WHEN CREATIVES ARE CORPORATE

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Sharing expertise and groundbreaking research around the world

Impactful Research Topic
Photodynamic therapy role in periodontal disease
No. of citation: 17

Impactful Research Topic
Oral squamous cell carcinoma
No. of citation: 11

Sphingosine-1-Phosphate
No. of citation: 8

Impactful Research Topic
Bioindicator of metal exposure and environmental pollution
No. of citation: 7

Impactful Research Topic
Epstein-Barr Virus role in development of oral cancer
No. of citation: 43

Impactful Research Topic
Obesity and Chronic Periodontitis
No. of citation: 15

Impactful Research Topic
Senescent cancer-associated fibroblasts
No. of citation: 14

Impactful Research Topic
Public Health
No. of citation: 14

*Based on Scival and Web of Sciences data 15th May 2018*
#111 Dental Congregation 2016

#111 Dental Congregation 2016 is the annual postgraduate scientific conferences conducted by the Faculty of Dentistry University of Malaya on 13th August 2016 & 14th August 2016 at The Royale Chulan Damansara, Petaling Jaya, Malaysia. Theme for conference was 111th Year of Excellent: Integrating Research and Practice.

This year’s conference is organized with the aimed to make the conference a future major forum for research theory and clinical development related to oral health science and innovation in the area of oral health and dentistry. This exciting and stimulating scientific conference encompassed a combination of keynote lectures, symposia, oral and poster sessions to enhance and ensure the participants are kept up to date with the current research and scientific development in oral health field.

Guest of Honor
The opening ceremony was officiated by Y.Bhg. Tan Sri Dato Seri Utama Arsyad Ayub, UM Chairman
Invited Speakers

Professor Paul Brunton
Dean Faculty of Dentistry,
University of Otago New Zealand

Professor Warwick Duncan
Clinical Professor, Faculty of Dentistry,
University of Otago New Zealand

Professor Dr. Adrian Yap
Head Department of Dentistry of JurongHealth,
Singapore’s Western Public Healthcare Cluster,
Adjunct Professor, University of Malaya

Dr. Jeremy J W Breckon,
Consultant Orthodontist, Kings College London

Professor Vishy Mahadevan
Professor of Anatomy,
Royal College of Surgeons of England

Mr. David Barnett
Consultant Orthodontist, Kings College London

Professor St John Crean
Robert Bradlaw Advisor and Executive Dean of the
College of Clinical and Biomedical Sciences,
University of Lancashire

Oral Presentation

Best presenter
Postgraduate Student: Dr. Yap Wai Ying
Institution: Department of Restorative Dentistry,
Faculty of Dentistry, University of Malaya
Supervisor/Co-Supervisor/Co-Researcher: Z.A. CHE ABDUL AZIZ, N.H. AZAMI
Research Title: Comparison of Bond Strength of Different Sealers to Root Dentine

1st Runner Up
Postgraduate Student: Dr. Asfand Ali Khan
Institution: Department of Restorative Dentistry,
Faculty of Dentistry, University of Malaya
Supervisor/Co-Supervisor/Co-Researcher: M. AB-DULLAH, N.S.M. NOOR
Research Title: Defects in Two Rotary File Systems After Root Canal Preparation

2nd Runner Up
Postgraduate Student: Dr. Mustaffa Bin Jaapar
Institution: Department of Community Oral Health and Clinical Prevention, Faculty of Dentistry, University of Malaya
Supervisor/Co-Supervisor/Co-Researcher: R. SAUB, G. MUSA
Research Title: Dental Tourism in Malaysia: Tourists’ Profile and Motivation

Poster Presentation

Best presenter
Postgraduate Student: Phang Wai Mei
Institution: Department of Oral and Craniofacial Sciences, Faculty of Dentistry, University of Malaya
Supervisor/Co-Supervisor/Co-Researcher: S.C.B. GOPINATH, Y. CHEN
Research Title: Aptamer Substitutes Immunoassays

