine aminotransferase level. Highly significant rise in alkaline phosphatase levels were observed. Also, Durian fruit extract fed rats showed significant ($p<0.05$) reduction in liver marker enzymes level and total cholesterol, low density lipoprotein levels. Hypercholesterolemia induced animals shows declining trend in testicular and epididymal weights. There was little increased sperm count in the Durian fed rats. Sperm count decreased significantly in hypercholesterolemic groups but feeding with Durian fruit extract reversed those. Antioxidants level (Superoxide dismutase and Catalase) was increased in the blood after feeding Durian fruit extract in both acute and chronic group animals. There was a significant ($p<0.05$) decrease in the blood antioxidants level in hypercholesterolemic groups which was reversed after feeding with Durian extract for 26 days. These confirms that Durian fruit extract has antioxidative, hypolipidemic and hepatoprotective potentials. In conclusion this study suggested that hypercholesterolemia induces biochemical and reproductive dysfunctions in liver and testes, which can be ameliorated by administration of aqueous Durian fruit extract.

Key words: Hypercholesterolemia, Durian fruit extract, Hypolipidemic effect, Hepatoprotection, Gonadal dysfunction.

FP 12

Student-Directed Case-Based Reasoning (SD-CBR): Online Version

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COVID-19 pandemic presented a set of unique challenges to educators, forcing them to adopt innovative teaching solutions to the online mode. The same was reflected in the conduct of the student-directed case-based reasoning (SD-CBR). SD-CBR allows the students to get involved more actively in shaping their learning experiences on how to generate hypothesis or decision-making based on prior experiences. The paper details the procedures adopted while executing the online mode SD-CBR at the MAHSA University Year 5 Dental students, from July – August 2021. Students displayed active participation and improved learning throughout the online SD-CBR sessions. The participants valued online SD-CBR as a resourceful, convenient and flexible learning strategy. Lack of physical presence and internet connectivity issues, however, contributed to some demerits of online SD-CBR. Suggestions to improve online SD-CBR include improved faculty development, better student orientation and more efficient technical support. To conclude, online SD-CBR can be utilized as an effective strategic alternative to the face-to-face modality. More efforts, nevertheless, are needed to further streamline and exploit the full potential of this online alternative.

Keywords: COVID-19; Student-Directed Case-Based Reasoning; Online teaching and learning

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