



**JSS
ACADEMY
OF HIGHER
EDUCATION
& RESEARCH**
MYSURU

(DEEMED TO BE UNIVERSITY)

Special Interest Group

On



Oral Microbiome, Dysbiosis and Diseases

An Initiative of
Research Division
JSS AHER, Mysuru-15.



Team Lead
Dr Usha Hegde

Professor,
Dept. of Oral Pathology &
Microbiology
JSS Dental College & Hospital
JSS AHER, Mysuru

Started on 2023-24

JSS AHER/REG/RES/SIG/OMD/547/2023-24 /1768

Date: 08.05.2023.

NOTIFICATION

Sub: Constitution of Special Interest Group in "Oral Microbiome Dysbiosis & Disease."
Ref: Your request letter No. DCH/ACG/199/2022-23/1862 Dated 21.01.2023

Special Interest Group (SIG) – "Oral Microbiome Dysbiosis & Disease"

In exercise of powers conferred under Section 50 (xcii) and 12 [xi (a)] of the MoA/Rules of JSS Academy of Higher Education & Research as per UGC Regulations 2016, the Special Interest Group (SIG) in the area of "Oral Microbiome Dysbiosis & Disease" has been constituted for focusing on basic and applied research in the mentioned area with the following members:

| Sl. No. | Name of the proposed members | Remarks |
|---------|---|---------------------|
| 01 | Dr. Usha Hegde Prof & Head, Dept. of Oral Pathology & Microbiology, JSS Dental College & Hospital, Mysuru | Group Leader |
| 02 | Dr. Jamuna Bai Asst Professor, Dept. of Microbiology, School of Life Sciences, Mysuru. | Member |
| 03 | Dr. Rajesh Kumar T Associate Professor, Dept. of Biochemistry, JSS Medical College, Mysuru | Member |
| 04 | Dr. Kartikeya Patil Professor & Head, Dept. of Oral Medicine & Radiology JSS Dental College & Hospital, Mysuru. | Member |
| 05 | Dr. Sreeshyla H.S Senior Lecturer, Dept. of Oral Pathology & Microbiology, JSS Dental College & Hospital, Mysuru. | Member |
| 06 | Dr. Nanditha Kumar Reader, Dept. of Prosthodontics JSS Dental College & Hospital, Mysuru. | Member |
| 07 | Dr. Anitha Subbappa Reader, Dept. of Periodontics, JSS Dental College & Hospital, Mysuru. | Member |
| 08 | Dr. Subba Rao M.V.S.S.S.T Professor, Dept. of Biochemistry JSS Medical College, Mysuru | Member |
| 09 | Dr. Gowthamarajan. K Prof & Head, Dept. of Pharmaceutics, JSS College of Pharmacy, Ooty. | Member |
| 10 | Dr. Mahesh Shetty Associate Professor & Head Surgical Gastroenterology, JSS Medical College & Hospital, Mysuru. | Member |

| | | |
|----|--|-----------------|
| 11 | Dr. Srinath Professor, Dept. of General Medicine, JSS Medical College & Hospital, Mysuru | Member |
| 12 | Dr. Kiran Oncologist, JSS Medical College & Hospital, Mysuru | Member |
| 13 | Dr. Shashidhara. R Prof & Head, Dept. of Oral Pathology & Microbiology, CIDS, Virajpet | External Member |

The SIG "Oral Microbiome Dysbiosis & Disease" shall function for a period of three years from the date of Notification.

The SIG shall submit their report once in six months to the JSS AHER. The budget for the functioning shall be submitted by the Group leader of the SIG and approval shall be obtained from JSS AHER for carrying out their various activities.