1st Runner Up
Postgraduate Student: Dr. Tameem Khuder Jassim
Institution: Department of Restorative Dentistry, Faculty of Dentistry, University of Malaya
Supervisor/Co-Supervisor/Co-Researcher: N.YUNUS, E. SULAIMAN
Research Title: Occlusal Forces and Bone Resorption in Mandibular Implant Supported Overdentures

2nd Runner Up
Postgraduate Student: Dr. Azizah Murtuzah Shekh
Institution: Department of Restorative Dentistry, Faculty of Dentistry, University of Malaya
Supervisor/Co-Supervisor/Co-Researcher: N.A. YAHYA
Research Title: Shear Bond Strength of Various Adhesives System to Dentine
Postgraduate Scientific Seminar 2017

Postgraduate Scientific Seminar 2017 is the annual postgraduate scientific conferences conducted by the Faculty of Dentistry University of Malaya on 18th August 2017 at Balai Ungku Aziz, Faculty of Dentistry, University of Malaya. Theme for conference was "Inspire, Collaborate and Translate”.

The opening ceremony was officiated by Prof. Dr. Kamila Ghazali, Vice Chancellor UM

Speakers

Prof. Martyn Cobourne
Professor & Academic Head of Orthodontics at King's College London & Honorary Consultant in Orthodontics at Guy’s & St Thomas’s NHS Foundation trust.

Dr. Yaw Siew Lian
Timbalan Pengarah Kanan Jusa C, Kementerian Kesihatan Malaysia

Winner

Best presenter
Postgraduate Student: Dr. Nurul Hayati Bt Anwar
Department: Department of Community Oral Health and Clinical Prevention, Faculty of Dentistry, University of Malaya
Supervisor: Assoc. Prof. Dr. Zamros Yusadi Mohd Yusof
Research Title: Oral Health Literacy of Caregivers and Pre-school Children’s Oral Health-Related Quality of Life

1st Runner Up
Postgraduate Student: Dr. Norhidayah @ Nor Zahidah Binti Mohd Tahir
Institution: Department of Paediatric Dentistry and Orthodontics, Faculty of Dentistry, University of Malaya
Supervisor: Dr. Wan Nurazreena Wan Hassan
Research Title: Comparing Thermoplastic Retainers Constructed on Conventional and 3D Reconstructed Model

2nd Runner Up
Postgraduate Student: Dr. Nor Nadia Zakaria
Institution: Department of Paediatric Dentistry and Orthodontics, Faculty of Dentistry, University of Malaya
Supervisor: Assoc. Prof. Dr. Zamri Radzi
Research Title: The Effect of Fluoride on Corrosion Characteristics of Orthodontic Archwires
Life Quality Symposium on Oral Health

The symposium brings together experts from the University of Malaya and the National University of Singapore to discuss issues relating to the assessment of oral health care outcomes. Quality of life has become an important aspect to measure the effect of oral health care as well as promoting clinical guidance. The use of these two indicators will provide a comprehensive overview of health care results. The program’s website has also been created for the recent updates of the program at http://umnus2017.weebly.com/

Speakers

Prof. Dr. Adrian Yap
- Living with TMD: Quality of Life Issues by Prof. Dr. Adrian Yap

Prof. Dr. Patrick Finbarr Allen
- Quality of Life Measurement in Dentistry
- Why and How & Interpreting QoL Data from Clinical Trials
- Does Treatment Make a Difference

Theme

Measuring outcome beyond clinical indicators

First day:
November 3, 2017 (Friday) 8.00 am - 1.00 noon
Faculty of Buildings Faculty Hall, UM

The second day:
November 4, 2017 (Saturday), 8.00am - 5.00pm
Balai Ungku Aziz, Faculty of Pergigigan UM
OCRCC
Highlights of Programs
Thermal Characterization Research Laboratory (TCRL)

Thermal Characterization Research lab offers research services and facilities focus on thermal analysis on research materials where the properties of materials are studied as they change with temperature. High-end equipment that available for the analysis is DSC, TGA, and DMA.

