SCHOOL OF DENTAL MEDICINE

CASE WESTERN RESERVE
U N I V E R S I T Y

42nd ANNUAL PROFESSIONALS DAY

Wednesday, October 12, 2022

10:00am-12:30pm
Poster Presentations: DMD Students and Residents
SMSN 213 F1, F2, G1, G2, M1, and M2

12:45pm-2:00pm
Dean's Opening Remarks: Dean Kenneth Chance, President, Supreme Chapter of
Omicron Kappa Upsilon, the National Dental Honor Society

Oral Presentations from Podium: DMD Students
SMSN 176

2:00-2:45pm
Presentations from CWRU SODM Faculty
SMSN 176

3:00pm
Award Presentations: Dr. Ibrahim Tulunoglu
SMSN 176

Chair of the Judging Committee: Dr. Ibrahim Tulunoglu
Committee Members: Dr. Mohsin Ali, Dr. Jay Joseph, Dr. Jerry Kolosionek,
Dr. Leonardo Marchini, Dr. Andre Paes, Dr. Jay Resnick, Dr. Lawrence
Rossoff, Dr. Eric Smith, Dr. Ali Syed

Continuing Education Hours Available – be sure to sign in with your FULL NAME and stay
through an entire session for credit. 2 hours will be given for the morning session and 2.5
for the afternoon session.

DMD Student Poster Presentations (Samson 213M):

Serene Abu-Hamdan & Caiyi Wu, Class of 2025
Mentor: Dr. Mark Hans, Orthodontics
Analysis of the Changes in the Natural Alignment of Dentition Utilizing the Peer Assessment Rating Orthodontic Index

A common empirical belief is that occlusion of the teeth is stable over time. The Peer Assessment Rating is an index that uses study casts to evaluate the difference in alignment of teeth at two time points. The most common use of PAR is to examine pre and post treatment orthodontic results. The present study evaluated changes in PAR score over a 20-year time span in the absence of any orthodontic treatment. The purpose was to determine if untreated occlusions stayed the same over time, improved or deteriorated.

Emily Fromel & Kunwoo Shin, Class of 2025
Mentor: Dr. T. Roma Jasinevicius, Comprehensive Care
Dental Treatment Protocols for Pregnant Patients

This project aimed to survey the standards of care surrounding dental treatment protocols of pregnant women at Case Western School of Dental Medicine. We hope to expand the survey to other accredited dental programs throughout the United States.

Poonam Furmah, Class of 2023
Mentor: Dr. Ali Syed, Oral and Maxillofacial Medicine and Diagnostic Sciences
Frequency of Spontaneous Osteosarcomatous Transformation of Craniofacial Fibrous Dysplasia: A Systematic Review

Spontaneous malignant transformation of fibrous dysplasia, albeit rare, can manifest as pain, swelling, and a late appearance of bony mass. No systematic review has exclusively examined the literature regarding the frequency of osteosarcomatous transformation from craniofacial fibrous dysplasia. This project aimed to perform a systematic review of the literature quantitatively, based on studies reporting the frequency of osteosarcomatous transformation, and qualitatively on the basis of case reports and a case series.

Huangcun Hu, Class of 2025
Mentor: Dr. Pushpa Pandiyan, Biological Sciences
Dectin-1 and Annexin A1 Interaction- Potential Role in Oral Cancer Development

This project examined the mRNA regulations of Dectin-1 and annexin A1 in carcinogen-stimulated cells and resected human tumor cells. We identified that dectin-1 receptor gene, rather than annexin A1 ligand gene, as an important component of the dectin-1 signaling pathway.

Isaac Kim, Class of 2023
Mentor: Dr. Jay Resnick, Comprehensive Care
Dx/Tx: Application of Adhesive Dentistry in the Restoration of Tooth Substance Loss Due to Erosion

A local veteran suffering from severe erosion having gone without seeing a dentist for 5+ years presents to CWRU SODM for Veteran's Day. Rehabilitation achieved through VDO adjustment, maxillary anterior ceramic restorations, and Class IV/VI restorations applying biomimetic/adhesive dentistry principles.

May Lin, Class of 2025
Mentor: Dr. Dale Baur, Oral and Maxillofacial Surgery
Identifying Great Auricular Nerve via Bony Landmarks: A Cadaver Study

The aim of this study is to utilize two bony landmarks for the Great Auricular Nerve (GAN) to determine if there is a reliable, bony anatomical landmark during surgery, specifically calculating the ratio at which the angle of the mandible (gonion) and tip of the mastoid process bisect GAN.

