

Program

Morning Program

(Galagan Auditoria)

7:30 a.m. Breakfast

8:00 a.m. Welcome Address
Dean Clark Stanford

**8:10 a.m. Welcome Address and
Featured Speakers Introduction**
Dr. Jeffrey Banas

8:20 a.m. Featured Speaker
Dr. Cristina Vidal
*Beyond Bacteria: Host-Microbiome
Interactions Driving Caries
Progression*

8:37 a.m. Featured Speaker
Dr. Chris Barwacz
*Emergence Profile Design at the Biologic-Prosthetic Interface:
Translational Evidence Guiding Digital Implant Therapy*

8:55 a.m. Keynote Speaker Introduction
Dr. Ariene Leme-Kraus

9:00 a.m. Keynote Address
Dr. Jacques Nör
Stem Cells in Dental Pulp Tissue Regeneration

9:45 a.m. Break

10:15 a.m. - 11:45 a.m. Oral Presentations

SESSION 1 DETAILS

SESSION 2 DETAILS

SESSION 3 DETAILS

SESSION 4 DETAILS

SESSION 5 DETAILS

12:00 p.m. - 1:00 p.m. Poster Presentations

POSTERS 29 - 38

POSTERS 39 - 50

POSTERS 51 - 62

POSTERS 63 - 74

POSTERS 75 - 83

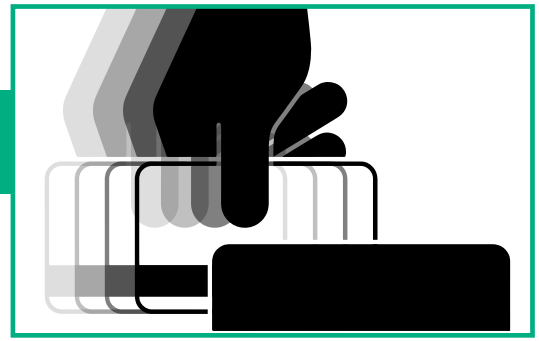
2026 RESEARCH DAY

73rd Annual Meeting
of the Iowa Section
of the American Association
for Dental, Oral,
and Craniofacial Research
(AADO CR)

TUESDAY, FEBRUARY 10, 2026

CONTINUING EDUCATION CREDIT

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Scan your College of Dentistry ID badge or Iowa One Card before each event in order to receive CE Credit!

Scanners will be placed at the entrances to each room. The badge scanning time will open 15 minutes before each event, and it will close shortly after the event has begun.

Attendees of the 2026 Research Day can receive up to 4 hours of CE credit, as long as they swipe their card at the start of each program/presentation (ex: Morning Program, Oral Presentations, and Poster Presentations), for a total of three swipes throughout the program. You do NOT need to swipe your card more than once during the Oral Presentations or Poster Presentations.

All faculty, staff, residents, and students are eligible to receive CE credit.

Morning Program

8:00 a.m. - 9:45 a.m.

Galagan A/B/C

Badge Scanning:

7:45 a.m. - 8:30 a.m.

1.5 hours of CE credit

Oral Presentations

10:15 a.m. - 11:45 a.m.

Galagan A, Gal. B, Gal. C, W433, and N212 Oral-B Classroom

Badge Scanning:

9:45 a.m. - 10:10 a.m.

1.5 hours of CE Credit

Poster Presentations

12:00 p.m. - 1:00 p.m.

Iowa Institute for Oral Health Research, 4th Floor Link, W220A/B

Badge Scanning:

11:30 a.m. - 12:10 p.m.

1 hour of CE credit

Questions regarding CE credit? Please contact Mattie Francis:

mattie-francis@uiowa.edu

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Oral Session 1: Details

Behavioral Science, Education, Epidemiology & Public Health

Location: W433

- 10:15** 1. **Jessica C. Gomez**, *M. Matkovich, L.B. Young*
Cannabis Use, Dental Anxiety, and Oral Health-Related Quality of Life
- 10:30** 2. **Kittiphoj Tikkhanarak**, *N. Handoo, J.W. Hellstein, T. Busch, A.L. Petrin, E. Zeng, H. Sun, M. Dunnwald, A. Butali*
Epidemiology, Clinicopathologic Features, and Prognosis of Ameloblastoma: A 22-Year Retrospective Study
- 10:45** 3. **Kim N. Vo**, *S. Lewis, J.C. Reynolds, J.M. Sukalski*
Exploring Procedure Mix Changes Post-2018 Iowa Medicaid Annual Benefit Maximum
- 11:00** 4. **Priyanka Singh**, *S. Rajaram, L. Jayasinghe, E. Zeng*
MiNDSET: A Modular Framework Evaluating Normalization and Differential Abundance Methods
- 11:15** 5. **Sydney Sanchez**, *S. Marshall, L.B. Young, K. Shin, E. Mueldener, M.A. Callan*
Orthodontic Residents' Perceptions of Their Onboarding Experience: A Pilot Study

