Contact Information

Name: Sumit Yadav
Email: syadav@unmc.edu

Personal Information

Sex: Male

EDUCATION

Date Awarded	Degree	Specialty/Major	Institution
November 2022	MBO	Master's in Business of Orthodontics	Wharton School of Management
July 2022	MBA	Business Management	Northwestern Kellogg School of Management
April 2021	MAP (Management Acceleration Program)	Business Management	UCLA Anderson School of Management
June 2013	Certificate	Orthodontics	University of Connecticut
June 2010	PhD	Dental Sciences	Indiana University-Purdue University, Indianapolis
June 2006	MDS	Orthodontics	Rajiv Gandhi University of Health Sciences, India
June 2002	BDS	Dental Surgery	Manipal University, India

EMPLOYMENT HISTORY

Dates	Rank/Title	Institution
January 2025 - Present	Professor & Chairman & Interim Associate Dean of Research	UNMC College of Dentistry and Department of Growth and Development
February 2023 - Present	Professor & Chairman	Department of Growth and Development- UNMC College of Dentistry
August 2022 – February 2023	Professor	Division of Orthodontics- University of Connecticut
July 2019	Tenured	Division of Orthodontics- University of Connecticut
July 2017	Associate Professor	Division of Orthodontics- University of Connecticut
July 2013 – February 2023	Research Director	Division of Orthodontics- University of Connecticut
July 2011- June2017	Assistant Professor	Division of Orthodontics- University of Connecticut
August 2010-July 2011	Clinical Instructor	Division of Orthodontics- University of Connecticut
September 2006 – August 2007	Assistant Professor	Division of Orthodontics- Maharana Pratap Dental College, Kanpur, India
September 2002 – June 2003	Instructor	Division of Oral and Maxillofacial Surgery, Rama Dental College, Kanpur, India
July 2001 – June 2002	Intern	Manipal College of Dental Sciences, Mangalore, India

ENTREPRENEURSHIP & CONSULTING

Dates	Rank/Title	Institution
July 2023 - Present	Founder	Dreamscape Homes LLC
April 2024 - Present	Advisory Council	Harvard Business Review (HBR)
March 2019 – September 2021	Founder & Healthcare Partner	ABillionHopes INC (Non-profit)
July 2021 – Present	Board of Director	Cleft Align INC
Propel Orthodontics (Acquired by DENTSPLY)	Consultant	2015-2018

PROFESSIONAL QUALIFICATIONS

Date	Certification/License
July 2013- Present	American Board of Orthodontics
August 2010- Present	Connecticut State Dental License

PROFESSIONAL MEMBERSHIPS

International

Years	Organization
2007-Present	American Association of Orthodontist
2009-Present	World Federation of Orthodontist
2009-Present	International Association of Dental Research
2010- Present	American Bone and Mineral Society

2013- Present	Orthopedic Research Society

National

Years	**Organization**
2007-2011	Indiana State Dental Association

AWARDS and HONORS

2010	Maynird K Hine Award
2010	Charley Schultz Resident Travel Award
2012	Anthony Gianelly Orthodontic Faculty Development Award
2015	Roberts M Ricketts Faculty Development Fellowship Award
2016	B.F. Dewel Memorial Research Award
2017	B.F. Dewel Memorial Research Award
2018	Butler William Scholar Award (National Institute of Aging)
2019	B.F. Dewel Memorial Research Award
2021	Thomas M. Graber Award (World Federation of Orthodontist)
2021	Beni Solow Award (European Orthodontic Society)
2023	Wayne G Watson Award (American Association of Orthodontist)
2023	Fred F Schudy Memorial Research Award

Publications

A. Peer-reviewed

1. **Yadav S**, Allareddy V. Orthodontics postgraduate education for generation Z: Current landscape, opportunities, and challenges! **Seminar in Orthodontics (Accepted)**

2. Empson I, Del Santo M, Kuo CL, Lagravere Vich M, Liu D, **Yadav S**, Mehta S. Short-term and long-term effects of miniscrew-assisted rapid palatal expansion on hard tissues using voxel-based superimposition of serial cone-beam computed tomography scans. Am J Orthod Dentofacial Orthop. 2024 Jul 23:S0889-5406(24)00268-3.

3. Chen PJ, Mehta S, Dutra EH, **Yadav S**. Alendronate treatment rescues the effects of compressive loading of TMJ in osteogenesis imperfecta mice. Prog Orthod. 25, 25(2024). https://doi.org/10.1186/s40510-024-00526-2

4. Wang B, Wang L, Gasek NS, Kuo CL, Nie J, Kim T, Yan P, Zhu J, Torrance B, Zhou Y, Flores L, Allen C, Andrade A, Guo C, Cohn R, Jellison E, Bartley JM, Kuchel G, Li S, Pirtskhalava T, Tchkonia T, Haynes L, Kirkland J, Ikeno Y, **Yadav S,** Xu M. Clearance of p21-highly-expressing cells extends lifespan and confers long-term benefits to health and physical function. Cell Metabolism. ***(Accepted for publication)***.

5. Venugopalan SR, Allareddy V, **Yadav S**. Interdisciplinary Role of Orthodontist in Screening and Managing Obstructive Sleep Apnea in Children and Adults. Dental Clinics of North America 2024. https://doi.org/10.1016/j.cden.2024.03.005

6. Mehta S, Arqub SA, Vishwanath M, Upadhyay M, **Yadav S**. Biomechanics of conventional and miniscrew-assisted rapid palatal expansion. J World Fed Orthod. 2024 May 1:S2212-4438(24)00015-8. doi: 10.1016/j.ejwf.2024.03.002. Online ahead of print.

7. Abu Arqub S, Al-Moghrabi D, Allareddy V, Upadhyay M, Vaid N, **Yadav S**. Content analysis of AI-generated (ChatGPT) responses concerning orthodontic clear aligners. Angle Orthod. 2024 May 1;94(3):263-272. doi: 10.2319/071123-484.1.

8. Muttanahally KS, **Yadav S**, Freilich MA, Tadinada A. Does the outcome of graft materials at dental implant sites differ between patients with normal and compromised bone health? J Oral Implantol. 2024 Apr 16. doi: 10.1563/aaid-joi-D-23-00078.

9. Alshehri A, Abu Arqub S, Betlej A, Chhibber A, **Yadav S**, Upadhyay M. Mandibular molar protraction: A comparison between fixed functional appliances

and temporary anchorage devices. **Orthod Craniofac Res**. 2024 Apr 18. doi: 10.1111/ocr.12790. Online ahead of print.

10. Mehta S, Vishwanath M, Patel A, Vich ML, Allareddy V, **Yadav S.** Long-term evaluation of soft-tissue changes after miniscrew-assisted and conventional rapid palatal expansion using voxel-based superimposition of cone-beam computed tomography scans. **Am J Orthod Dentofacial Orthop**. 2024 Mar;165(3):332-343. doi: 10.1016/j.ajodo.2023.09.017. Epub 2023 Nov 29.

11. Nelson T, Cobos SF, Gandhi V, Katechia B, **Yadav S**, Tadinada A. Evaluation of a 3D-printed cleft palate obturator using a low-dose cone beam computed tomography acquisition protocol: A proof-of-concept study. Cureus. 2024 Apr 4;16(4):e57602. doi: 10.7759/cureus.57602. eCollection 2024 Apr.