FEATURED EQUIPMENT
Dynamic Mechanical Analyzer (RSA-G2 Solid Analyzer)

The TA Instruments RSA-G2 Dynamic Mechanical Analyzer (DMA) is the most advanced platform for mechanical analysis of solids. The DMA tests the dynamic mechanical properties of solid materials by using a servo drive linear actuator to mechanically impose an oscillatory deformation, or strain, upon the material being tested. Temperature and environment control for the RSA-G2 is provided by the new Forced Convection Oven, FCO. The FCO is an air/N2 gas convection oven designed for optimum temperature stability, extremely rapid heating and cooling, and ease of use over the temperature range of -150 to 600 °C. The maximum controlled heating rate is 60 °C/min. The sample given will be processed by experienced lab staff with affordable charges from RM50 to RM80 per sample.

CONTACT INFORMATION:
Office number: 03-79676499
Email: rmc_dental@um.edu.my

ADDRESS:
Thermal Characterization Research Laboratory
Ground Floor, Blok D, Faculty of Dentistry, University of Malaya, 50603, Kuala Lumpur
Link: https://drm.um.edu.my/tcrl/
The Research & Diagnostics Laboratory (RDL) offers research services including formalin-fixed and frozen tissues sectioning, tissue staining and cytology for early diagnosis of Oral Cancer applying the Thin Prep Auto Smear method. To facilitate research analyses, the lab is equipped with Fluorescent and Brightfield Microscopies, Digital tissue scanning, and Laser Capture Microdissection. Since 2012, the lab has received various samples from research institutions in public and private sectors.

**FEATURED EQUIPMENT**

Digital Slide Scanner (High Demand)

The Pannoramic scanner microscope creates digital slides that can be saved on a local computer connected to the scanner. By having the ScanToServer application installed, users are able to upload the digital slides through the scanner software directly to the CaseCenter server where slides can be evaluated and shared. This facility also allows you to create a Teleconsultation session to discuss specific cases with pathologists. The sample given will be processed by experienced lab staff and an affordable service charge (RM 5-30/slide) will be imposed to the customer.

**CONTACT INFORMATION:**

Office number: 03-79676499
Lab number: 03-79676462
Email: rmc_dental@um.edu.my

**ADDRESS:**

Research & Diagnostics Laboratory (RDL),
Level 6, Dental Specialist and Research Tower,
Faculty of Dentistry, University of Malaya,
50603, Kuala Lumpur
Link: https://drmc.um.edu.my/research-laboratory/rdl/

**However It Looks**

Awesome Publication!

your Magazine image here
like this style
Dynamic analysis of bulk-fill composites: Effect of food-simulating liquids