Oral Session 2: Details

Biomaterials, Regenerative Strategies, and Drug Delivery

Location: Galagan Auditorium A

- 10:15** 6. **Noor Asfar**, C.M.P. Vidal, R. Bowers, S.M. Dabdoub, E.C. Teixeira, A. Leme-Kraus
Desensitizing Agents and Aging Effects on Eroded Dentin Bond Strength
- 10:30** 7. **Amrita Bhattacharya**, A. Maharishi, E. McLaren, S. White
Effect of Surface Treatment on Speed Sintered Chairside Graded Zirconia
- 10:45** 8. **Linna Zhong**, X. Zhang, Z. Wang, Z. Zhu, H. Sun
Gingival Fibroblasts Derived Nanovesicles Enable Fludrocortisone Delivery for Bone Regeneration
- 11:00** 9. **Zhuozhi Wang**, L. Zhong, H. Sun
Metabolite-Derived Polymer Modulates Cell Metabolism Through Mitochondrial Regulation
- 11:15** 10. **An Vi Phan**, F. Shao, Z. Fang, H. Cao
Pilot Testing of RNA Based Therapeutic Approaches for Bone Regeneration
- 11:30** 11. **Kendall N. Chase**, Z. Wang, L. Zhong, H. Sun
Using Exogenous Mitochondrial Transfer to Test Cellular Rescue Potential

Oral Session 3: Details

Clinical Outcomes, Diagnostics, & Treatment Effectiveness

Location: Galagan Auditorium B

- 10:15** 12. **Lyda Madigan**, *K. Shin, J. Thomas, J. Hunt, F. Qian, T.E. Southard, M.A. Callan, S. Marshall, L.M. Moreno Uribe*
Advanced Assessment of Forces During Rapid Maxillary Expansion
- 10:30** 13. **Priscilla Lavagnoli**, *K. Zuim, F. Qian, A. Masiero, F.B. Teixeira, A. Parolia*
Apical Size Impacts Effectiveness of Gentlewave Against Root Canal Biofilm
- 10:45** 14. **Jihyun Kim**, *D.H. Lee, S.H. Cho, E. Zeng*
Automated Objective Evaluation of Tooth Preparation Margin Designs Using Artificial-Intelligence
- 11:00** 15. **Satoki Kawashima**, *M. Matkovich, J. Thomas, D.J. Caplan, E.C. Teixeira, A. Tsujimoto*
Influence of Isolation Method on Longevity of Direct Restorations
- 11:15** 16. **Melika Farshad**, *A.M. Wieland, J. Beetner, S.M. Dabdoub, P. Remulla, M. Daily, M.A. Callan, S. Venugopalan, L.M. Moreno Uribe, S.M. Ganesan*
Longitudinal Immunoprofiling of Adolescents Undergoing Orthodontic Treatment: Preliminary Findings
- 11:30** 17. **Alex Hsieh**, *K.Y. Kim, F. Qian, C. Hogden*
Nonsurgical Root Canal Treatment and Retreatment Outcomes Using GentleWave