12. Allareddy V, Atsawasuwan P, Frazier-Bowers S, Hong C, Huja S, Katebi N, Lee MK, Mehta S, Padala S, Utreja A, Vaiid N, Venugopalan SR, Wadhwa S, **Yadav S**. Orthodontic Educational Landscape in the contemporary context: Insights from educators. **Seminar in Orthodontics**. https://doi.org/10.1053/j.sodo.2024.05.001

13. Kandaswamy E, Altabtbaei K, Joshi VM, Ayilavarapu S, Eswaran VKS, Allareddy V, **Yadav S**. Dental Match: An overview and trends in postdoctoral dental match process in United States. **Seminar in Orthodontics**. https://doi.org/10.1053/j.sodo.2024.04.006

14. Elnagar M, **Yadav S**, Venugopalan SR, Lee MK, Qubaidin M, Rampa S Allareddy V. Dental Match: ChatGPT and dental education. Oppurtunities and Challenges **Seminar in Orthodontics**. https://doi.org/10.1053/j.sodo.2024.03.004

15. Gandhi V, Sharma G, Dutra EH, Chen PJ, **Yadav S**. Degenerative disorder of temporomandibular joint-current practices and treatment modality. **Seminar in Orthodontics**. https://doi.org/10.1053/j.sodo.2023.12.007

16. Harandy MT, Mehta S, Warren E, Feldman J, **Yadav S**. Outcomes associated with 3M clarity aligners. **J Clin Orthod**. 2023 Jun; 57(6): 344-352

17. Harandi MT, Abu Arqub S, Warren E, Kuo CL, Da Cunha Godoy L, Mehta S, Feldman J, Upadhyay M, **Yadav S.** Assessment of clear aligner accuracy of 2 clear aligners systems. **Am J Orthod Dentofacial Orthop**. 2023 Dec;164(6):793-804. doi: 10.1016/j.ajodo.2023.05.028. Epub 2023 Jul 27.

18. Dutra EH, Chen PJ, Kalajzic Z, Wadhwa S, Hurley MM, **Yadav S**. FGF Ligands and Receptors in osteochondral tissues of the temporomandibular joint in young and aging mice. **Cartilage**. 2023 Apr 26:19476035231163691. doi: 10.1177/19476035231163691.

19. Allareddy V, Oubaidin M, Rampa S, Venugopalan SR, Elnagar MH, **Yadav S**, Lee MK. Call for algorithmic fairness to mitigate amplification of racial biases in artificial intelligence models used in orthodontics and craniofacial health. **Orthod Craniofac Res**. 2023 Dec;26 Suppl 1:124-130. doi: 10.1111/ocr.12721. Epub 2023 Oct 17.

20. Liu J, Chen PJ, Mehta S, Dutra EH, **Yadav S**. Dynamic changes in transcriptome during orthodontic tooth movement. ***Orthod Craniofac Res***. 2023 Mar 8. doi: 10.1111/ocr.12650. Online ahead of print.

21. Allareddy V, Rampa S, Venugopalan SR, Elnagar MH, Lee MK, Oubaidin M, **Yadav S**. Blockchain technology and federated machine learning for collaborative initiatives in orthodontics and craniofacial health. ***Orthod Craniofac Res***. 2023 Apr 10. doi: 10.1111/ocr.12662.

22. Perez-Pino A, **Yadav S**, Upadhyay M, Cardarelli L, Tadinada A. The accuracy of artificial intelligence-based virtual assistants in responding to routinely asked questions about orthodontics. ***Angle Orthod***. 2023 Mar 14. doi: 10.2319/100922-691.1. Online ahead of print.

23. Mehta S, Wang K, Chen PJ, Zhichao F, Ahmida A, Kalajzic Z, **Yadav S**. How does alendronate effect orthodontic tooth movement in osteogenesis imperfecta: an in vivo study on a mice model. ***Eur J Orthod***. 2023 Mar 31;45(2):217-223. doi: 10.1093/ejo/cjad001.

24. Abu-Arqub S, Ahmida A, Da Cunha Godoy L, Kuo CL, Upadhyay M, **Yadav S**. Insight into clear aligner therapy protocols and preferences among the members of the American Association of Orthodontists in the United States and Canada. ***Angle Orthod***. 2023 Mar 13. doi: 10.2319/101022-694.1.

25. Ahmida A, Mehta S, Amelemah E, Bashir R, Vich ML, Tadinada A, Allareddy V, **Yadav S**. Short-term and long-term effects of miniscrew-assisted and conventional rapid palatal expansion on the cranial and circummaxillary sutures. ***Am J Orthod Dentofacial Orthop***. 2023 Apr;163(4):e115-e126. doi: 10.1016/j.ajodo.2023.01.007. Epub 2023 Feb 6.PMID: 36754700

26. Abu Arqub S, Rehana B, Obeng K, Kuo CL, **Yadav S**. Survival and failure rate of lower lingual bonded retainers: a retrospective cohort evaluation. **Orthod Craniofac Res**. 2023 May;26(2):256-264. doi: 10.1111/ocr.12608. Epub 2022 Sep 1.

27. Tadinada A, Proft B, Thacker S, **Yadav S.** Comparitive evaluation of a lower-dose CBCT acquisition protocol for preoperative implant site assessment in dry human skulls: A proof-of-concept study. **J Oral Implantol**. 2023 Aug 1;49(4):408-413. doi: 10.1563/aaid-joi-D-22-00099R2.

28. Mehta S, Gandhi V, Patel A, Chen PJ, Lin MH, Kuo CL, Tadinada A, **Yadav S.** Three-dimensional assessment of temporomandibular joint volume, and condylar and glenoid-fossa morphology: A cone-beam computed tomography study. **Contemp Clin Dent**. 2023 Oct-Dec;14(4):256-264. doi: 10.4103/ccd.ccd_254_23. Epub 2023 Dec 19.

29. Akbari A, Gandhi V, Turkkahraman H, Chen J, **Yadav S**. Vibrational force on accelerating orthodontic tooth movement: A systematic review and meta analysis. **European Journal of Dentistry.** Eur J Dent. 2022 Dec 13. doi: 10.1055/s-0042-1758070.

30. Chen PJ, Wank K, Dealy C, Obrien M, Dutra E, **Yadav S**. Anabolic response of Intermittent Parathyroid Hormone and Alendronate on the Osteochondral Tissue of TMJ. ***Cartilage***. 2022 Dec;13(4):171-183. doi: 10.1177/19476035221109229. Epub 2022 Oct 14.

31. Abu Arqub S, Mehta S, Allareddy VS, Mehta S, **Yadav S**. Radiographic and histologic assessment of root resorption associated with conventional and mini-screw assisted rapid palatal expansion. ***European Journal of Orthodontics***.. 2022 Dec 1;44(6):679-689. doi: 10.1093/ejo/cjac029.

32. Wang B, Wang L,Gasek N, Zhou Y, Kim T, Guo C, Jellison E, Haynes L, **Yadav S**, Kuchel G, Tchkonia T, Kirkland J, Xu M. p21-Cre mouse model, a novel and powerful model to study p21-highly-expressing senescent cells in vivo. ***Nature Aging*** (Accepted)

33. Roberts WE, Chang C, Chen J, Brezniak N, **Yadav S**,. Integrating skeletal anchorage into fixed and aligner biomechnics . ***Journal of World Federation of Orthodontist****.* DOI:https://doi.org/10.1016/j.ejwf.2022.04.001

34. Ross G, Abu Arqub S, Mehta S, Tadinada A, Vishwanath M, **Yadav S,** Upadhyay M. Estmating the 3D location of Impacted Maxillary Canines: A CBCT based analysis of severity of impaction. ***Orthodontics and Craniofacial Research***. 2022 Apr 28.doi: 10.1111/ocr.12581.

35. Mehta S, Wang D, Upadhyay M, Lagravère MO, **Yadav S**. Long Term Effects on Alveolar Bone with Bone-Anchored and Tooth-Anchored Rapid Palatal Expansion. ***Am J Orthod Dentofacial Orthop*** 2022 Apr;161(4):519-528. doi: 10.1016/j.ajodo.2020.10.030.Epub 2022 Mar 7.

36. Wang K, Chunmei X, Xudong X, Yan J, Po-Jung C, **Yadav S**, Zheng W, Reginald T, Jun W, Fang J. Axin2+ PDL cellsdirectly contribute to new alveolar bone formation in OTM. ***Journal of Dental Research***. 2022 Jun;101(6):695-703. doi: 10.1177/00220345211062585. Epub 2022 Jan 9

37. Seong C, Chen PJ, Kalajzic Z, Mehta S, Nanda R, **Yadav S**. Vitamin E Enriched Diet Increases the Rate of Orthodontic Tooth Movement. ***Am J Orthod Dentofacial Orthop***. 2022 May;161(5):687-697.e3. doi: 10.1016/j.ajodo.2020.10.033.Epub 2022 Jan 7.