Wenxuan Shi, Class of 2025
Mentor: Lingyan Cao; Shanghai Engineering Research Center of Advanced Dental Technology and Materials
Photodynamic Bacteria Targeting Nanosystems for Enhanced Biofilm Eradication

Oral biofilms are hard-to-remove, highly organized microbial communities, which can lead to oral diseases. This project involves developing a hydrogel containing photodynamic nanoparticles to actively target bacteria to inhibit growth of oral biofilms.

Kahani Soni, Class of 2024
Mentor: Dr. Abrar Alamoudi, Dr. Ali Syed, Oral and Maxillofacial Medicine and Diagnostic Sciences
Vascular artherosclerosis in CBCT scans

Our purpose is to identify the radiographic anatomical location and prognosis of atherosclerosis. Our hypothesis is that the number of affected location by atherosclerosis and/or the amount of atherosclerosis at specific area will increase with time.

Shu Tu, Class of 2025
Mentor: Dr. Ge Jin, Biological Sciences
Oral co-infection of KSHV: role of HIV-associated extracellular vesicles and growth factor receptor

This project studies the expression of the antigenic gene MX1 in human tonsil cells after the treatment of HIV-infected T cell exosomes and Kaposi's Sarcoma-Associated Herpesvirus Infection. Overall, we found that exosomes from HIV-infected T-cell can inhibit the antigenic gene MX1 expression and may promote HIV-associated exosome-enhanced KSHV infection via the EGFR pathway

Bowen Zhang, Class of 2023
Mentor: Dr. Ibrahim Tulunoglu, Comprehensive Care
Complete Denture Fabrication with Maxillary Tori

This case study discusses the success of fabricating complete maxillary and mandibular denture for patient with excessive palatal tori.

Graduate Student Poster Presentations (Samson 213F & G):

Deangelo Davis & Marise Ibrahim, AEGD, Class of 2023
Restoring Deep Carious Teeth with Deep Margin Elevation vs. Crown Lengthening

This is a summative review of current literature to assess and investigate whether or not deep margin elevation can provide stable clinical outcomes and address limitations of usage compared to crown lengthening procedures in deeply decayed teeth with subgingival margins.

Jessica Di Salvo & Aashna Kumar, AEGD, Class of 2023
It's All in the Connection: A Brief Review of Tooth-to-Implant Supported Fixed Prostheses

Restoring an edentulous space between a tooth and an implant can be a problem when there are site limitations. Conventional dental education recommends avoiding connecting the tooth and the implant, however, this is a controversial topic. Here we present a literature review on the use of tooth-to-implant supported fixed dental prostheses (TIPs) in restorative dentistry.

Brandon Astin, Endodontics, Class of 2023
Taking out the Trash

This presentation focuses on the types of obstructions encountered during endodontic retreatment procedures and the instruments/techniques that are utilized to remove those obstructions.

Mohammed Dameri, Endodontics, Class of 2024
Considerations for retreated teeth reconstruction in Endodontics

Describe the relevant features related to the restoration of the retreated tooth. Illustrate the timing for optimizing the stages of reconstruction. Present the techniques useful for the reconstructive treatment.

Maclean Okang, Endodontics, Class of 2023
Getting rid of the bugs in retreatments in Endodontics

This is presentation will: 1. describe irritants and their properties, identify a set of clinical protocols that can be adopted in different pathological situations. 2. Illustrate the activation methodologies of the chemical agents used in retreatments

Edmond E. Onwukwe, Endodontics, Class of 2023
Don't extract!...subtract : an alternative approach for the treatment of periapical diseases

This poster presentation describes the main indications for the use of surgical endodontics to treat endodontic periapical disease. It also illustrates techniques and methods for an optimum approach to treat most complex cases requiring endodontic surgery.

Monica Patel, Endodontics, Class of 2023
The Jigsaw Puzzle: Piecing together the radiographic and clinical findings to determine retreatment approach

This poster presentation discusses factors such as radiographic interpretation, clinical exam and case selection to determine if root canal retreatment is indicated. Furthermore, it explains cases where apicoectomy (surgery) and/or non-surgical root canal treatment may be a better option.

Leslie Scott, Endodontics, Class of 2024
Please Don't Hurt My Fillings: Traditional and Alternative Techniques for Sealing Endodontic Retreatments

This presentation focuses on reviewing different filling and sealing techniques for endodontic retreatment cases. This will explore the different techniques and case selection process for each one.

Zoya Shaikh, Endodontics, Class of 2024
Trick or Retreat! Post-Retreatment Clinical Case Scenarios in Endodontics

Various clinical scenarios examining complications and resolutions in post-retreatment endodontic cases are discussed.

Carolina Wagdy Wadie Farag Gerges, Endodontics, Class of 2025
The Communication that matters! Endo-Periodontal lesions and perforations.