REGISTRAR

To,

All the above members,

Copy to,

1. The Vice Chancellor, JSS AHER.
2. Finance Officer, JSS AHER
3. Dean (Research), JSS AHER.
4. Dy. Deans (Research), JSS AHER.
5. The Principal, JSS Medical College, Mysuru
6. The Principal, JSS Dental College & Hospital, Mysuru
7. The Principal, JSS College of Pharmacy, Mysuru.
8. The Principal, JSS College of Pharmacy, Ooty
9. The Head, School of Life Sciences, Mysuru
10. The Head, School of Life Sciences, Ooty
11. Office Copy

Name of the SIG: Oral Microbiome, Dysbiosis & Diseases

Approval Reference:

JSSAHER/REG/RES/SIG/OMD/547/2023-24

Name of the Team Leader: Dr Usha Hegde

| Sl. No. | PI | Role |
|----------------|---|--------------------|
| 1. | Dr. Usha Hegde Prof & Head, Dept. of Oral Pathology & Microbiology JSSDC&H, Mysuru | Team Leader |
| 2. | Dr. Jamuna Bai A Asst Professor Dept. of Microbiology SLS, JSSAHER, Mysuru | Member |
| 3. | Dr. Rajesh Kumar T, Associate Professor Dept. of Biochemistry, JSSMC, JSSAHER, Mysuru | Member |
| 4. | Dr. Kartikeya Patil Prof & Head, Dept of Oral Medicine & Radiology JSSDCH, Mysuru | Member |
| 5 | Dr. Sreeshyla HS Senior lecturer, Dept. of Oral Pathology & Microbiology JSSDC&H, Mysuru | Member |
| 6. | Dr. Nanditha Kumar Reader, Dept. of Prosthodontics JSSDC&H, Mysuru | Member |

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| 7. | Dr. Anitha Subbappa Reader, Dept. of Periodontics JSSDC&H, Mysuru | Member |
| 8. | Dr. Subba Rao Professor, Dept. of Biochemistry JSS Medical College & Hospital, Mysore | Member |
| 9. | Dr. Gowthamarajan K Prof & Head, Dept. of Pharmaceutics, JSS College of Pharmacy, Ooty | Member |
| 10. | Dr. Mahesh Shetty Associate Prof & Head Surgical Gastroenterology JSSMC&H, Mysuru | Member |
| 11. | Dr. Srinath Prof, Dept of Gen Medicine JSS Medical College & Hospital, Mysore | Member |
| 12. | Dr. Kiran Oncologist JSS Medical College & Hospital, Mysuru | Member |
| 13. | Dr. Shashidhara R Prof & Head Dept. of Oral Pathology & Microbiology CIDS, Virajpet | External Member |

Objectives

Primary Objectives:

To build a multidisciplinary research team of clinicians and basic scientists to address critical role of oral microbiome in dental and systemic diseases.

Secondary Objectives:

To assess the oral microbiome dysbiosis and its causal role in various diseases

Activities Conducted

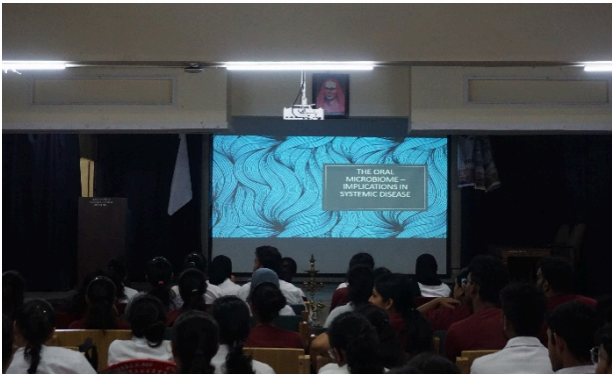
Inauguration of special interest group (SIG)

Inauguration of SIG on “Oral Microbiome, Dysbiosis & Diseases” was held on 22nd August at Gowrishankara auditorium, JSS Dental College & Hospital. The program was presided by Dr.Mahima VG, Deputy COE, JSS AHER as Guest of Honour, Dr.Dhakshaini MR, Principal as Chief Guest, Vice Principal Dr. Jaishankar HP and Dr.Shashidara R, Prof & Head, Department of Oral Pathology & Microbiology, CIDS.