38. Mehta S, Wang D, Upadhyay M, Lagravère MO, **Yadav S**. Long Term Effects on Alveolar Bone with Bone-Anchored and Tooth-Anchored Rapid Palatal Expansion. ***Am J Orthod Dentofacial Orthop*** 2022 Apr;161(4):519-528. doi: 10.1016/j.ajodo.2020.10.030.Epub 2022 Mar 7.

39. Mehta S, Abu Arqub S, Patel N, Sharma R, Upadhyay M, **Yadav S**. Variability associated with mandibular ramus area thickness and depth in subjects with different growth patterns, gender, and growth status. ***Am J Orthod Dentofacial Orthop.*** 2021 Nov 18:S0889-5406(21)00693-4. doi: 10.1016/j.ajodo.2021.10.006.

40. Mehta S, Abu Arqub S, Lagravère MO, Tadinada A, Upadhyay M, **Yadav S**. Long Term Effects of Conventional and Mini-Screw Assisted Rapid Palatal Expansion on Root Resorption. ***Am J Orthod Dentofacial Orthop***. 2021 Dec 4:S0889-5406(21)00701-0. doi:10.1016/j.ajodo.2021.10.010.

41. Shephard J, Kaitlyn F, Po-Jung C, Fisher M, Kelsey, R, **Yadav S,** Dealy C. Cross-talk between EGFR and BMP signals regulates chondrocytes maturation during endochondral ossification. ***Dev Dyn***. 2022 Jan;251(1):75-94. doi: 10.1002/dvdy.438. Epub 2021 Nov 27

42. Mehta S, Chen PJ, Ahmida A, **Yadav S**. Acceleration of Orthodontic Tooth Movement and Root Resorption with Near and Distant Surgical Insult: An *in vivo* study on rat model. ***Int Orthod***. 2021 Dec;19(4):591-600. doi: 10.1016/j.ortho.2021.10.002. Epub 2021 Oct 27.

43. Mehta S, Gandhi V, Lagravere Vich M, Allareddy V, Tadinada A, **Yadav S**. Long-term assessment of conventional and mini-screw assisted rapid palatal expansion on nasal cavity***. Angle Orthod***. 2021 Dec 29. doi: 10.2319/021221-122.1.

44. Mehta S, Chen PJ, Upadhyay M, **Yadav S**. Intermaxillary elastics on skeletal anchorage and MARPE to treat a Class III maxillary retrognathic open bite adolescent: A case report. ***Int Orthod***. 2021 Aug 24:S1761-7227(21)00107-8.

45. Mehta S, Chen P, Lagravere Vich M, Tadinada A, Upadhyay M, **Yadav S** Bone anchored vs Tooth anchored maxillary expansion appliances: Long-term effects on condyle fossa relationship. ***Journal of World Federation of Orthodontist***. 2021 Jul 28:S2212-4438(21)00031

46. Bakhsh K, Gandhi V, **Yadav S**, Lurie A., Tadinada A., Correlation of bone density and occluso-mandibular plane angle: a retrospective study. **Oral Surg Oral Med Oral Pathol Oral Radiol.** 2021;132;e115.

47. Zhou Y, Xu M,**Yadav S.** Temporomandibualr Joint aging and potential therapies. ***Aging (Albany NY)***. 2021 Jul 15;13(14):17955-17956

48. Abu Arqub S, Gandhi V, Mehta S, Palo Ledjo, Upadhyay M, **Yadav S.** Survival estimates and risk factors for the failure of palatal and buccal mini-implants. ***Angle Orthodontist****.* 2021 May 18. Doi10.2319/090720-777.1.

49. Allareddy V, Lee MK, Vaid N, **Yadav S**. Use of Neural Network model to examine post-operative infections following orthognathic surgeries in the United States. ***Seminar in Orthodontics*** 2021;27:130-137

50. Zhou Y, Al-Naggar IMA, Chen PJ, Gasek NS, Wang K, Mehta S, Kuchel GA, Xu M, **Yadav S.** Senolytics alleviate the degenerative disorders of temporomandibular joint in old age. ***Aging Cell***. 2021 Jun8:e13394

51. Abu Arqub S, Mehta S, Upadhyay M, **Yadav S.** Does Mini screw assisted rapid palatal expansion (MARPE) have an influence on airway and breathing in middle aged children and adolescent? Systematic review. ***Int Orthod.*** 2021 Mar;19(1):37-50. doi: 10.1016/j.ortho.2021.01.004. Epub 2021 Jan 28.

52. Mehta S, Patel D, **Yadav S.** Staging Orthodontic Aligners for Complex Orthodontic Tooth Movement. ***Turk J Orthod*** (Accepted)

53. Cohen M, Thacker S, **Yadav S**, Tadinada A. The role of online education platforms and tools in sustaining dental education during the COVID-19 pandemic and beyond. ***The Communicator***. 2021. Spring 25-27

54. Gandhi V, Upadhyay M, Tadinada A, **Yadav S**. Variability associated with mandibular buccal shelf area width and height in the subjects with different growth pattern, gender and growth status. ***Am J Orthod Dentofacial Orthop.*** 2021 Jan;159(1):59-70. doi: 10.1016/j.ajodo.2019.11.020.

55. O'Brien MH, Dutra EH, Chen PJ, Mehta S, **Yadav S.** BMP2 Is Required for Postnatal Maintenance of Osteochondral Tissues of the TMJ. ***Cartilage.*** 2020 Dec 14:1947603520980158

56. Woods P, Morin A, Chen PJ, Mahonski S, Xiao L, Hurley MH, **Yadav S**, Tannin Schmidt. Automated Indentation Demonstrates Structural Stiffness of Femoral Articular Cartilage and Temporomandibular Joint Mandibular Condylar Cartilage is Altered in FgF2KO Mice. ***Cartilage****.* 2020. Oct 3:1947603520962565

57. Chen PJ, Dutra EH, Mehta S, O'Brien MH, **Yadav S.** Age-related Changes in the Cartilage of the Temporomandibular Joint. ***Geroscience***. 2020;42(3):995-1004.

58. Mehta S**,** Wang D, Kuo CL, Mu J, Lagravere VM, Allareddy V, Tadinada A, Yadav S. Long-term effects of mini-screw-assisted rapid palatal expansion on airway ***Angle Orthod.*** 2020;10.2319/062520-586.1

59. Nanda A, Chen PJ, Mehta S, Kalajzic Z, Dutra EH, Allareddy V, Nanda R, **Yadav S**. The Effect of Differential Force System and Minimal Surgical Intervention on Orthodontic Tooth Movement and Root Resorption. ***Eur J Orthod***. 2020;cjaa065

60. Mehta S, Dresner R, Gandhi V, Chen PJ, Allareddy V, Kuo CL, Mu J, **Yadav S.** Effect of positional errors on the accuracy of cervical vertebrae maturation assessment using CBCT and lateral cephalograms. ***J World Fed Orthod*****.** 2020;S2212-4438(20)30060-6. doi:10.1016/j.ejwf.2020.09.006

61. Alzahrani A, **Yadav S**, Gandhi V, Lurie AG, Tadinada A. Incidental findings of temporomandibular joint osteoarthritis and its variability based on age and sex. ***Imaging Sci Dent***. 2020 Sep;50(3):245-253. doi: 10.5624/isd.2020.50.3.245

62. Dzingle J, Mehta S, Chen PJ, **Yadav S.** Correction of Unilateral Posterior Crossbite with U-MARPE. ***Turk J Orthod*** 2020; 33(3):192-6.

63. Gandhi V, Lowney A, Cardarelli L, **Yadav S**, Tadinada A. Three-dimensional evaluation of the mandibular symphyseal region in block graft harvesting for dental implants using cone-beam computed tomography. ***Imaging Sci Dent***. 2020 Sep;50(3):217-226. doi: 10.5624/isd.2020.50.3.217

64. Betlej A, Gandhi V, Upadhyay M, Allareddy S, Tadinada A, **Yadav S**. Variability of the maxillary suture maturation and density in subjects with different sex and growth status. ***Clin Anat***. 2020 May 19. doi: 10.1002/ca.23621.

65. Gandhi V, Obrien M, **Yadav S.** High Quality and High Yield RNA Extraction Method from Whole Human Saliva. Biomarkers Insight ***Biomark Insights.*** 2020 Jun 8;15:1177271920929705.