Oral Session 4: Details

Craniofacial Genetics, Development, & Tissue Patterning

Location: Galagan Auditorium C

- 10:15** 18. **Jackie Olberding**, F. Shao, T.T. Nguyen, C.P. Kenny, H. Cao, *E. Van Otterloo*
Ectoderm-Mediated Patterning of the Mandible During Mouse Development
- 10:30** 19. **Amanda M. Seaberg**, A. Butali, J.C. Murray, H. Keen, F. Qian, S. Fisher, L. Dunlay, D. Remulla, L.M. Moreno Uribe, *A.L. Petrin*
Epigenetic Landscape and Phenotypic Variation in Van der Woude Syndrome
- 10:45** 20. **Samantha D. Wuebker**, M. Kiel, K. Katsura, Y. Jian, *E. Van Otterloo*
Perinatal and Cellular Characterization of Ameloblast Specific MEMO1 Function
- 11:00** 21. **Fan Shao**, A. Phan, J. Thompson, *E. Van Otterloo*, *H. Cao*
Roles of Mesenchymal SHH and WNT Pathways for Tooth Initiation
- 11:15** 22. **Emmanuel T. Aladenika**, N. Mba, L. Cook, O. Ajala, R. Gadde, T. Busch, A. Visel, C.J. Buxo-Martinez, *A. Butali*
Whole Genome Sequencing Identifies Deleterious Variants in Puerto-Ricans with Clefts
- 11:30** 23. **Zheng Fang**, F. Shao, M. Hassanein, *H. Cao*
Xbp1 Knock-out in Dental Epithelium Alters Enamel Formation in Mice

Oral Session 5: Details

Oral Immunology, Host–Microbe Interactions, & Microbial Pathogenesis

Location: N212 Oral-B Classroom

- 10:15** 24. **Mahbube Jafari**, S.M. Ganesan, S.M. Dabdoub
Distinct Oral Virome Signatures Associated With Oral Squamous Cell Carcinoma
- 10:30** 25. **Qiong Ding**, J. Zhang, Y. Qian, E. Anderson, S. Zhang
Interleukin(IL)-27 Inhibits Periodontal Bone Loss by Restraining an IL-17 Response
- 10:45** 26. **Priscilla Remulla**, S.M. Dabdoub, L. Winborn, J. Smith, M. Correia, S.M. Ganesan
Longitudinal Shifts in the Oral Microbiome Following Weight Loss
- 11:00** 27. **Shri Vishalini Rajaram**, P. Singh, E. Zeng
Organism-Resolved Multi-Omics Analysis Reveals Functional Patters of the Oral Microbiome
- 11:15** 28. **Chawin Upara**, F. Shao, M. Zhu, H. Cao, J.A. Banas, L. Hong
Sexual Dimorphism in Periodontitis is Regulated by the miR-141/200c Cluster

Poster Session Details

Location: Iowa Institute for Oral Health Research, 4th Floor Link, W220 A/B

29. **Reis Schweiner**, *D. van der Hoeven*
Assessing the Practice Management Curriculum in U.S. Dental Schools
30. **Anna Hedges**, *O. Rysavy, M.R. McQuistan*
Comparing D1 Versus D4 Students' Willingness to Treat Underserved Populations
31. **Kim N. Vo**, *D. Johnsen, L. Marchini, C. Garaicoa Pazmiño, A. Jain, J. Syrbu, M. Geneser, A. Butali, J. Hartshorn, J. Desai, C. Stanford, M. Spector, N. McGlynn, L. Brendan Young*
Critical Thinking: Symbiotic Network of Skillsets, Outcomes, and Learning Moments
32. **Rima Desai**, *M.R. McQuistan, K. Dukes, L. Marchini, R. Nair, H. Steinkamp*
Dental Care Access for Adults With Disabilities: Barriers and Facilitators
33. **Veronica C. McClennen**, *T.A. Marshall*
Dental Implications of Nutritional Profiles of Protein Powders and Shakes
34. **Benjamin Pierson**, *W. Shi, M.R. McQuistan*
Dental Insurance Literacy Varies by Role Within a Dental School
35. **L. Brendan Young**, *J.L. Kolker, P. Henprasert, M.M. Hernandez*
Dental Student Professionalism: Identifying Education Gaps and Developing Assessment Strategies
36. **Nima Odowa**, *K. Weber-Gasparoni, H. Steinkamp, A. Miers, J. Bowman-Reif, F. Seyd, E. Striegel, J.J. Warren, T.A. Marshall, S.M. Levy, J.A. Banas, J. Reeve, D. Smith*
Food Insecurity Among WIC-Enrolled Pregnant Women
37. **Meagan L. Blomgren**, *J.M. Sukalski, S. Lewis, T.A. Marshall*
Food Noise and Behaviors Associated with Dental Caries Risk
38. **Ann Luo**, *M.C. Tandon, T.A. Marshall*
Front-Line Staff Attitudes and Experiences with Teledentistry Scheduling in Academics