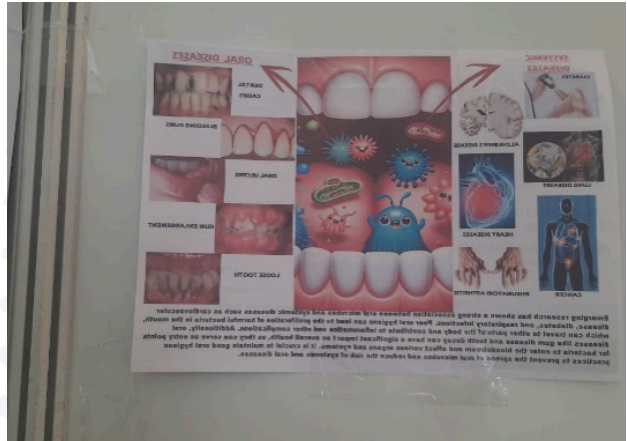
Guest Lecture

On 22/08/23 by Dr. Shashidara R
Topic- The Oral Microbiome – Implications in Systemic Diseases



Health education camp

Health education provided on oral precancer and cancer to the general public at Community Camps and at Suttur Jathra.





Research Projects

Project proposal submitted for external funding

- Identification of age-associated healthy oral microbiome for characterizing oral health and development of oral probiotics. Submitted to ICMR for amount Rs.20000000. (Not approved)
- Isolation And Characterization Of Bioactive Compounds From Plants' Extracts For Prevention And Treatment Of Oral Diseases. Submitted to VGST on May 2023 under K-FIST For amount Rs.2000000. (Not approved)
- Development of oral probiotic product for improving oral health in high risk-subjects by characterizing healthy oral microbiota. Submitted to ICMR on March 2024 for amount Rs.7000000. (Results Awaited)
- Isolation And Characterization of Bioactive Compounds from Plants' Extracts for Prevention and Treatment of Oral Diseases. Submitted to ICMR on March 2024 for amount of Rs. 4587400. (Results Awaited)
- Detection and comparison of Helicobacter Pylori in Oral Squamous Cell Carcinoma & Oral Potentially Malignant Disorders using modified Giemsa stain – Student ICMR STS project submitted in July 2024 for amount of Rs.50000. (Results Awaited)

- Assessing the efficiency of Safranin-O and Gram's staining as a tool in identifying Candida organisms in clinically suspected oral candidiasis – Student ICMR STS project submitted in July 2024 for amount of Rs.50000. (Results Awaited)

Collaborations: Nil

Projects and Patents

Ongoing Project

A comparative evaluation of hematological parameters and cell block technique in oral precancer and cancer”

Investigators - PI – Dr Sreeshyla HS

CO-PI – Dr Usha Hegde

Objectives of the study –

- To study utility of KOH in detection of candidiasis in oral cancer.

Progress –

Data collection is in process

- **Patents/Prototypes: Nil**

Achievements

Publications:

Acharya S, Hegde U, Acharya AB, Nitin P. Dysbiosis linking periodontal disease and oral squamous cell carcinoma-A brief narrative review. Heliyon. 2024 May 31;10(11):e32259. doi: 10.1016/j.heliyon.2024.e32259. PMID: 38947439; PMCID: PMC11214465.

Awards and Recognitions: Nil

Student/Faculty Involvement:

- Dr Usha Hegde and Dr Sreeshyla participated in International Oral Diseases Case Presentation Conference 2024 Conducted Virtually on 03- 05, May 2024 and Co-authored paper on “Necrotizing Periodontal Disease Masquerading As A Potential Proliferative Verrucous Leukoplakia: Lessons To Eliminate Misdiagnosis”
- Dr Sreeshyla participated in International conference on Ayurveda by JSSAHER and Kazakhstan university on 28th November and presented scientific paper on “ antibacterial effect of Trigonella foenum grecum on oral microbiota” and won 3rd best presentation award.

Future Plans

- Upcoming Events:
one webinar/seminar to be organised by December 2024
- Long-Term Goals:
To conduct interdisciplinary research with societal outcomes

Conclusion

Summary:

- Through the SIG we wish to
- Facilitate and enhance collaborations between dentist, clinicians and basic scientist within and outside JSS AHER
- Enhance the number and quality of publications
- Increase opportunities for grants from Industry and government agencies
- Promote recognition & better ranking in accreditation bodies
- Enhanced knowledge & preventive health care practises due to oral dysbiosis
- Enhanced proficiency of dentists & clinicians in oral & general health management of individuals due to oral dysbiosis
- Improved workplace practices, productivity and improved patient outcomes.