66. Ramos MJ, **Yadav S**, Gandhi V, Upadhyay M, Tadinada A. Is there a relationship between mandibular cortical bone thickness and orthodontic treatment time. ***Angle Orthod.*** 2020 Nov 1;90(6):794-800. doi: 10.2319/012220-42.1

67. Gandhi V, Mehta S, Gauthier M, Chia-Ling K, Nanda R, **Yadav S**. Comparative evaluation of root resorption with clear aligners and preadjusted edgewise appliances: a systematic review and meta-analysis. ***Eur J Orthod***. 2020 Feb 20:cjaa013. doi: 10.1093/ejo/cjaa013. Online ahead of print.

68. Azami N, Chen PJ, Mehta S, O'Brien MH, Dutra EH, Nanda R, **Yadav S**. Raloxifene administration enhances retention in an orthodontic relapse model. ***Eur J Orthod***. 2020 Feb 17:cjaa008. doi: 10.1093/ejo/cjaa008. Online ahead of print.

69. Schneider S, Gandhi V, Upadhyay M, Allareddy V, Tadinada A, **Yadav S.** Variability associated with maxillary and mandibular buccal cortical thickness and density in the subjects with different growth pattern, gender and growth status. ***Korean J Orthod.*** 2020 Mar;50(2):108-119. doi: 10.4041/kjod.2020.50.2.108. Epub 2020 Mar 24

70. Ejaz A, Donovan C, Gandhi V, **Yadav S**, Tadinada A. Evaluation of the reliability of the a new low dose CBCT acquisition protocol in diagnosing impacted canines: an ex-vivo imaging study. ***Physics of medical imaging***. DOI: 10.1117/12.2512521

71. **Yadav S**, Markiewicz M, Allareddy V. Distraction Osteogenesis for Rapid Canine Retraction: Techniques and Outcomes. ***Oral Maxillofac Surg Clin North Am.*** 2020 Feb;32(1):83-88. doi: 10.1016/j.coms.2019.09.005. Epub 2019 Nov 1.

72. Allareddy V, Caplin J, Markiewicz M, **Yadav S**, Yates D. An Overview of Time Line of Interventions in the Continuum of Cleft Lip and Palate Repair. ***Oral Maxillofac Surg Clin North Am.*** 2020 May;32(2):177-186. doi: 10.1016/j.coms.2020.01.001. Epub 2020 Feb 27.

73. Chen PJ, Chang JH, Dutra EH, Ahmida A, Nanda R, **Yadav S**. The effect of alveolar decortication on orthodontically induced root resorption. ***Angle Orthod.*** 2020 Mar 5. doi: 10.2319/051819-344.1.

74. Chang J, Mehta S, Chen PJ, Upadhyay M, **Yadav S**. Correction of Open Bite with Temporary Anchorage Device-Supported Intrusion. ***APOS Trends in Orthodontics***. 2019;9(4):246-251. DOI: 10.25259/apos_101_2019

75. Tadinada A, Schneider S, **Yadav S**. Role of Cone Beam Computed Tomography in Contemporary Orthodontics. ***Seminar in Orthodontics***

76. Alshetti H, Chen PJ, Updahyay M, **Yadav S**. Mini-implant assisted enmasse protraction of maxillary posterior segment. ***Turk J Orthod*** 2019; 32(3):182-9.

77. Chang JH, Michael A, Chen PJ, Dutra EH, Nanda R, Kumbar S, **Yadav S**. Injectable RANKL sustained release formulations to accelerate Orthodontic Tooth Movement. ***Eur J Orthod***. 2019 May 31. pii: cjz027. doi: 10.1093/ejo/cjz027

78. Dutra EH, **Yadav S.** The effects of Botox injection into the masseter in the mandibular condyle are not transient. ***Am J Orthod Dentofacial Orthop.*** 2019 Aug;156(2):193-202

79. Dutra EH, Obrien MH, Chen PJ, **Yadav S**. The anabolic effects of long-term intermittent PTH (1-34) on the mandibular condylar cartilage and the subchondral bone of the TMJ. ***Cartilage.*** 2019 Mar22: 1947603519833146

80. Vishwanath M, Chen PJ, Upadhyay M, **Yadav S**. Orthodontic Management of a Patient with Short Root Anomaly and Impacted Teeth. ***Am J Orthod Dentofacial Orthop***. 2019 Mar;155(3):421-431. doi: 10.1016/j.ajodo.2018.11.009

81. Chang JH, Chen PJ, Dutra EH, Nanda R, **Yadav S**. The effect of the extent of surgical insult on the Orthodontic Tooth Movement. ***Eur J Orthod.*** 2019 Feb 27. pii: cjz006. doi: 10.1093/ejo/cjz006

82. **Yadav S**, Yang Y, Dutra EH, Robinson JL, Wadhwa S. Temporomandibular Joint Disorders in the Elderly and Aging Population. ***J Am Geriatr Soc.*** 2018 Jul;66(6):1213-1217. doi: 10.1111/jgs.15354. Epub 2018 May 2

83. Clearfield DS, Xin X, **Yadav S**, Rowe DW, Wei M. Osteochondral Differentiation of Fluorescent Multireporter Cells on Zonally-Organized ***Biomaterials. Tissue Eng Part A***. 2018 Oct 9.10.1089/ten.TEA.2018.0135.

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B. Books

Temporary Anchorage Devices in Orthodontics: Elsevier; Editors- Ravindra Nanda, Flavio Uribe, **Sumit Yadav**

C. Book Chapters & Non-Peer Reviewed Articles

1. **Yadav S**, Sanchez F, Venugopalan S, Allareddy V. Application of Artificial Intelligence in treating patients with Cleft and Craniofacial Anomalies. Celft and Craniofacial Orthodontics. Editor. Pradip Shetye.

2. Nanda R, Uribe F, ***Yadav S***. Accelerated Orthodontic Tooth Movement. Orthodontics, Current Principles and Techniques. Editors: Graber, Vanarsdall, Huang

3. Upadhyay M, **Yadav S**, Nanda R. Mechanics of Class II Malocclusion Compensation With Mini-Implant Supported Anchorage. Skeletal anchorage in orthodontic treatment of Class II malocclusion. Contemporary applications of orthodontic implants, miniscrew implants and mini plates Ed: Papadopoulos MA, ed, Elsevier.

4. **Yadav S**, Upadhyay M, Nanda R. Mechanics for impacted and ectopically erupted canines. Esthetic and Biomechanics in Orthodontics Ed: Nanda R, ed, Elsevier.

5. Upadhyay M, **Yadav S**, Nanda R. Biomechanical basis of extraction space closure. Esthetic and Biomechanics in Orthodontics Ed: Nanda R, ed, Elsevier

6. Mistry N, Moskow J, Shelke N, **Yadav S**, Kumbhar S. Bioinstructive Scaffolds for Cartilage Repair and Regeneration. Cartilage. Elsevier

7. **Yadav S**. Enhanced patient care through collaborative team play: An orthodontist perspective. American Academy of Oral and Maxillofacial Radiology Newsletter, Spring 2015

Patents

Title: Non-opiod methods for treating pain

Title: Novel treatment for TMJ dysfunction and disorder (provisional and to be filed fully before August 30th)

Grants

Pending Council Review

Title: *Identifying causative mechanism for targeting p21 positive senescent cells for attenuating TMJ degeneration*

PI: S.Yadav 12/01/2024 – 08/31/2029
Agency:NIH/NIDCR **(RO1)**
$2,702,941
Objective: The goal of the proposed research is to identify the precise mechanism behind TMJ degeneration. Additionally, we will also target the p21-high-cells for alleviating TMJ degeneration

Pending IRG Review

Title: *Molecular mechanism by which Notch Signaling regulates TMJ Osteoarthritis*
PI: S.Yadav 04/01/2025 – 03/31/2030
Agency:NIH/NIDCR **(RO1)**
$2,120,838
Objective: the proposal aims to understand how Jagged1/2 ligands and BMPR signals controls cellular and molecular events behind TMJ-OA.

