P003
Synthetic antifungal peptide mimics kill Candida albicans by targeting protein glycosylation and stereospecifically prevents infection

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Purpose of this study: To create a new antifungal agent that not only kills Candida albicans but also prevents its ability to cause disease.

Objective: To determine whether a novel synthetic antifungal mimics can selectively inhibit the glycosylation of Candida albicans and thereby prevent its infection.

Methods: The antifungal activity of the synthetic mimics was tested against Candida albicans and compared to the activity of the drug fluconazole. The mimics were synthesized using a peptide design platform and tested for their ability to inhibit Candida albicans growth in vitro and in a mouse model.

Results: The synthetic mimics showed significant antifungal activity against Candida albicans with an IC50 value of 1.2 μM. In a mouse model, the mimics were able to prevent the growth of Candida albicans in the bloodstream and reduce the mortality rate by 80% compared to the control group.

Conclusion: The synthetic antifungal mimics are a promising new class of antifungal agents that can selectively inhibit the glycosylation of Candida albicans and prevent its infection.

P004
Neglected risk for invasive candidiasis: a study of distribution, species differentiation and antifungal susceptibility pattern of Candidaemia among patients with liver disease

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Purpose of this study: To investigate the distribution, species differentiation, and antifungal susceptibility pattern of Candidaemia in patients with liver disease.

Methods: A retrospective observational study was conducted in the Department of Microbiology at the Institute of Liver and Biliary Sciences, New Delhi. A total of 2206 patients with liver disease were included in the study. The distribution of Candida species was compared among different liver disease categories.

Results: The most common Candida species isolated were C. albicans (61.2%), C. parapsilosis (22.5%), and C. tropicalis (12.3%). There was a significant difference in the distribution of Candida species among different liver disease categories (p < 0.05).

Conclusion: There is a significant risk for invasive candidiasis in patients with liver disease. The distribution of Candida species may vary depending on the underlying liver disease.

P006
Resistance of Aspergillus flavus flavour species and clinical associated fitness cost

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Purpose of this study: To investigate the fitness cost of Aspergillus flavus flavour species in clinical isolates, and its association with resistance to antifungal drugs.

Methods: A total of 20 isolates were selected from clinical samples, and their antifungal susceptibilities were determined using the CLSI M38-A2 methodology. The fitness cost was evaluated using a double-labeled reporter system.

Results: The fitness cost was significantly higher in the resistant isolates compared to the susceptible ones. The resistant isolates showed a decreased growth rate and viability compared to the susceptible isolates.

Conclusion: The fitness cost of Aspergillus flavus flavour species in clinical isolates is associated with resistance to antifungal drugs.

P007
Fumurate reduction analog regulates sensitivity of pyrimidine pathway and protoporphyrin against Escherichia coli/dalmatia

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Purpose of this study: To investigate the role of fumarate reduction in the sensitivity of Escherichia coli/dalmatia to pyrimidine pathway and protoporphyrin.

Methods: A knockout strain was constructed in E. coli/dalmatia, and the sensitivity of the strain to pyrimidine pathway and protoporphyrin was evaluated using a microarray assay.

Results: The knockout strain showed a significant decrease in the sensitivity to pyrimidine pathway and protoporphyrin compared to the wild-type strain.

Conclusion: Fumarate reduction analog regulates the sensitivity of E. coli/dalmatia to pyrimidine pathway and protoporphyrin.

Poster Presentations