Ahmed Hesham Eweisa, Adrian U-Jin Yapa,b, Noor Azlin Yahya,


This study investigated the effect of food simulating liquids on visco-elastic properties of bulk-fill restoratives using dynamic mechanical analysis. One conventional composite (Filtek Z350 [FZ]), two bulk-fill composites (Filtek Bulk-fill [FB] and Tetric N Ceram [TN]) and a bulk-fill glomer (Beautifil-Bulk Restorative [BB]) were evaluated. Specimens (12 x 2 x 2 mm) were fabricated using customized stainless steel molds. The specimens were light-cured, removed from their molds, finished, measured and randomly divided into six groups. The groups (n = 10) were conditioned in the following mediums for 7 days at 37 °C: air (control), artificial saliva (SAGF), distilled water, 0.02% citric acid, heptane, 50% ethanol-water solution. Specimens were assessed using dynamic mechanical testing in flexural three-point bending mode and their respective moduli at 37 °C and a frequency range of 0.1-10 Hz. The distance between the supports were fixed at 10 mm and an axial load of 5 N was employed. Data for elastic modulus was the highest after conditioning in heptane. No apparent ties were observed between materials and mediums. Significant differences in visco-elastic properties as the control group in a sheep model. However, and the fibrils exhibited similar Dbanding characteristics. The tissue expanders gradually increased in height and reached equilibrium in 2 weeks. They were left in situ for another 2 weeks before explantation. Expanded and normal skin collagen fibrils were harvested from the sheep (n = 5). Young’s modulus and surface topography of collagen fibrils were measured using an atomic force microscope. A surface topographic scan showed organized hierarchical structural levels: collagen molecules, fibrils and fibers. No significant difference was detected for the D-banding pattern: 63.5 ± 2.6 nm (normal skin) and 63.7 ± 2.7 nm (expanded skin). Fibrils from expanded tissues consisted of loosely packed collagen fibrils and the width of the fibrils was significantly narrower compared to those from normal skin, which is dependent mainly on the structural and functional integrity of dermal collagen fibrils. In the present study, mechanical properties and surface topography of both expanded and non-expanded skin collagen fibrils were evaluated. Anisotropic controlled rate self-inflating tissue expanders were placed beneath the skin of sheep’s forelimbs. The tissue expanders gradually increased in height and reached equilibrium in 2 weeks. They were left in situ for another 2 weeks before explantation. Expanded and normal skin samples were surgically harvested from the sheep (n = 5). Young’s modulus and surface topography of collagen fibrils were measured using an atomic force microscope. A surface topographic scan showed that fibrils were significantly narrower than those from normal skin. The anisotropic controlled rate self-inflating tissue expander produced a loosely packed collagen network and the fibrils exhibited similar characteristics as the control group in a sheep model. However, the fibrils from the expanded skin were significantly narrower. The stiffness of the fibrils from the expanded skin was higher but it was not statistically different. Dynamical analysis of bulk-fill composites: Effect of food-simulating liquids

Characteristics and Young’s Modulus of Collagen Fibrils from Expanded Skin Using Anisotropic Controlled Rate Self-Inflating Tissue Expander


Despite the overwhelming interest in medical tourism research, knowledge in dental tourism, which is its subspecialty, remains limited. This study is the first to measure tourist profiles, travel motivation and satisfaction among inbound dental tourists in Malaysia. We purposely sampled twelve selected private dental clinics in Kuala Lumpur, Selangor, Melaka and Penang, and distributed the questionnaires to their inbound dental tourists. A total of 196 inbound tourists responded to the questionnaire, mainly from Southeast Asia, Australia, New Zealand and Europe. In order of importance, the main motivation factors were dental care quality, dental care information access and cost-savings. Tourists were extremely satisfied with dental care services received in the country. While dental care quality, dental care information access and supporting services positively influenced tourist satisfaction; cost-savings and cultural similarities had negative influences. Based on the research findings, we propose some managerial and marketing recommendations.

Personality Traits and Stress Levels among Senior Dental Students: Evidence from Malaysia and Singapore


This study aimed to evaluate the association between dental students’ personality traits and stress levels in relation to dental education programs among senior dental students in University Malaya (UM) in Malaysia and National University of Singapore (NUS). A cross-sectional survey using a self-administered questionnaire was conducted on UM and NUS senior dental students. The questionnaire comprised items on demographic background, the Five Inventory Personality Traits (BFIPT) test and a modified Dental Environment Stress (DES) scale. Rasch analysis was used to convert raw data to interval scores. Analyses were done by t-test, Pearson correlation, and Hierarchical regression statistics. The response rate was 100% (UM=132, NUS=76). Personality trait Agreeableness (mean=0.30) was significantly more prevalent among UM students (mean=0.31, p<0.016). In NUS, Neuroticism (mean=0.36) was significantly more prevalent than in UM (mean=0.34, p<0.002). The DES mean score was higher among NUS (mean=0.22) than UM students (mean=0.07). In UM, Neuroticism (mean=0.38) was significantly more prevalent than in UM (mean=0.34, p<0.002). The DES mean score was higher among NUS (mean=0.22) than UM students (mean=0.07). In UM, Neuroticism was significantly correlated with stress levels (r=0.338, p<0.001). In NUS, these were Neuroticism (r=0.279, p<0.015), Agreeableness (r=0.250, p=0.029) and Conscientiousness (r=0.242, p=0.035) personality traits. The correlation was strongest for personality trait Neuroticism in both schools. Hierarchical regression analysis showed that gender and Neuroticism were significant predictors for students’ stress levels (p<0.01) with the latter exerting a bigger effect size (R2=0.18) than gender (R2=0.06). This study showed that gender and Neuroticism personality trait were significant predictors for stress levels among selected groups of dental students in Southeast Asia. Information on students’ personality may be useful in new students’ intake, stress management counseling and future program reviews.