Funded Research Projects (In Progress)

Title: *Targeting p21 positive senescent cells for alleviating TMJ degeneration*

PI: S.Yadav 10/01/2024 – 12/31/2029
Agency:NIH/NIDCR **(RO1)**
$2,156,828
Objective: The goal of the proposed research is to understand the role of p21-high-cells in obesity and aging induced TMJ degeneration. Additionally, we will also target the p21-high-cells for alleviating TMJ degeneration

Title: *Targeting p21 positive senescent cells for alleviating TMJ degeneration*

PI: S.Yadav 09/01/2023 – 08/30/2024
Agency:NIH/NIDCR **(R56)**
$3,07,001

Objective: The goal of the proposed research is to understand the role of p21-high-cells in obesity and aging induced TMJ degeneration. Additionally, we will also target the p21-high-cells for alleviating TMJ degeneration

Title: *Cellular Senescence in mediating age related TMJ degeneration*
PI: S.Yadav 07/01/2021 – 06/30/2024
Agency:NIH/NIDCR **(RO3)**
$328,000
Objective: The goal of the proposed research is to understand the role of senescence in the TMJ degeneration

Title: *Notch Signaling in the regulation of TMJ osteoarthritis*
PI: S.Yadav 07/01/2021 – 06/30/2024
Agency:NIH/NIDCR **(RO3)**
$328,000
Objective: The goal of the proposed research is to understand the role of notch signaling in the TMJ degeneration

Title: *Individualized assessment and treatment program for TMD: Coping as a mechanism*
Co-I: S.Yadav (5% FTE) 01/11/2020 – 06/30/2025
Agency:NIH/NIDCR **(UO1)**
$3,690,510
Objective: The goal of the proposed research is to shed light on active mechanism of TMD

Title: *Dose analysis for translating animal based vibrational force study for accelerating orthodontic tooth movement to clinic*
Co-I: S.Yadav (10% FTE) 04/01/2022 – 08/31/2026
Agency:NIH/NIDCR **(RO1)**
$2,300,620
Objective: The application proposes to assess the optimal intermittent vibration force for modifying speed of tooth movement

Title: *Mechanism of BMP4 regulation of Mandibular Condylar Cartilage Growth*
PI: S.Yadav 09/01/2020 – 12/30/2022

Agency:NIH/NIDCR(Supplement)
$78,903
Objective: The goal of the proposed research is to understand the role of Bone Morphogenic Protein 4 in the osteoarthritis of the TMJ

Title: *Mechanism of BMP2 regulation of Mandibular Condylar Cartilage Growth*
PI: S.Yadav 04/01/2017 -3/30/2022

Agency: NIH/NIDCR
$886,713
Objective: The goal of the proposed research is to understand the role of Bone Morphogenic Protein 2 in the postnatal growth, pathogenesis and adaptive remodeling of mandibular condylar cartilage

Title: *Establishing Charles J Burstone Center for Research and Excellence*
MPI: S.Yadav 04/01/2021 - 3/30/2023

Agency: Burstone Foundation
$1,500,000
Objective: This is a center grant and objective is to attract the best talent across the globe to come and do research in the center

Title: *Role of cellular senescence in TMJ degeneration*
PI: S.Yadav 07/01/2020 – 06/30/2022

Agency: American Association of Orthodontic Foundation
$30,000
Objective: To understand the role of cellular senescence in TMJ degeneration

Title: *Notch Signaling in the regulation of TMJ osteoarthritis*
PI: S.Yadav 07/01/2021 – 12/31/2022
Agency: American Association of Orthodontic Foundation
$30,000
Objective: The goal of the proposed research is to understand the role of snotch signaling in the TMJ degeneration

Title: *Bed to Bench Collaboration for Skeletal Research*

MPIs: D. Rowe,**S.Yadav**, E.Lee 03/01/2019 – 04/30/2021

Agency: UCONN (Center)
$150,000
Objective: To develop a research focused craniofacial phenotyping for rare skeletal disease

Completed Research Projects

Title: *Role of PTH in Mandibular Cartilage Chondrocytes De-differentiation*

PI: S.Yadav 07/01/2019 – 12/31/2020

Agency: American Association of Orthodontic Foundation
$30,000
Objective: The project will study the role PTH plays in chondrocytes de-differentiation

Title: *Investigating PRG4 Re-expression as a Treatment for TMJ Degenerative Diseases*
Co-PI: S.Yadav. 08/30/2018 – 07/30/2020

Agency: UCONN (Covergence Grant)
$75,000
Objective: The goal of this work is to determine if restoration of PRG4 gene function in PRG4 deficient mice can halt or delay TMJ cartilage degeneration, assessed both histologically and biochemically

Title: *Orthodontic Tooth Movement using different customized devices*

PI: S.Yadav 09/30/2017 – 09/30/2020

Agency: Charles J. Burstone foundation
$650,000
Objective: The goal of the proposed research is to understand the bone remodeling using various customized appliance to accelerate orthodontic tooth movement

Title: *Mechanism of Anti-TGF beta for the treatment of the Mandibular Condylar Cartilage in Osteogenesis Imperfecta*

PI: S.Yadav 07/01/2018 – 12/31/2019

Agency: American Association of Orthodontic Foundation
$30,000
Objective: This project will study the outcomes of Anti-TGF treatment on the mandibular condylar cartilage in OI mice

Title: *PTH mediated regulation of the chondrogenic lineage in the mandibular condylar cartilage*

PI: S.Yadav 07/01/2017 – 12/31/2018

Agency: American Association of Orthodontic Foundation
$30,000
Objective: This project will study the outcomes of long-term I-PTH on the MCC in an adult and older mouse model

Title: *Novel approach for peripheral nerve regeneration using ionically conducting polymers*

Co-I: S.Yadav 07/01/2017 – 08/31/2017

Agency: UCONN Type: Convergence
$75,000
Objective: This project will st`udy the outcomes of peripheral nerve using novel polymer to regenerate the critical size nerve defects

Title: *BMP2 signaling in mandibular condylar cartilage*

PI: S.Yadav 07/01/2016 – 12/31/2017

American Association of Orthodontic Foundation
$30,000
Objective: The goal of the proposed research is to understand the cross talk between BMP2 and Ihh in the adaptive remodeling of mandibular condylar cartilage

Title: *Study of cell lineage of mandibular condylar cartilage*

PI: S.Yadav 07/01/2013 – 06/30/2014

Agency: American Association of Orthodontic Foundation
$30,000
Objective: The goal of this project was to determine lineage relationship of the mandibular condylar cartilage and subchondral bone

Title: *The effects of Invisalign and fixed appliances on the oral hygiene*

MPI: S.Yadav 07/01/2011 – 12/31/2013

Agency: Align Technology (Industry)
$50,000
Objective: The goal of the proposed research was to examine which orthodontic appliance system is best for the oral hygiene

Menotred Research Grants

Title: *The role of FGFR3 in the effects of PTH in the Mandibular Condyle*

PI: Eliane Dutra 04/01/2020 – 03/31/2025

Role: Mentor (Co-Chair)
Agency: NIDCR
$872,000
Objective: The goal of the proposed research is to examine the role of FGF3 in the anabolic effects of PTH

Title: *The effect of alendronate in Orthodontic Tooth Movement Model in Osteogenesis Imperfecta*

PI: Shivam Mehta 07/01/2020 – 06/30/2021
Role: Mentor
Agency: AAOF
$5,000
Objective: The goal of the proposed research is to examine the effects of alendronate on orthodontic tooth movement in osteogenesis imperfecta mice model

Title: *The gender differences in orthodontic tooth movement in Osteogenesis Imperfecta*

PI: Shivam Mehta 07/01/2019 – 06/30/2021
Role: Mentor
Agency: NESO
$8,000
Objective: The goal of the proposed research is to understand the gender differences in orthodontic tooth movement in osteogenesis imperfecta mice model

Title: *Dynamic transcriptomic changes during Orthodontic Tooth Movement*

PI: Jia Liu 07/01/2019 – 12/31/2020
Role: Mentor
Agency: AAOF
$5,000
Objective: The goal of the proposed research was to examine the changes in the gene expression during orthodontic tooth movement

Title: *The role of PRG4 in alleviating temporomandibular disorders*

PI: Po-Jung Chen 07/01/2019 – 12/31/2020
Role: Mentor
Agency: AAOF
$5,000
Objective: The goal of the proposed research was to examine the role of PRG4 in alleviating the temporomandibular joint disorder

