Centre for Early Childhood Caries Research (CECCRe)



ABOUT THE LAB

Centre for Early Childhood Caries Research (CECCRe) was established with few key objectives.

- 1. To understand the host factors namely the enamel composition, permeability, contact areas, morphology, the cuspal pattern of the tooth, pits and fissures and its variations and their role in Early Childhood Caries (ECC)
- 2. To establish the role of feeding practices, sleep pattern and events around the practices and its association with ECC
- 3. To understand the population-based prevalence of this disease in India
- 4. To estimate the Impact of ECC on nutritional status, general health of children
- 5. To understand the Quality of Life issues in various domains namely, psychological, functional, and other related domains in children with ECC
- 6. To understand the role of various risk factors involved in ECC etiology and establish the most important ones from existing knowledge
- 7. To develop simple effective economical interventions to prevent ECC at the community level
- 8. To create large scale public engagement plans to disseminate knowledge regarding ECC to the common man
- 9. To increase awareness about ECC to the common man, health care professionals, allied health care professionals, general dentists, and Pediatric dentists
- 10. To understand the burden of this disease among children with Special Health Care Needs and develop strategies to prevent them
- 11. To develop and train a group of researchers committed to ECC research to spearhead cutting edge research in this country
- 12. To understand the role of genetics in ECC (genes involved in determining the morphology of teeth and contact areas, enamel formation genes, etc.)

13. To collaborate and work with leading global organizations like WHO and EC4 (Early Childhood Caries Collaborating Centers)

MISSION

To provide exceptional, uncompromised, personalized, preventive, therapeutic oral health care services including guidance for infants to preschoolers with the highest level of care, skill, judgment and comfort in an atmosphere of trust, compassion and to spearhead innovative research leading to a cavity free childhood through adolescence and forever

VISION

To usher in an era, where every milk tooth is preserved and nurtured through creative breakthrough in thinking and human resources and to engage in life transforming research to create holistic oral care

PRINCIPAL INVESTIGATOR



Dr. M S Muthu MDS PhD MFDS RCPS (Glasgow),

Principal Investigator – Zero Cavity Project,

Centre for Early Childhood Caries Research (CECCRe),

Sri Ramachandra Dental College and Hospital,

Sri Ramachandra Institute of Higher Education and Research,

Porur, Chennai -600 116,

Tamil Nadu, India

About Dr. M S Muthu

- Dr. M S Muthu has spent the last decade working in Early Childhood Caries, Dental Traumatology, and Dental Education
- He has been working as an Adjunct Research Associate Ajman University Since Feb 2021
- He has given 200 plus Guest lectures
- He has received Paul P Taylor Award 2020, American Academy of Pediatric Dentistry
- He has received Outstanding Dentist of the Year 2016 FamDent
- He has received Dr. Lakshmanan Gold Medal 2016, 2017, 2019, 2020 and 2023
- He has Proposed Classifications OXIS, Dens Evaginatus, Talon Cusp
- He has Proposed Concepts TeDiE technique, Sustained Anticipatory Guidance (SAG)
- He has Developed FeAST scale, Time scale, Injured Tooth App, and www.oxiscalibration.com
- He has Established Enamel Hypoplasia/Enamel Defects as No 1 risk factor for ECC (SR) among the numerous risk factors associated with ECC
- He has received Extra Mural Funding to the tune of 800000 USD plus
- He has Published nearly 130 Publications
- He is the Co-Founder Start-up Ignobilis Terrain LLP mHealth, Research Consultancy and Capacity building, www.ignobilis.in







Dr. Ankita M Saikia



Dr. Akila Ganesh







Dr. Felsy Premila



Dr Kavitha Swaminathan



Dr. H Selvakumar





Dr. Priya Jayakumar







Mrs. Kavitha



CURRENT PROJECTS

1. Innovative mHealth Intervention Providing Sustained Anticipatory Guidance (Zero Cavity); Design, Validation, User Perception and Effectiveness

