**M3 Literature Review**

**Period: 08/05/2024 – 08/06/2024**

[Scientific Highlights: 1](#_Toc143520007)

[Clostridioides difficile/ Clostridium difficile 3](#_Toc143520008)

[Fidaxomicin & Clostridium difficile 4](#_Toc143520009)

[Clostridioides difficile vaccine 4](#_Toc143520010)

[Vancomycin & CDI 4](#_Toc143520011)

[CDI 4](#_Toc143520012)

[FMT/ Fecal Microbiota Transplant 5](#_Toc143520013)

[Competitors 5](#_Toc143520014)

[CDAD 6](#_Toc143520015)

[CMC 6](#_Toc143520016)

[Guidelines 6](#_Toc143520017)

[Non-toxigenic C. difficile 6](#_Toc143520018)

[MGB 6](#_Toc143520019)

[Other news of possible interest 7](#_Toc143520020)

Scientific Highlights:

1. Secondary prophylaxis for Clostridioides difficile infection for patients on non- Clostridioides difficile antibiotics: A retrospective cohort study.
2. Fecal microbiota transplantation: current challenges and future landscapes.
3. Validation of clinical risk tools for recurrent Clostridioides difficile infection.
4. Clostridioides Difficile: A Concise Review of Best Practices and Updates.
5. Fighting against Clostridioides difficile infection: Current medications.
6. Breaking the Cycle of Recurrent Clostridioides difficile Infections: A Narrative Review Exploring Current and Novel Therapeutic Strategies.
7. Rational Design of Live Biotherapeutic Products for the Prevention of Clostridioides difficile Infection.
8. Offline Two-Dimensional Liquid Chromatography-Mass Spectrometry for Deep Annotation of the Fecal Metabolome Following Fecal Microbiota Transplantation.
9. Clostridioides difficile toxin B subverts germinal center and antibody recall responses by stimulating a drug-treatable CXCR4-dependent mechanism.
10. Protection against Clostridioides difficile disease by a naturally avirulent C. difficile strain.
11. [The new guideline for gastrointestinal infections].
12. "Primum, non nocere": The Epidemiology of Toxigenic Clostridioides difficile Strains in the Antibiotic Era-Insights from a Prospective Study at a Regional Infectious Diseases Hospital in Eastern Europe.
13. A Comparison of Currently Available and Investigational Fecal Microbiota Transplant Products for Recurrent Clostridioides difficile Infection.
14. Alternative treatment of recurrent Clostridioides difficile infection in adults by fecal transplantation: an overview of phase I-IV studies from Clinicaltrials.gov.
15. Exploring the Toxin-Mediated Mechanisms in Clostridioides difficile Infection.
16. Estimating Clostridioides difficile infection-associated readmission rates: A systematic review and meta-analysis.
17. Microbiota restoration therapies for recurrent Clostridioides difficile infection reach an important new milestone.
18. Efficacy of Fecal Microbiota (REBYOTA) in Recurrent Clostridium difficile Infections: A Systematic Review and Meta-Analysis.
19. Expression of Concern: Clostridium transplantifaecale sp. nov., a new bacterium isolated from patient with recurrent Clostridium difficile infection.
20. Comparison of fidaxomicin, metronidazole and vancomycin for initial episode and recurrence of Clostridioides difficile infection - An observational cohort study.
21. Exploring the therapeutic potential of endolysin CD27L\_EAD against Clostridioides difficile infection.
22. Estimating excess mortality and economic burden of Clostridioides difficile infections and recurrences during 2015-2019: the RECUR Germany study.
23. Fight or flee, a vital choice for Clostridioides difficile.
24. Rise to the Challenge: Master the Management of Clostridioides difficile Infection.
25. Probiotic use in pediatric kidney transplant recipients: What are current practices, and are they evidence-based? A pediatric nephrology research consortium study.
26. Clostridioides difficile-mucus interactions encompass shifts in gene expression, metabolism, and biofilm formation.
27. Treating Helicobacter pylori and Recurrent Clostridioides difficile Coinfection: A Delicate Balance in Management and a Need for Guidelines.
28. The role of extracellular structures in Clostridioides difficile biofilm formation.
29. Current and future microbiome-based therapies in inflammatory bowel disease.

Clostridioides difficile/ Clostridium difficile

1. Defining the phylogenetics and resistome of the major Clostridioides difficile ribotypes circulating in Australia.
2. Influence of Antibiotic Exposure Intensity on the Risk of Clostridioides difficile Infection.
3. Discovery and Structure-Activity Relationship of Cadazolid: A First-In-Class Quinoxolidinone Antibiotic for the Treatment of Clostridioides difficile Infection.
4. Metagenome-assembled genomes (MAGs) suggest an acetate-driven protective role in gut microbiota disrupted by Clostridioides difficile.
5. Usefulness of Capillary Gel Electrophoresis-Based PCR for Detection of Clostridioides difficile Strains with Hypervirulent Ribotypes.
6. Levofloxacin prophylaxis for pediatric leukemia patients: monitoring of outcomes for sustained benefit and consequences.
7. Association between vedolizumab and risk of clostridium difficile infection in patients with ulcerative colitis: A systematic review and meta-analysis.

Fidaxomicin & Clostridium difficile

1. Developing the Common Marmoset as a Translational Geroscience Model to Study the Microbiome and Healthy Aging.

Clostridioides difficile vaccine

1. Association of toxin-producing Clostridioides difficile with piglet diarrhea and potential transmission to humans.
2. Development of multi-epitope mRNA vaccine against Clostridioides difficile using reverse vaccinology and immunoinformatics approaches.