Title: *The role of raloxifene in preventing orthodontic relapse*

PI: Niloufar Azami 07/01/2018 – 12/31/2019
Role: Mentor
Agency: AAOF
$5,000
Objective: The goal of the proposed research was to examine the role of raloxifene in preventing orthodontic tooth relapse

Title: *The role of RANKL microparticles in accelerating the orthodontic tooth movement*

PI: Joy Chang 07/01/2017 – 12/31/2018
Role: Mentor
Agency: AAOF
$5,000
Objective: The goal of the proposed research was to examine the role of RANKL loaded microparticles in accelerating orthodontic tooth movement

Title: *The role of RANKL loaded microparticles in alveolar bone remodeling*

PI: Joy Chang 07/01/2016 – 12/31/2017
Role: Mentor
Agency: NESO
$4,000
Objective: The goal of the proposed research was to examine the role of RANKL loaded microparticles in accelerating orthodontic tooth movement

TEACHING ACTIVITIES

I. School of Dental Medicine Undergraduate Teaching

1. **Didactic Teaching (D2 & D3):** 3 to 4 lecture hours of didactic teaching from 2011 to 2016. The topic covered are usually, A) Biology of Tooth Movement, B) Space analysis, C) Anchorage in Orthodontics. However, from last 2 years I have not taught dental students
2. **Research Teaching (D1, D2 & D3):** Each year 2 to 3 dental students do summer research in my lab. They usually work on basic science project or retrospective research. I teach them basic principles in research, ethics in research and scientific writing

II. School of Dental Medicine Resident Teaching

1. **Summer Courses for Orthodontic Residents (Instructor) – every summer to first year residents and fellows:** The main goal of the summer course is to teach entire orthodontics concisely in 2 months before resident can start the patients. I teach 6 to 10 hours varied topic each year during the summer semester.
2. **Wire Bending and Typhodont – every summer to first year residents and fellows:** The main goal of the project is to familiarize the residents with different physical properties of the wires, concept of wire bending and arch wire formation in relation to day to day clinical practice and principles of loop design and their fabrication.
3. **Biology of Tooth Movement (Course Director) - 2 credits; every year in spring semester:** This course is intended to provide a review of current concepts of the biological basis of tooth movement and the effect of orthodontic treatment on the related biological tissues. Every resident enrolled in the class has to discuss a case in which they are having difficulty in moving teeth or the orthodontic tooth movement is extremely slow

4. **Biodontics/ Biotechnology in Dentistry (Co-Course Director) - 4 credits; alternate year in fall semester:** The goal of this course is to introduce residents to recent advances in the bio-sciences and how these advances have been yield new diagnostic and therapeutic services, technologies, equipment and products. Based on their study of how bio-science discoveries become the next –generation of technologic products, the course promotes entrepreneurship by having all students develop an idea of a dentally related new technology, develop a business plan for its commercialization and present this plan to their classmates as a completion for venture capital.

5. **Evidence Based Orthodontics (Course Director) – every year in fall and spring semester; 1 hour class every week:** In this lecture, we review the most current systematic reviews and meta analysis that pertain to orthodontics and fields related to the practice of multidisciplinary dentistry. The goal is to make resident familiar with the most important studies highlighted in the systematic reviews and understand the pyramid of evidence for clinical decision making.

6. **Syndrome Review (Course Director) – every alternate year in fall semester:** In this lecture, we provide an overview of

commonly occurring Craniofacial syndromes and how Dentists can be better prepared to provide care to these patients. The syndromes that will be covered include: Robins sequence, Treacher Collins syndrome, Crouzon syndrome, Apert syndrome, Cleidocranial Dysplasia, Hemifacial microsomia, Goldenhar syndrome, Vander Woude syndrome, Pfieffer syndrome, and Cherubism. Different treatment strategies (eg: implants for missing lateral incisors, restorative build-up of malformed lateral incisors, or canine substitution) are used. In this lecture, we will illustrate with multiple case examples the different treatment strategies used and the associated outcomes.

7. **Problem Case Seminar series (Instructor)- every year in fall and spring semester; 1-hour class every week:** The entire faculty in the division participates in this every week. In this lecture based presentation residents discuss the problematic cases with the faculty and what alternative approach should be used to expedite the treatment.

8. **Case Conference (Instructor)- every year in fall and spring semester; 2-hour class every week:** The entire faculty in the division participates in this every week. In this course we emphasize a systematic approach to treatment planning following the steps of records presentation, problem list generation, synthesis, diagnosis, treatment and mechanics plan. The discussion among the residents and the faculty is focused on diagnosis, treatment steps, and treatment alternatives.

9. **Case Discussion-** Each resident is allocated 7 to 8 patients with each faculty and I do diagnosis and treatment planning of each patient allotted under my supervision with residents.

10. **Clinical Teaching-20 % of FTE- every year in fall, spring and summer; Wednesday morning and Monday afternoons:** I supervise the first, second and third year residents in the clinic. Each and every resident is allocated 7 to 9 cases with each faculty and our job is to supervise the resident and make sure residents are adhering to the treatment plan and if necessary modify the treatment objectives to expedite the treatment.

III. Graduate School Courses

1. **Biology of Tooth Movement (Course Director) - 2 credits; every year in spring semester:** This course is intended to provide a review of current concepts of the biological basis of tooth movement and the effect of orthodontic treatment on the related biological

tissues. Every resident enrolled in the class has to discuss a case in which they are having difficulty in moving teeth or the orthodontic tooth movement is extremely slow.

2. **Biodontics/ Biotechnology in Dentistry (Co-Course Director) - 4 credits; alternate year in fall semester:** The goal of this course is to introduce residents to recent advances in the bio-sciences and how these advances have been yield new diagnostic and therapeutic services, technologies, equipment and products. Based on their study of how bio-science discoveries become the next – generation of technologic products, the course promotes entrepreneurship by having all students develop an idea of a dentally related new technology, develop a business plan for its commercialization and present this plan to their classmates as a completion for venture capital.

MENTORSHIP

I have mentored junior faculty, postdoctoral fellows, doctoral candidates, residents, dental students and highschool students.

Junior Faculty

1) *Eliane Dutra:* Dr. Dutra is an Assistant Professor in the Division of Orthodontics, UCONN School of Dental Medicine. I have been mentoring Dr. Dutra for her research activities and she has been successful in obtaining 3 different American Association of Orthodontic Foundation Grants and a Pre-K grant through CICATS. She recently obtained her KO1 through NIDCR and I am the co-chair of the committee
2) *Meenakshi Vishwanath:* Dr. Vishwanath is an Assistant Professor in the Section of Orthodontics, UNMC College of Dentistry. I have been mentoring Dr. Vishwanath for last 5 years and she has been successful in obtaining a grant through American Association of Orthodontic Foundation
3) *Shivam Mehta:* Dr. Mehta is an Assistant Professor in the Section of Orthodontics, Marquette University College of Dentistry. I have been mentoring Dr. Mehta for last 3 years and he has been successful in publishing 25 peer reviewed articles and obtaining a grant through American Association of Orthodontic Foundation and Northeastern Society of Orthodontist
4) *Po-Jung Chen:* Dr. Chen is an Assistant Professor in the Division of Orthodontics, UCONN School of Dental Medicine. I have been mentoring Dr. Mehta for last 3 years and he has been successful in publishing 25

peer reviewed articles and obtaining a grant through American Association of Orthodontic Foundation and Northeastern Society of Orthodontist

Postdoctoral Fellows

1) *Mara H O'Brien (2016-present):* Dr. O'brien is a current postdoctoral fellow and is submitting her KO1 grant in the coming cycle.
2) *Po-Jung Chen (2017-2018):* Dr. O'brien is a current third year orthodontic resident and his K99ROO grant is pending IRG review.
3) *Raman Kaul (2013-2014): Dr. Kaul is a research associate in Edmonton, Alberta*

Residents

1. *Po-Jung Chen* (Orthodontics-June 2021). The effects of PRG4 on Temporomandibualr Joint

2. *Shivam Mehta* (Orthodontics-June 2021). The effects of alendronate on orthodontic tooth movement in an Osteogenesis Imperfecta mice model

3. *Rebecca Dresner* (Orthodontics-June 2021). The effects of unilateral crossbite on the Temporomandibualr Joint

4. *Alana Marczak* (Orthodontics-June 2021). Temporomandibular Joint Space and Condylar Bone Density Changes due to Invisalign

5. *Jia Liu* (Orthodontics-June 2020). Dynamic transcriptome changes during orthodontic tooth movement

6. *Dennis Wang* (Orthodontics-June 2020). The effects of mini-implant assisted rapid palatal expansion on alveolar bone and airway

7. *Jonathan Lomboy* (Orthodontics-June 2020). Long-term effects of rapid palatal expansion on vertical bone loss

8. *Khabbab Bhaksh* (Oral and Maxillofacial Radiology-December 2020). Correlation of Bone Density and Occluso-Mandibular Plane Angle: A Retrospective Study.