Funded by: National Institutes of Health

Grant Amount: INR 7, 80, 00,000

Project Site





2. Micro Computerized Tomography (Micro-CT) assessment of enamel thickness and density in primary teeth with and without early childhood caries

Funded by: Ajman University
Grant Amount: INR 4, 15,044

Project Site



International Collaborators

Name of the Collaborator	Institute	Country	
Dr. Vineet Dhar	University of Maryland School of Dentistry	United States of America	
Dr. Robert Anthonappa	University of Western Australia	Australia	
Dr. Tarun Walia	Ajman University	United Arab Emirates	
Dr. Raghavendra Shetty	Ajman University	United Arab Emirates	
Dr. Alex	Ajman University	United Arab Emirates	
Dr. Omolola O. Orenuga	University of Lagos	Nigeria	
Dr. Peter Mossey	University of Dundee	United Kingdom	
Dr. Marina Campodonico	Fundacion Gantz	Chile	
Dr. Rachael England	Federation Dentaire International	Switzerland	
Dr. Sean Taylor	Federation Dentaire International	Switzerland	
Dr. Pamela Sheeran	Smile Train	United States of America	
Dr. Monica Dominguez	Smile Train	United States of America	
Dr. Justin Jae Cheoun Lee	Children Dental Centre	South Korea	
Dr. Ji Soo Song,	Children Dental Centre	South Korea	
Dr. Kim Shin	Children Dental Centre	South Korea	
Dr. Duangporn Duangthip	University of Hong Kong	China	
Dr. Nicola Innes	Cardiff University	United Kingdom	
Dr. Bathsheba Turton	University of Puthisastra	Cambodia	
Dr. Patimorn Pungchanuchaikul	Khon Kaen University	Thailand	
Dr. Jorge L Castillo	Peruvian University Cayetano Heredia	Peru	
Dr. Anas Al-Salami	Mohammed Bin Rashid University of	United Arab Emirates	

	Medicine and Health Science	
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National Collaborators

Name of the Collaborator	Institute	State	
Dr. Lalitha Jairam	MS Ramaiah Institute of Dental Sciences	Karnataka	
Dr. Umesh Wadgave	Dental Home	Karnataka	
Dr. Usha Rao	Tamilnadu Government Dental College	Tamil Nadu	
Dr. Aarthi Jagadeesan	Madha Dental College	Tamil Nadu	
Dr. Richard Kirubakaran	Narayana Dental College	Andhra Pradesh	
Dr. Sivakumar Nuvvula	Narayana Dental College	Andhra Pradesh	
Dr. MB Aswath Narayanan	Tamilnadu Government Dental College	Tamil Nadu	
Dr. G Kayalvizhi	Shymala Reddy Dental College	Karnataka	
Dr. Vijay Prakash Mathur	. Vijay Prakash Mathur All India Institute of Medical Sciences		
Dr. Mayur S Bhattad	Dr. Hedgewar Smruti Rugna Seva Mandal's Dental College Hospital	Maharashtra	
M S Sathyanarayana	Happiest Mind Technologies	Karnataka	
Dr. Richa Khanna	Richa Khanna King George Medical University		
Dr. Latha Anandakrishna	MS Ramaiah Institute of Dental Sciences	Karnataka	
Or. Nikhil Marwah Mahatma Gandhi Dental College		Rajasthan	