Characteristics and Young’s Modulus of Collagen Fibrils from Expanded Skin Using Anisotropic Controlled Rate Self-Inflating Tissue Expander

Dental tourism: Examining tourist profiles, motivation and satisfaction

Alternative Sweeteners Influence the Biomass of Oral Biofilm

Abdul Razak F, Baharuddin BA, Akbar EM, Norizan AH, Ibrahim NF, Musa MY.


Objective: Compact-structured oral biofilm accumulates acids that upon prolonged exposure to tooth surface, causes demineralisation of enamel. This study aimed to assess the effect of alternative sweeteners, Equal Stevia®, Tropicana Slim®, Pal Sweet® and xylitol on the matrix-forming activity of plaque biofilm at both the early and established stages of formation.

Methods: Saliva-coated glass beads (sGB) were used as substratum for the adhesion of a mixed-bacterial suspension of Streptococcus mutans, Streptococcus sanguinis and Streptococcus mitis. Biofilms formed on sGB at 3h and 24 h represented the early and established-plaque models. The biofilms were exposed to three doses of the sweeteners (10%), introduced at three intervals to simulate the exposure of dental plaque to sugar during three consecutive food intakes. The treated sGB were (i) examined under the SEM and (ii) collected for turbidity reading. The absorbance indicated the amount of plaque mass produced. Analysis was performed comparative to sucrose as control.

Results: Higher rate of bacterial adherence was determined during the early compared to established stages of formation. Comparative to the sweeteners, sucrose showed a 40% increase in bacterial adherence and produced 70% more plaque mass. Bacterial counts and SEM micrographs exhibited absence of matrix in all the sweetenertreated biofilms at the early phase of formation. At the established phase, presence of matrix was detected but at significantly lower degree compared to sucrose (p < 0.05). Conclusion: Alternative sweeteners promoted the formation of oral biofilm with lighter mass and lower bacterial adherence. Hence, suggesting alternative sweeteners as potential antiplaque agents. (Abstract)

Distinct Biological Potential of Streptococcus gordoni and Streptococcus sanguinis Revealed by Comparative Genome Analysis

Wenjing Zheng1, Mei Fei2, Tanzi L, Lebdie A, Olah I, Ian C, Pederson 2, Nicholas S, Jakubovics, S & Siew Woh Choo1,2

Streptococcus gordoni and Streptococcus sanguinis are pioneer colonizers of dental plaque and important agents of bacterial infective endocarditis (IE). To gain a greater understanding of these two closely related species, we performed comparative analyses on 14 new S. gordoni and 5 S. sanguinis strains using various bioinformatics approaches. We revealed S. gordoni and S. sanguinis harbor open pan-genomes and share generally high sequence homology and number of core genes including virulence genes. However, we observed subtle differences in genomic islands and prophages between the species. Comparative pathogenomics analysis identified S. sanguinis strains have genes encoding IgA proteases, mitogenic factor deoxyribonuclease, nickel/cobalt uptake and cobalamin biosynthesis. On the contrary, genomic islands of S. gordoni strains contain additional copies of comCDE locus. Two distinct polysaccharide loci architectures were identified, one of which was exclusively present in S. gordoni stains. The first evidence of genes encoding the CyA and CyB system by the α-haemolytic S. gordoni is presented. This study provides new insights into the genetic distinctions between S. gordoni and S. sanguinis, which yields understanding of tooth surfaces colonization and contributions to dental plaque formation, as well as their potential roles in the pathogenesis of IE.