39. **Tiffany M. Gradeler**, *J.M. Sukalski, E. Janio, R. Bucklin, N. Askelson*
HPV Vaccine Referrals in Dentistry: A Qualitative Study
40. **Drew Hawthorne**, *J.J. Warren, O. Rysavy*
Long-Term Effects of Chlorinated Pools on the Oral Cavity
41. **Elise A. Amerongen**, *T.A. Marshall, F. Qian*
Obesity Stereotypes, Biases, and Prejudices Amongst Academic Dental Professionals
42. **Kylie Scott**, *K. Weber-Gasparoni, D. Smith, A. Miers, J. Bowman-Reif, F. Seyd, E. Striegel, J.J. Warren, T.A. Marshall, S.M. Levy, J.A. Banas, J. Reeve*
Oral Health Knowledge among WIC-Enrolled Pregnant Women
43. **Ana S. Rodriguez**, *A.B. Miers, D. Smith, J. Bowman-Reif, F. Syed, J.J. Warren, T.A. Marshall, S.M. Levy, J.A. Banas, J. Reeve, K. Weber-Gasparoni*
Oral Health Perceptions and Behaviors Among Low-Income Pregnant Women
44. **Nathan Schneider**, *R. Bowers, D.J. Caplan*
Patient Characteristics Associated with Dental Fear: A Retrospective EHR Study
45. **Maggie Rohrbeck**, *K. Weber-Gasparoni, D. Smith, A. Miers, J. Bowman-Reif, F. Seyd, E. Striegel, J.J. Warren, T.A. Marshall, S.M. Levy, J.A. Banas, J. Reeve*
Pregnant Women's Knowledge and Use of Fluoridated Tap Water
46. **Sara E. Escudero**, *H. Steinkamp, S.M. Dabdoub, K. Harvey, G.M. Emmons*
Socioeconomic Indicators of Caries Incidence in an Iowa Pediatric Cohort
47. **Soroush Samouei**, *F. Floriani, D. Garcia, M. Bertolini Fernandes Dos Santos, M. Zhu, M. El Najjar*
Flexure Strength Comparison: 3Y, 4Y, 5Y TZP & Lithium Disilicate
48. **Shubhi Sharma**, *A. Zandinejad, S.H. Cho, F. Floriani*
Impact of Designed Porosity on SBS of 3D-Printed Y-TZP
49. **J Abraham**, *Z. Wang, H. Sun, R. Bowers*
pH of Nano-Hydroxyapatite Containing Oral Care Products in Simulated Saliva
50. **Marnie L. Vonderhaar**, *A. Leme-Kraus, N. Asfar*
Remineralization Efficacy of Desensitizing Agents Following Dentinal Erosion

51. **Tanveer Vasdev**, *M. El Najjar, S. Roushdy, F. Floriani*
The Novelty of Dental Ceramic: New Advances in Lithium Disilicate
52. **Katy Volz**, *D.J. Caplan, J. Desai, F. Qian, T.A. Marshall*
Associations Between Weight Loss Medications and Oral Health
53. **Mychyl Brown**, *M.J. Kanellis*
Clinical Survival of Band and Loops Versus Crown and Loops
54. **Austin Green**, *D.H. Lee, T. El-Kerdani, S.H. Cho*
Comparative analysis of AI-based mandibular segmentation software for CBCT-derived 3D reconstruction of edentulous mandibles
55. **Jihyun Kim**, *Priyanka Singh, J. Desai, L. Marchini, E. Zeng*
Cross-System Patient Matching Between Epic and Axium Using Transformer-Based Embeddings
56. **Madison Thatcher**, *C. Hogden, F. Qian, L.B. Young, R. Bowers*
Dentist Reports of Patient Dental Anxiety and Procedural Pain Management
57. **Maggie L. Manson**, *K. Leary, H. Steinkamp, L. Marchini, M. Matkovich, R. Nair*
Dentists' Opinions on Transitioning Care for Adolescents With Special Needs
58. **Alexis M. Oppman**, *G. Flores, E. Anderson, C. Stipp*
EDIL3 Promotes Invasion of Mesenchymal-like OSCC Cells
59. **Tala Hag Ali**, *M.J. Kanellis*
Evaluating Silver Diamine Fluoride (SDF) Application Frequency in Pediatric Dentistry
60. **Katie Prior**, *S.M. Ganesan, W. Shi, S. Prakasam, P. Pitchumani*
Factors Influencing Intravenous Moderate Sedation Dosage in Periodontal Surgery Procedures
61. **E.C. Boosalis Toaddy**, *E. Muedener, N.A. Kallemeyn, J. Thomas, K.J. Bogert-Baird, K. Shin, S. Marshall, T.E. Southard*
Finite Element Analysis of Mandibular Arch Collapse and Molar Drift
62. **Makenzi R. Worsfold**, *M.J. Kanellis, D. Smith*
Utilization of Hall Stainless Steel Crowns in Dental School Setting