9. *Jyoti Mago* (Oral and Maxillofacial Radiology-December 2020). Diagnostic Accuracy and Dosimetry and of Intraoral, Extraoral and CBCT Generated Bitewings for Detecting Approximal Caries and Bone loss

10. *Armaghan Ahmad* (Oral and Maxillofacial Radiology-December 2020). Reliability of a low dose CBCT protocol in evaluating sinus pathology

11. *Anjali Nanda* (Orthodontics-June 2019). The Effect of Differential Force System and Minimal Surgical Intervention on Orthodontic Tooth Movement and Root Resorption

12. *Niloufar Azami* (Orthodontics-June 2019). Raloxifene administration enhances retention in an orthodontic relapse model

13. *Bill Lu* (Orthodontics-June 2019). Raloxifene administration enhances retention in an orthodontic relapse model

14. *Christina Seong* (Orthodontics-June 2019). Vitamin E Enriched Diet Increases the Rate of Orthodontic Tooth Movement

15. *Melissa Landin* (Orthodontics-June 2018). Is there a relationship between mandibular cortical bone thickness and orthodontic treatment time

16. *Joy Chang* (Orthodontics-June 2018). Injectable RANKL sustained release formulations to accelerate Orthodontic Tooth Movement

17. *Abdul Rahman Alsheri* (Orthodontics-June 2018). Raloxifene administration enhances retention in an orthodontic relapse model

18. *Suha Alghamdi* (Orthodontics-June 2018). A Randomized Clinical Trial Comparing Outcomes of Open- versus Closed-Surgical Exposure of Palatally Impacted Maxillary Canines

19. *Alexandro Lima* (Orthodontics-June 2018). The effect of intermittent parathyroid hormone on osteochondral tissue's of TMJ.
20. *Kehinde Babalola* (Oral and Maxillofacial Radiology-December 2017)."Correlation Between Temporomandibular Joint Arthritis and Cervical Spine Arthritis associated with potential implant sites: An ex-vivo imaging study

21. *Sonya Kalim* (Oral and Maxillofacial Radiology-December2017). "Mapping the Embryological Development of the Temporomandibular Joint With Cone Beam Computed Tomography"

22. *Adel Al-Zahrani* (Oral and Maxillofacial Radiology-June 2016).The Prevalence and Severity of Incidental TMJ Osteoarthritic Changes in Implant Patients

23. *Kristen Knecht* (Orthodontics-June 2016).“The influence of facial pattern on bone density Pre- and Post-Orthodontic Treatment”

24. *Eliane Dutra* (Orthodontics-June 2016). “Cellular and matrix response of the mandibular condylar cartilage to Botulinum toxin”

25. *Afsaneh Rangiani* (Orthodontics-June 2016). “The effect of intensity levels of LIPUS (Low Intensity Pulsed Ultrasound) on orthodontic tooth movement”

26. *Amir Assefnia* (Orthodontics-June 2015). “The effect of low frequency mechanical vibration on retention in an orthodontic relapse model”

27. *Greg Ross* (Orthodontics-June 2015). “Three dimensional analysis of the impacted maxillary canine: Localization and assessment of severity”

28. *Elnaz Jalali* (Oral and Maxillofacial Radiology-June 2015). A morphological and volumetric airway analysis of patients with mandibulofacial abnormalities using cone beam computed tomography.

29. *Mina Mahdian* Oral and Maxillofacial Radiology-June 2015. Tissue Characterization Using Optical Coherence Tomography.

SERVICE ACTIVITIES

I. Committee Memberships

A. Departmental Committee Membership

2010 - Present	Admissions Committee for Post-Doctoral Orthodontic Program, Division of Orthodontics, School of Dental Medicine, UCONN Health
2011	Search Committee for In-Residence Assistant professor, Division of Orthodontics, School of Dental Medicine, UCONN Health
2014 - 2016	Search Committee for In-Residence Assistant professor, Division of Orthodontics, School of Dental Medicine, UCONN Health

B. SDM Committee Memberships

2016 - 2018	Member, Deans Advisory Committee on Research
2019 - Present	SDM Research Advisory Group for Accreditation

C. Health Center Committee Memberships

2015 - 2018	Member (Representative from School of Dental Medicine), Collective Bargaining Council, faculty union
2016 - 2018	Member (Sole representative from School of Dental Medicine), Library advisory committee

D. State Positions

2014 - 2017	Treasurer, CT state branch for dental research (Unit of International Association of Dental Research)

E. National Positions

2022 - 2028	Concil of Scientific Affairs, American Association of Orthodontics

II. Scientific Reviewing; Editorial; Advisory

A. Journal Editorship/ Editorial Board Member

Date	Journal
2018 - Present	Associate Editor (Progress in Orthodontics)
2013 - Present	Angle Orthodontist

B. Journal Reviewing

Date	Journal
2010 - Present	American journal of Orthodontics and Dentofacial Orthopedics
2010 - Present	Angle Orthodontist
2011 - Present	European Journal of Orthodontics

2013 - Present	PLoS One
2014 - Present	Progress in Orthodontics
2014 - Present	Journal of Dental Research
2015 - Present	Dental Press in Orthodontics
2015 - Present	Journal of World Federation of Orthodontics
2016 - Present	Journal of Molecular Histology
2016 - Present	Journal of Applied Oral Science

C. Residency Program Examiner

Date	University
June 2016	Columbia University, New york

PRESENTATIONS

A. Invited Addresses

Date	Invited Talks
2023	Invited Lecture “Advances in Aligner Treatment”. Athens 2023, Greek Association for Orthodontic Study and Research
2023	Invited Lecture “Expansion with TADS: Are the results predictable”. Athens 2023, Greek Association for Orthodontic Study and Research
2023	Invited Lecture “3D outcomes associated with different aligner system”. AAO 2023, Chicago
2023	Invited Lecture “Advances in Aligner Treatment: possibilities and future”. World Federation of Orthodontist Seminar Series 2023
2022	Invited Lecture “Rapid palatal expansion and alveolar bone changes”. Australian Orthodontic Society 2022
2021	Invited Lecture “Dental and Orthodontic Education in 2030- Incorporating Technology”. University of Pittsburgh.
2021	Invited Lecture “Alveolar Bone Reaction to Rapid Palatal Expansion”. Angle Orthodontic Society Biennial Meeting, New Hampshire.

2020 Invited Lecture “Digital Marketing in Dentistry”. Manchester, Vermont.

2020 Invited Lecture (Zoom), “Arch wire Vs Rapid Palatal Expansion”. Indian Orthodontic Society, India.

2020 Invited Lecture (Zoom), “Airway changes after rapid maxillary expansion”. University of Southern Australia, Perth.

2020 Invited Lecture (Zoom), “Vertical bone loss after rapid maxillary expansion”. University of Southern Australia, Perth.

2020 Invited Lecture (Zoom), “Molar Protraction using Mini-implants”. University of Illinois, Chicago.

2020 Invited Lecture, “Space closure Vs Space opening”. University of Illinois, Chicago.

2019 Invited Lecture & Workshop, “Rapid Maxillary Expansion”. Dubai Orthodontic Society, UAE.

2019 Invited Lecture, “Mini-implant Assisted Rapid Maxillary Expansion”. World Implant Orthodontic Conference, Romania.

2019 Invited Lecture, “Management of Open Bite with and without TADS”. Medical University of South Carolina, Charleston, United States.

