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SERIES 95  
&  
CMBRI Seminar Series FY2024-05

Ms. Shruptha Padival  
2024-07-31

### Series - 95

Date and Time - 31 July 2024 (3:30 PM JST)

Venue - Zoom

Speaker - Ms. Shruptha Padival

Affiliation - PhD Scholar, SDM University, Dharwad

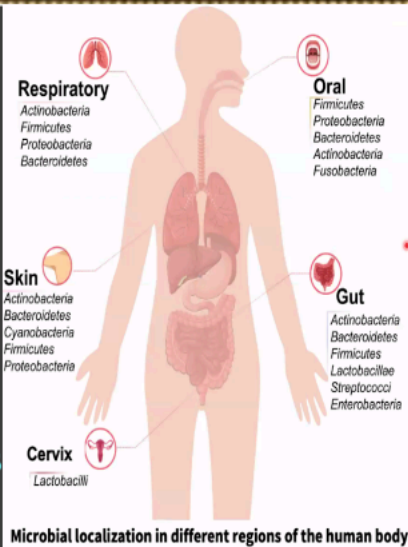
Email: [shruthakervashe@gmail.com](mailto:shruthakervashe@gmail.com)



### Title - Clinical relevance and insights of microbiome on Human health

#### Abstract -

The vast diversity of constitutive microbiota in the human body significantly impacts various infectious diseases via mechanisms such as increased metabolic capacity, induction of DNA damage, and altered immune cell reactivity. The microbiome is thus considered as a genome that has a vast symbiotic relationship with the host. This relationship may be beneficial, pathogenic, or neutral; hence, microbiome interactions play a key role in human health. About 15% to 20% of all cancers may be directly attributed to microbial infections. Microbiome studies using metagenomic sequencing have linked an even higher incidence of cancers to a perturbation in the normal balance of commensal microbiota. The crucial role of infectious pathogens and bacterial dysbiosis, in conjugation with human papillomavirus (HPV), in invasive cervical cancer pathogenesis is increasingly recognized. A global report alarmingly estimates over 2.6 million annual cases of antibiotic-resistant bacterial infections, resulting in 44,000 deaths. Guided by this imperative, enabled us to elucidate the microbial diversity, abundance, and antibiotic-resistance genes within the diabetic and cervical microenvironment. This knowledge holds tremendous potential in refining the methods for predicting, preventing, and treating microbial-associated dysbiosis, ultimately paving the way for improved therapeutic outcomes.

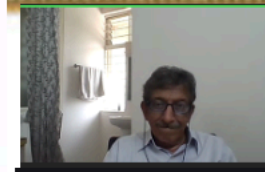


Microbial localization in different regions of the human body

### MICROBIOTA & HUMAN HEALTH



Human microbiota dysbiosis contributes to various diseases



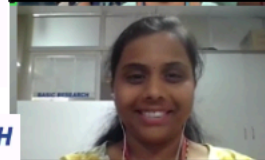
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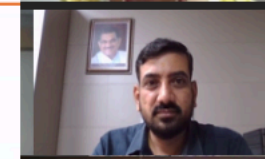
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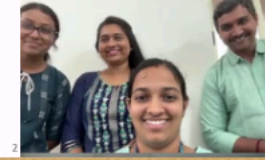
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