The treatment and prognosis of periodontal and endodontic diseases may vary depending on the etiology, pathogenesis and proper recognition of each specific condition. Understanding the interrelationship between these diseases will increase the clinician's ability to establish the correct diagnosis.

Connie Yoon Winegar, Endodontics, Class of 2024
Turning Failure into a Key to Success: Failure & Retreatment in Endodontics

This poster aims to clarify failures in endodontics by exploring the biological background behind root canal therapy failures. Ultimately, dental professionals should be able to identify determinants of endodontic failure in order to establish prognosis and considerations prior to retreatment.

Ian Canepa, Orthodontics, Class of 2023
The relationship between print layer height of 3D-printed dental models and thermoplastic retainer fit: an in vivo study.

This project compared the 3D printed dental models of differing print layer height and the subsequent retainer fit from those models.

Hana Hamed Al Kiyumi, Orthodontics, Class of 2023
Compression Between Digital Manual (DM) and Web-Based Artificial Intelligence (AI) Software in The Assessment of Facial Symmetry Within Orthognathic Patients

Artificial intelligence has been shown to improve efficiency for clinicians. But before we can rely on its benefits, we must first test its reliability and accuracy which this study aims to do for orthodontists.

Danielle Miller, Orthodontics, Class of 2023
Investigating Treatment Timing Disparities within Cleft Care along Racial and Socioeconomic Lines: An Institutional Review

The aim of this study is to compare treatment timing for five treatment interventions within cleft care along racial and socioeconomic lines. The treatment interventions that were investigated are: initial consultation, primary lip repair, primary palate repair, alveolar bone grafting and initiation of orthodontic treatment.

Yahaziel Simon, Orthodontics, Class of 2023
The Uses of 3-Dimensional Printing Technology in Orthodontic Offices in the United States

This project examined the uses of 3D printing technology in the US, whether it was in an in-house or outsourced capacity to understand why orthodontists are, or are not, incorporating this technology into their practices. It also identified the popularity of various software, applications, uses, pitfalls, and benefits for 3D printing by practicing professionals and any association of these experiences with practice or professional demographics.

Justin McCray, Pediatric Dentistry, Class of 2023
Identifying Dental Neglect within a Hospital-Based Residency Program: A Retrospective Chart Review

Dental health providers are mandated to report child abuse and dental neglect. However, dental neglect cases are often under-reported due to the difficulty to identify suspected cases. Dental health providers are more hesitant to report dental neglect due to barriers such as lack of access to dental care, oral health awareness, and personal conflicts. This study is a retrospective chart review to identify the risk factors associated with dental neglect for pediatric patients that need dental sedation. We reviewed patient charts that received recommendation of general anesthesia or deep sedation at University Hospitals Rainbow Pediatric Dental Clinic from September 1, 2018 to August 31, 2021.

Ahmed Alghamdi, Periodontics, Class of 2023
All on x implant case

Full arch Implant supported prosthesis (FP3)

Mercurious Mina, Periodontics, Class of 2023
Digital dentistry: Advances in 3D Printing and guided implant surgery

This project reviews the recent advances in digital planning for Implant and 3D printed surgical guides and provisional restorations.

Youstina Mozeih Shaker Mikhail, Periodontics, Class of 2023
Maxillary Esthetic Crown Lengthening after Orthodontic Treatment: Clinical Case Report

Gummy smile was noted in a 23-year-old male patient who had altered active eruption after orthodontic treatment. This case report aims to present the stability of the results obtained by performing esthetic crown lengthening surgery.

Muhammad Sohail, Periodontics, Class of 2023
An Approach for Diagnosis and Management of Impacted Canines

Incidence of canine impactions with classification and treatment showing own cases. Immediate placement, Immediate loading guided.

DMD Student Oral Presentations (Samson 176):

May Lin, Class of 2025
Mentor: Dr. Dale Baur, Oral and Maxillofacial Surgery
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The aim of this study is to utilize two bony landmarks for the Great Auricular Nerve (GAN) to determine if there is a reliable, bony anatomical landmark during surgery, specifically calculating the ratio at which the angle of the mandible (gonion) and tip of the mastoid process bisect GAN.

Mark Spencer Goodman, Class of 2023
Mentor: Dr. Sena Narendran, Community Dentistry
Impact of COVID-19 Pandemic on Preclinical Dental Education

The study investigated the impact of the Covid-19 pandemic on preclinical dental education. Data were collected by self-administered Qualtrics-based internet survey. Covid-19 virus pandemic appears to have had minimal negative impact on preclinical dental students' education.

Caiyi Wu, Class of 2025
Mentor: Dr. Mark Hans, Orthodontics
What is the efficacy of over the counter products in removal of S. Mutans in thermoplastic aligners?