2019 Invited Lecture, “Management of Open Bite with and without TADS”. Medical University of South Carolina, Charleston, United States.

2018 Invited Lecture, “Mini-implant Assisted Rapid Palatal Expansion”. World Implant Orthodontic Conference, Bali, Indonesia.

2018 Invited Lecture, “Management of Vertical Dimensions”. New York University, New York, USA

2018 Invited Lecture, “Management of Palatal Expansion”. University of Florida, New York, USA

2017 Invited Lecture, “Can we really accelerate the Orthodontic Tooth Movement”. American Association of Orthodontist Annual Meeting San Diego, CA

2017 Invited Lecture, “Alveolar decortication to increase the velocity of Orthodontic Tooth Movement”. Accelerated Orthodontic Tooth Movement Symposium, IADR, March 2017

2016 Invited Lecture, “Dental asymmetries: diagnosis and treatment”. 51st Indian Orthodontic Conference & 8th World Implant Orthodontic Conference, Goa, India

2016 Invited Lecture, “Accelerated Orthodontic Tooth Movement”. Connecticut Orthodontic Society, Waterbury, Connecticut

2016 Invited Lecture, “Chondrogenesis in temporomandibular joint”. The Consortium for Orthodontic Advances in Science and Technology West Palm Beach, FL

2016 Invited Lecture, “Open bite closure with and without TADS”. Asian Pacific Orthodontic Society, Bali, Indonesia

2016 Invited Lecture, “Accelerating Orthodontic Tooth Movement”. Melbourne Dental school, Melbourne, Australia

2015 Invited Lecture, “Open bite closure with and without mini implants”. 50th Indian Orthodontic Conference, Hyderabad, India

2015 Invited Lecture, “Severe open bite closure with mini implants”. 7th World Implant Orthodontic Conference, Dubai

2015 Invited Lecture, “Mechanical vibration and orthodontic tooth movement”. Burstone Presymposium, Indianapolis, IN

2014 Invited Lecture, “The effect of mechanical vibration on orthodontic tooth movement”. 40th Moyers Presymposium, Ann Arbor, MI

2013 Invited Lecture, “Accelerating Orthodontic Tooth Movement: Where is the evidence”. American Association of Orthodontist Annual Meeting Philadelphia, PA

2012 Invited Lecture, “Characterization of GFP reporters in mandibular condylar cartilage of TMJ”. TMJ3 meeting, Philadelphia, PA

2011 Invited Lecture, “Lineage progression in mandibular condylar cartilage of TMJ”. Indiana society for dental research, Indianapolis, IN

2010	Invited Lecture, “Unraveling Impacted Canines-from theory to clinical practice”. 45th Indian Orthodontic Conference, Mangalore, India
2010	Invited Lecture, “The effect of surface treated mini implants on bone integration”. 36th Moyers Presymposium, Ann Arbor, MI

B. Workshops

Date	Workshops Conducted and Organized
2016	Invited Workshop, “Orthodontic Tooth Movement”. 8th World Implant Orthodontic Conference, Goa, India
2013	Workshop Organized, “Accelerated Orthodontic Tooth Movement” Symposium, IADR, March 2013

C. Conference Presentations

Date	Title	Meeting
March 2016	The effect of intermittent parathyroid hormone on the mandibular condylar cartilage	American Association of Dental Research
March 2014	Early cellular response during orthodontic loading in a rat model	American Association of Dental Research
March 2013	In vivo fate mapping identifies progenitor of mandibular condylar cartilage	International Association of Dental Research
September 2011	Developing GFP reporters for assessing lineage progression within articular and fibroarticular tissues	American Society of Bone and Mineral research
March 2010	Effect of bracket angulation on force system of impacted canine	International Association of Dental Research
April 2009	Three dimensional evaluation of forces on impacted maxillary canine	American Association of Dental Research

Dental Students

Himank Gupta, DMD, UCONN Class of 2015

1. **Papers Published:** 1) Yadav S, Dobie T, Assefnia A, Kalajzic Z, Gupta H, Nanda R. The Effect of Low Frequency Mechanical Vibration on Orthodontic Tooth Movement. American Journal of Orthodontics. 2) Yadav S, Assefnia A, Kalajzic Z, Allareddy V, Nanda R. The Effect of Low Frequency Mechanical Vibration on Retention in an Orthodontic Relapse Model. European Journal of Orthodontics2015 Mar 4. pii: cjv006. [Epub ahead of print]
2. **Poster presented at School of Dental Medicine Research day**
3. **Poster presented at Connecticut State Dental Society meeting**

Yina Li, DMD, UCONN Class of 2015

1. **Matched at University of North Carolina for Orthodontic Residency**
2. **Poster Presented at School of Dental Medicine Research day and won the first prize.**
3. **She presented her research (done in my lab) at NIH and represented the School of Dental Medicine**
   Poster presented at International Association of Dental Research meeting

Melissa Landin, DMD, UCONN Class of 2015

1. **Papers Published:** 1) Landin M, Jadhav A, Yadav S, Tadinada A. A comparative study between currently used methods and SV-CBCT for surgical placement of mini implants. Angle Orthod. 2015 May;85(3):446-53. doi: 10.2319/042214-298.1. Epub 2014 Oct 24.
2. **Poster presented at School of Dental Medicine Research day**
3. **Poster presented at International Association of Dental Research meeting**

Ledjo Palo, DMD, UCONN Class of 2017

1. **Papers Published:** 1) Yadav S, Palo L, Mahdian M, Upadhyay M, Tadinada A. Evaluation of the Diagnostic accuracy of two CBCT protocols in detecting TMJ arthritic changes Am J Orthod Dentofacial Orthop. 2015 Mar;147(3):339-44. doi: 10.1016/j.ajodo.2014.11.017.
2. **Poster presented at School of Dental Medicine Research day**
3. **Poster presented at International Association of Dental Research meeting**

Daniel Lee, DMD, UCONN Class of 2018

1. **Paper Published:**
   A) Rangiani A, Khan Y, Nanda R, Yadav S. The varying effect of intensity levels of low intensity pulsed ultra sound on orthodontic tooth movement. American Journal of Orthodontics (Under Review)
2. **Poster presented at School of Dental Medicine Research day**

Sydney Schneider, DMD, UCONN Class of 2018

1. **Paper Published:**
   A) Tadinada A, Schneider, Yadav S. Evaluation of diagnostic efficacy of two cone-beam computed tomography protocols in reliably detecting the location of the inferior alveolar nerve canal (Under Review). Dento Maxillo Facial Radiology
2. **Poster presented at School of Dental Medicine Research day**
3. **Poster presented at State of Connecticut Dental Society Meeting**
4. **Poster presented at Oral and Maxillofacial Radiology Academy meeting**

Emily Sachs, DMD, UCONN Class of 2018

1. **Paper Published:**
2. Yadav S, Sachs E, Vishwanath M, Knecht K, Upadhyay M, Tadinada A. Gender variation in palatal bone thickness and palatal bone density for mini-implant placement. American Journal of Orthodontics (In Press)
3. **Poster presented at School of Dental Medicine Research day**
4. **Poster presented at State of Connecticut Dental Society Meeting**
5. **Poster presented at American Association of Dental Research Meeting**

Alana Marczak, DMD, UCONN Class of 2019

1. **Paper Published:**
   A) Tadinada A, Marczak A, Yadav S. Diagnostic efficacy of a modified low dose acquisition protocol for pre-operative evaluation of mini-implant sites (Under Review). Angle Orthodontist
2. **Poster presented at School of Dental Medicine Research day**
3. **Poster presented at American Association of Dental Research Meeting**

Boyu Ma, DMD, UCONN Class of 2019

Research in Progress

Candice Logan, DMD, UCONN Class of 2019

Research in Progress

Triny Gutierrez, DMD, UCONN Class of 2019

1. **Paper Published:**

A. Dutra EH, O'Brien MH, Gutierrez T, Lima A, Nanda R, Yadav S. PTH [1-34] induced alteration predisposes the mandibular condylar cartilage to early degeneration.
Matthew Prezioso, DMD, UCONN Class of 2019

Research in Progress

Tara Babushkin, DMD, UCONN Class of 2019

Research in Progress

Undergraduate Students

Arianna Lowney, Boston College Class of 2018