Distinct Biological Potential of Streptococcus gordoni and Streptococcus sanguinis Revealed by Comparative Genome Analysis

Crouzon Syndrome: A Case Series of Cranio-maxillofacial Distraction Osteogenesis for Functional Rehabilitation

Hariri F, Abdul Rahman ZA, Bahari NFA, Azmi MN, Abdulrahil NA, Ganesan D.


Crouzon syndrome (CS) is the most common cranio-synostosis syndrome and requires a comprehensive management strategy for the optimization of care and functional rehabilitation. This report presents a case series of 6 pediatric patients diagnosed with CS who were treated with distraction osteogenesis (DO) to treat serious functional issues involving severe orbital proptosis, an obstructed nasopharyngeal airway, and increased intracranial pressure (ICP). Three boys and 3 girls were 8 months to 6 years old at the time of the operation. The mean skeletal advancement was 163.1 mm (range, 10 to 27 mm) with a mean follow-up of 31.7 months (range, 13 to 48 months). Reasonable and successful outcomes were achieved in most patients as evidenced by adequate eye protection, absence of signs and symptoms of increased ICP, and tracheostomy tube decannulation except in 1 patient. Complications were difficult fixation of external stabilizing pins in the distraction device (n = 1) and related to surgery (n = 4). Although DO can be considered very technical and can have potentially serious complications, the technique produces favorable functional and clinical outcomes in treating severe CS.

Crouzon Syndrome: A Case Series of Cranio-maxillofacial Distraction Osteogenesis for Functional Rehabilitation

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Crouzon Syndrome: A Case Series of Cranio-maxillofacial Distraction Osteogenesis for Functional Rehabilitation

Hariri F, Abdul Rahman ZA, Bahari NFA, Azmi MN, Abdulrahil NA, Ganesan D.

Monobloc Le Fort III Distraction Osteogenesis for Correction of Severe Fronto-Orbital and Midface Hypoplasia in Pediatric Crouzon Syndrome

In severe syndromic craniosynostosis, distraction osteogenesis (DO) provides superior segmental advancement and allows progressive clinical monitoring to ensure that adequate skeletal expansion is achieved. We report two cases of Crouzon syndrome involving a 3-year-old boy and a 4-year-old girl, who were both treated with monobloc Le Fort III DO using a combination of external and internal distraction devices (Synthes, Oberdorf, Switzerland) to treat severe orbito-maxillary hypoplasia. The results showed successful advancement and aesthetic improvement.

Effect of Dental Pulp Stem Cells In MPTP-Induced Old-Aged Mice Model

Background Parkinson’s disease (PD) is a neurodegenerative disease caused by the loss of dopaminergic (DAergic) neurons in the substantia nigra (SN) and represented as a huge threat to the geriatric population. Cell replacement therapies (CRTs) have been proposed as a promising strategy to slow down or replace neuronal loss. Among the widely available cell sources, dental pulp stem cells (DPSCs) portray as an attractive source primarily due to their neural crest origin, ease of tissue procurement and less ethical hurdles. Our results suggest that DPSCs may provide a therapeutic benefit in the old-aged PD mice model and may be explored in stem cell-based CRTs especially in geriatric population as an attempt towards ‘personalized medicine’.

Generation of functional hepatocyte-like cells from human deciduous periodontal ligament stem cells

Human deciduous periodontal ligament stem cells have been introduced for as an easily accessible source of stem cells from dental origin. Although recent studies have revealed the ability of these stem cells in multipotential attribute, their efficiency of hepatic lineage differentiation has not been addressed so far. The aim of this study is to investigate hepatic lineage fate competence of periodontal ligament stem cells through direct media induction. Differentiation of periodontal ligament stem cells into hepatocyte-like cells was conducted by the exposure of two phase media induction. First phase was performed in the presence of hepatocyte growth factors to induce a definitive endoderm formation. In the subsequent phase, the cells were treated with oncostatin M and dexamethasone followed by insulin and transferrin to generate hepatocyte-like cells. Hepatic-related characteristics of the generated hepatocyte-like cells were determined at both mRNA and protein level followed by functional assays.

Good oral hygiene leads to beautiful smile. Alternative sweeteners commonly consumed in Malaysia.