This project is to evaluate the effectiveness of five disinfectant methods commonly recommended to patients by their orthodontists to clean thermoplastic materials.

Shu Tu, Class of 2025
Mentor: Dr. Ge Jin, Biological Sciences
Oral co-infection of KSHV: role of HIV-associated extracellular vesicles and growth factor receptor

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Nicholas Wolsefer, Class of 2023
Mentor: Dr. Ivan Stojanov, Oral and Maxillofacial Medicine & Diagnostic Sciences
The diagnostic utility of BRAF VE1 mutation-specific immunohistochemistry in ameloblastoma

BRAFV600E mutation has been reported to be specific for and frequent in ameloblastoma, and this study evaluated the usefulness of immunohistochemistry (IHC) using the BRAF VE1 mutant-specific antibody as a diagnostic adjunct in this setting.

Seungchan Kim, Class of 2025
Mentor: Dr. Ying An, Pediatric Dentistry
Identifying Dental Neglect within a Hospital-Affiliated Residency Program: A Retrospective Chart Review

Dental health providers are mandated to report child abuse and dental neglect. However, dental neglect cases are often under-reported due to the difficulty to identify suspected cases. Dental health providers are more hesitant to report dental neglects due to barriers, such as, lack of access to care, oral health awareness, and personal conflicts, etc. This study is a retrospective chart review to identify risk factors associated with dental neglect for pediatric patients that need dental sedation. We reviewed patient charts that received recommendation of general anesthesia or deep sedation at University Hospitals Rainbow Pediatric Dental Clinic from September 1, 2018 to August 31, 2021.

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Oral Presentations from Faculty (Samson 176):

Suchitra Nelson, PhD, Professor and Interim Chair, Community Dentistry, *Community-Based Clinical Trials to Reduce Oral Health Disparities*

Suchitra Nelson, PhD is the Assistant Dean for Clinical and Translational Research, Professor and Interim Chair of Community Dentistry at the School of Dental Medicine. Dr. Nelson is an epidemiologist with expertise in oral health disparities research. In her talk, Dr. Nelson will focus on her federally funded clinical trials to prevent cavities and improve oral health among minorities, the poor, special needs children and older adults. Dr. Nelson has received the Presidential Early Career Award for Scientists and Engineers (PECASE) from the White House Office of Science and Technology and in 2016, she received the Health Care Hero award from Crain's Cleveland Business for her work in NE Ohio communities.

Gian Pietro Schincaglia, DDS, PhD, FACD, Professor and Chair, Periodontics, *Precision in Implant Dentistry: A Primer of Robotic Navigation*

Dr. Gian Pietro Schincaglia DDS, PhD, FACD is Chair and Graduate Program Director for the Department of Periodontics and a Diplomate of the American Board of Periodontology. In his previous position at West Virginia University, Dr. Schincaglia started the robotic dental implant program and now brings his expertise and innovations to the CWRU SODM. He will provide an overview on the use of robotic navigation in implant dentistry.

Aaron Weinberg, DDS, PhD, Professor and Chair, Biological Sciences, *The beta defensin index (BDI) a novel platform to detect oral cancer: From bench to chairside*

Dr. Weinberg, DMD, PhD, is Professor and Chair of the Department of Biological Sciences and the former Dean of Research. He is secondarily appointed in the Departments of Pathology and Otolaryngology at the School of Medicine. He has combined his clinical background with molecular and cellular biological approaches to research oral diseases. His work includes researching a family of molecules known as antimicrobial peptides (AMPs) that are both antimicrobial and immunoregulatory. His research interests include interactions between innate and adaptive immunity, including responses to oral COVID-10 infection. Today, he will present an example of AMPs and their role in role in oral cancer.

Awards (Samson 176):

The Nygaard Award for excellence in dental anatomy, presented by Dr. Roma Jasinevicius

The OKU Award, a monetary prize to a DMD student, presented by Dr. Roma Jasinevicius

The Guenther M. Hans Award, a monetary prize to a DMD student, presented by Dr. Mark Hans

The Greater Cleveland Dental Society Award, a monetary prize to a graduate student, presented by Dr. Joseph Leon, GCDS

The Student Competition for Advancing Dental Research and Its Application (SCADA) Award, supported by the American Association for Dental, Oral, and Craniofacial Research (AADOCR) and Dentsply Sirona. The award is an expenses paid trip to represent the CWRU SODM at the AADOCR conference in Portland, OR in March 2023. Presented by Dr. Catherine Demko.

Professionals Day Committee

Dr. Catherine Demko

Lasaundra Acre

Jean Farah

Heidi McKee

Heather Ramsey

Kaitlyn Sterl