International collaborations

















香港中文大學 The Chinese University of Hong Kong

















National collaborations



















MAHATMA GANDHI INSTITUTE OF HEALTH INFORMATICS







OCTOBER 4TH • 11.00 AM TO 8.00 PM

Funded by



















Publications

S.No	Title	Journal	Impact Factor	Year
1	Child Temperament and Early Childhood Caries: A Systematic Review and Meta- Analysis	Paediatr Dent	1.6	2024
2	Herbal Dentifrices for Prevention of Dental Caries in Children and Adolescents: A Systematic Review	International Journal of Clinical Pediatric Dentistry	-	2024
3	Genetic variations in exon 10 of ENAM and their association with early childhood caries	Journal of Oral Biosciences	2.4	2024
4	AMELX gene association to early childhood caries in south-Indian children: a case–control study	European Archives of Paediatric Dentistry	2.2	2024
5	Association between polymorphisms of immune response genes and early childhood caries—systematic review, gene-based, gene cluster, and meta-analysis	Journal of Genetic Engineering and Biotechnology	3.5	2023
6	Variations in Primary Molar Contact and Approximal Caries in Children: A Three-Year Prospective Cohort Study	Pediatric Dentistry	1.6	2023
7	OXIS contacts and approximal caries in preschool children: A prospective cohort study	Caries research	4.2	2023
8	Single nucleotide polymorphisms of enamel formation genes and early childhood caries-systematic review, gene-based, gene cluster and meta-analysis	Journal of Indian Society of Pedodontics and Preventive Dentistry	-	2023
9	Early childhood caries and iron deficiency	Caries Research	4.2	2022

	anaemia: a systematic review and meta-analysis			
10	Feeding At Sleep Time (FeAST) Scale: assessing risk for developing early childhood caries in South Indian Toddlers	Pediatric Dentistry	1.6	2022
11	Dental caries experience among children and adolescents with cleft lip and/or palate: An umbrella review	International Journal of Clinical Pediatric Dentistry	-	2022
12	Breastfeeding and its association with early childhood caries—an umbrella review	Journal of Clinical Pediatric Dentistry	1.1	2022
13	Association of sleep-time feeding practices with early childhood caries: A case-control study	Caries Research	4.2	2022
14	Sustainable development goals and ending ECC as a public health crisis	Frontiers in Public Health	5.2	2022
15	How to Intervene in the Caries Process: Early Childhood Caries–A Systematic Review	Caries Research	4.2	2021
16	Oral health policies to tackle the burden of early childhood caries: a review of 14 countries/regions	Frontiers in Oral Health	-	2021
17	Effect of sustained interventions from infancy to toddlerhood in children with cleft lip and palate for preventing early childhood caries	Caries Research	4.2	2021
18	OXIS contacts as a risk factor for approximal caries: A retrospective cohort study	Pediatric dentistry	1.6	2021
19	Prevalence of Cusp of Carabelli and its caries susceptibility—an ambidirectional cohort study	Australian Dental Journal	2.1	2020
20	Prevalence of early childhood caries in India–A systematic review	The Indian Journal of Pediatrics	4.3	2019
21	Surface-specific correlation between extrinsic stains and early childhood caries	Oral Health Prev Dent	1.2	2019

22	Risk factors for early childhood caries: a systematic review and meta-analysis of case control and cohort studies	Pediatric dentistry	1.6	2019
23	Interventions with pregnant women, new mothers and other primary caregivers for preventing early childhood caries	Cochrane Database of Systematic Reviews	8.4	2019
24	Early childhood caries-causes and management.	Indian Journal of Practical Pediatrics	-	2017
25	Prevalence and pattern of early childhood caries in a rural South Indian population evaluated by ICDAS with suggestions for enhancement of ICDAS software tool	International journal of paediatric dentistry	3.1	2017
26	Do oral health educational programmes for expectant mothers prevent early childhood caries? Systematic review	Oral Health Prev Dent	1.2	2017
27	Comparison of the chemical composition of normal enamel from exfoliated primary teeth and teeth affected with early childhood caries: an in vitro study	International Journal of Paediatric Dentistry	3.1	2016
28	In vitro assessment of enamel permeability in primary teeth with and without early childhood caries using laser scanning confocal microscope	The Journal of Clinical Pediatric Dentistry	1.1	2016
29	In vivo scanning electron microscope assessment of enamel permeability in primary teeth with and without early childhood caries	Caries Research	4.2	2015
30	Risk factors for early childhood caries: a case—control study	European Archives of Paediatric Dentistry	2.2	2013

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