Vancomycin & CDI

1. Comparison of fidaxomicin, thuricin CD, vancomycin and nisin highlights the narrow spectrum nature of thuricin CD.
2. Perioperative cefazolin prescribing rates following suppression of alerts for non-IgE-mediated penicillin allergies.
3. Lowering the Acquisition of Multi-drug Resistant Organism (MDROs) with Pulsed-xenon (LAMP) Study: a cluster randomized controlled, double-blinded, interventional crossover trial.
4. Long-Term Outcomes Associated With β-Lactam Allergies.
5. Progress on mechanisms of antibiotic resistance in Clostridioides difficile.
6. Toxin genotypes, antibiotic resistance and their correlations in Clostridioides difficile isolated from hospitals in Xi'an, China.
7. Antimicrobial Resistance and Associated Risk Factors for Clostridium difficile in Patients Attending Tertiary Care Settings.

CDI

FMT/ Fecal Microbiota Transplant

1. Developing the Common Marmoset as a Translational Geroscience Model to Study the Microbiome and Healthy Aging.

Competitors

1. Meeting 24-h movement behavior guidelines is associated with academic engagement, social-emotional functioning in obese/overweight youth.
2. The State of Patient Reported Outcome Measures in Rheumatology.
3. Anchorage of H3K9-methylated heterochromatin to the nuclear periphery helps mediate P-cell nuclear migration though constricted spaces in Caenorhabditis elegans.
4. Effect of supplementing lysins and methionine to low-protein diets on growth performance, hepatic antioxidant capacity, immune status, and glycolytic activity of tibetan sheep.
5. In vitro effects of the new oral β-lactamase inhibitor xeruborbactam in combination with oral β-lactams against clinical Mycobacterium abscessus isolates.

CDAD

1. Effects of prednisolone tapering on effectiveness of infliximab in patients with ulcerative colitis: data from a retrospective cohort.
2. A Case of Life-Threatening Postpartum Necrotizing Pancreatitis Requiring Gastrocystostomy With Serial Pancreatic Necrosectomies.
3. Pharmacologic Treatment of Malignant Catatonia Without Electroconvulsive Therapy: A Case Report.
4. Vascular Access Team Central Line Dressing Changes to Reduce Infection Risk: A Focused Two-Person Approach in High-Risk Patients.
5. Clostridioides difficile infection in patients with and without COVID-19 during the pandemic: a retrospective cohort study from a tertiary referral hospital.
6. Positive pathogens in stool could predict the clinical outcomes of sepsis-associated acute kidney injury in critical ill patient.
7. Multiplexed Gastrointestinal PCR panels for the Evaluation of Diarrhea in HCT Recipients.
8. Retrospective Analysis of Clostridioides difficile Infection Rates and Outcomes in Hospitalized Patients during the COVID-19 Pandemic: A Unicenter Study in Reus, Spain.
9. Impact of rifaximin use in infections and mortality in patients with decompensated cirrhosis and hepatic encephalopathy.
10. Does the Surgical Approach Affect the Incidence of Post-Hepatectomy Liver Failure in Cirrhotic Patients? An Analysis of the NSQIP Database.
11. Diagnosis of urinary tract infections in the hospitalized older adult population in Alberta.

CMC

Guidelines

1. Exploring toilet plume bioaerosol exposure dynamics in public toilets using a Design of Experiments approach.
2. Preclinical murine models for the testing of antimicrobials against Mycobacterium abscessus pulmonary infections: Current practices and recommendations.
3. Assessing the quality of antimicrobial prescribing in solid organ transplant recipients: a new frontier in antimicrobial stewardship.
4. Impact of the Reverse 2-Step Algorithm for Clostridioides difficile Testing in the Microbiology Laboratory on Hospitalized Patients.
5. Japanese Society for infection prevention and control guide to Clostridioides difficile infection prevention and control.
6. Benefits of Accepting Infectious Diseases Pharmacist Recommendations: A 5-Year Outcome Study in a Multihospital System.
7. Application of personalized templates in minimally invasive management of coronal dens invaginatus: a report of two cases.
8. The clinical effectiveness of Fidaxomicin compared to Vancomycin in the treatment of Clostridioides difficile infection, a single center real-world experience.
9. Testing and Diagnosis of Clostridioides difficile Infection in Special Scenarios: A Systematic Review.
10. The nutritional support to prevent sarcopenia in the elderly.
11. Clostridium difficile infection after stoma reversal surgery: a systematic review and meta-analysis of the literature.
12. Implementation of multifaceted diagnostic stewardship for Clostridioides difficile infection during the COVID-19 pandemic at a small Japanese hospital.

Non-toxigenic C. difficile

1. Novel target and PCR assay for identification of hypervirulent ST1 (BI/NAP1/027) Clostridioides difficile and detection of toxigenic C. Difficile.
2. Evaluation of the prevalence of Aeromonas spp., Campylobacter spp., and Clostridioides difficile in immunocompromised children with diarrhea.
3. The changing epidemiology of Clostridioides difficile infection and the NAP1/027 strain in two Québec hospitals: a 17-year time-series study.
4. Molecular epidemiology and antimicrobial resistance in Clostridioides difficile strains isolated from children and adolescents in a tertiary referral pediatric hospital in Fortaleza, Brazil.

MGB

Other news of possible interest