

Mahajana Education Society (R)

SBRR Mahajana First Grade College (Autonomous)

Affiliated to University of Mysore

Re-Accredited by NAAC with 'A' Grade, College with Potential for Excellence

Post Graduate Wing

PoojaBhagavat Memorial Mahajana Education Centre

K R S Road, Metagalli, Mysuru – 570 016

Department Activity Report 6

- Title of the Event: **“Interactive session on Yeast as Probiotic- Mechanism of action” on 13-12-2024**
- Name of the venue: **Life science Auditorium**
- Details of the department organizing the event in collaboration with institution: **Department of Studies in Microbiology, PoojaBhagavat Memorial Mahajana Education Centre K R S Road, Metagalli, Mysuru.**
- Purpose and scope of the event: **Interactive session was organized by Department of studies in Microbiology.** The theme of the seminar imparts insightful and comprehensive information on the use of yeast as a probiotic, emphasizing its unique properties, benefits, and mechanisms of action. The session was highly informative for researchers, students, and professionals interested in probiotics, microbiology, and human health.
- Details of the talk/event/activity:
- The Resource person on the respective scientific session was Dr.Anu Appiaha, Former SR.Principal Scientist, CSIR-CFTRI, Mysuru. The Programme was started at 11:00 am with the opening remarks and introduction of the scientific session narrated by I year M.Sc student Ms. Kavya shree.
- Welcome address of the invited speaker, was given by Dr.Akahatha, Assistant Professor, DoS Microbiology.

- Dr. Appiaha began by explaining the concept of probiotics as "live microorganisms that, when administered in adequate amounts, confer a health benefit on the host." While probiotics are often associated with bacterial strains such as *Lactobacillus* and *Bifidobacterium*, yeast is emerging as an important probiotic candidate
- The session focused on *Saccharomyces cerevisiae*, a non-pathogenic yeast strain commonly used as a probiotic. Dr. Appiaha highlighted the following characteristics that make yeast a promising probiotic:
 - **Resilience to Gastric Conditions:** Unlike some bacterial probiotics, yeast can survive extreme pH and bile salts in the gastrointestinal tract.
- **Non-invasive and Non-pathogenic Nature:** *S. cerevisiae*, is naturally safe and does not colonize the host gut permanently.
- **Thermal Stability:** Yeast can withstand higher temperatures, making it suitable for various formulations.
- Dr. Appiaha provided a detailed explanation of the mechanisms through which yeast probiotics, especially *S. cerevisiae*, confer health benefits:
 - **Pathogen Inhibition:** Yeast acts as a decoy, binding to bacterial toxins and pathogens like *E. coli* and *Clostridium difficile* to prevent their adhesion to the intestinal lining.
 - **Anti-inflammatory Effects:** *S. boulardii* modulates inflammatory responses by reducing the production of pro-inflammatory cytokines and enhancing anti-inflammatory cytokines.
 - **Gut Barrier Protection:** Yeast enhances the integrity of the gut epithelial lining, thereby preventing leaky gut syndrome.
 - **Enzyme Secretion:** Yeast secretes digestive enzymes that aid in nutrient absorption and breakdown of indigestible compounds.
 - **Microbiota Modulation:** It positively influences the gut microbiota composition, promoting the growth of beneficial bacteria while suppressing harmful strains.
- Dr. Appiaha emphasized the comparative advantages of yeast probiotics, including their stability, ability to function under harsh conditions, and resilience to antibiotics, making them a preferred choice in certain clinical scenarios.

- Dr. Anu Appiaha's expert talk shed light on the underexplored yet highly promising role of yeast as a probiotic. The session provided a deeper understanding of the mechanisms through which yeast probiotics act, along with their potential applications in promoting gut health and treating gastrointestinal disorders. Attendees gained valuable insights into the future prospects of yeast-based probiotics in clinical and commercial applications.
 - Take home message
 - *Yeast, particularly Saccharomyces cerevisiae, has proven probiotic benefits.*
 - *Its mechanisms include pathogen inhibition, anti-inflammatory action, and gut barrier protection.*
 - *Yeast probiotics are stable, safe, and effective for treating various gastrointestinal conditions.*
 - The session was concluded with an engaging Q&A, where Dr. Appiaha addressed queries related to yeast probiotics, their formulations, and their applications in health and disease management
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- No. of Participants/beneficiaries: **200**

Signature of the Event Coordinator

Signature of the Principal

Gallery section



Intoduction of speaker Biography by Dr Akshatha S J



Presentation by Dr.Anu Appiaha



Addressing the session gathering by Dr. Harish R