63. **Jeremiah T. Poppen**, *K. Leary, F. Qian, T. Morgan*
Impact of an Intervention on Dental Incident Reports
64. **Karin Zuim**, *F. Qian, A. Masiero, C. Hodgen, M.R. Gomez, A. Parolia*
Impact of Systemic Health and Canal Quality on Endodontic Outcomes
65. **Cole M. Higley**, *J.M. Sukalski, J.G. Curtis*
Iowa Dentists' Practices and Perspectives on Complete Dentures
66. **Riley Saginak**, *C. Hogden, R. Bowers*
Local Anesthetic Diffusion Through Cortical Bone: An *in vitro* Model
67. **Sebastian Alberti**, *D.J. Caplan, R. Bowers*
Patient Appointment Compliance Trends in a Dental Education Setting
68. **Phuong Nguyen**, *E. Zeng, A. Greenwood, L. Marchini*
Polypharmacy and Self-Reported Clenching/Grinding: A Network Analysis
69. **Emma Hovey**, *J.G. Curtis, L. Marchini, S. Lewis*
Retrospective Analysis of Implant Survival in a State-Sponsored Dental School
70. **Zachary A. Graham**, *F. Qian, C. Hogden*
Retrospective Study of Incomplete Primary Root Canal Treatments and Retreatments
71. **Julia A. Norton**, *F. Qian, J.C. Reynolds*
State Variation in Pediatric Dental Medicaid Utilization and Related Factors
72. **Dean Cho**, *M. Zhu, C. Upara, L. Hong*
Targeting Sexual Bias in Oral Squamous Cell Carcinoma
73. **Claire B. Roske**, *S. Hendricks, J. Curtis, S.H. Cho, D.H. Lee*
Workflow for Patient-Specific Detachable 3d-Printing Models for Impacted Tooth Extraction
74. **Saba Manafi**, *L. Alves Machado De Paula, A.K. Fashimpaur, L.M. Moreno Uribe, S. Rengasamy Venugopalan, A.L. Petrin, E. Van Otterloo*
Functional Analysis of Oculo-Auriculo-Vertebral Spectrum PDGFRA Variant in Zebrafish

75. **Sydney Fisher**, A.M. Seaberg, L. Dunlay, L. Alves Machado De Paula, H. Keen, A. Butali, J.C. Murray, L.M. Moreno Uribe, A.L. Petrin
Methylation Profiling GRHL3 in Patients With Van der Woude Syndrome
76. **Audrey K. Fashimpaur**, S. Manafi, L.M. Moreno Uribe, S. Rengasamy Venugopalan, E. Van Otterloo, A.L. Petrin
Testing a Putative Dominant OAVS PDGFRA Variant During Zebrafish Development
77. **Noah M. Jeppesen**, A. Villhauer, R. van der Hoeven, D. van der Hoeven
Cholesterol and SM Pathways Influence EGFR Function in *C. elegans*
78. **Karol Mohr**, S. Cunha, S. Kulanthaivel, M. Souza, C.M.P. Vidal
Inflammatory Response of Dental Pulp Stem Cells Following Photodynamic Therapy
79. **Keshav Wagle**, J. Beetner, P. Remulla, L. Winborn, M. Correia, J. Smith, S.M. Dabdoub, S.M. Ganesan
Longitudinal Analysis Reveals Reduced Pro-Inflammatory Salivary Cytokines Following Weight-Loss Interventions
80. **Balasubramaniam Boopathi**, H.A. Ali, A. Villhauer, R. van der Hoeven
Metformin-Induced Protection Against *S. gordonii* via SKN-1 and MDT-15
81. **Brandon Cooley**, S. Kulanthaivel, J.A. Banas, C.M.P. Vidal
MMP and TIMP Expression in Dental Pulp Stem Cells
82. **Sivakumar Lingappa**, J. Beetner, P. Remulla, S.M. Ganesan
Obesity is Associated with Subclinical Oral Inflammation and Inflammasome Activation
83. **Darren Kilpatrick**, J.A. Banas, M. Zhu
Yogurt Starter Strains Effects on Biofilm Formation and Dental Caries