**M3 Literature Review**

**Period: 08/09/2024 – 08/10/2024**

[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. Short Versus Long Antibiotic Duration in Streptococcus pneumoniae Bacteremia.
2. The 3 Ds: Depression, Dysbiosis, and Clostridiodes difficile.
3. Challenges in Liver Transplantation for Hepatocellular Carcinoma: A Review of Current Controversies.
4. Significant drop in serum C-reactive protein in patients with solid neoplasia and bacterial infection is associated with a better prognosis and identifies candidates for short-course antibiotic therapy.
5. A randomized controlled trial of efficacy and safety of Fecal Microbiota Transplant for preventing recurrent Clostridioides difficile infection.
6. Déjà vu: Unanswered Questions about Fecal Microbiota Transplantation for Recurrent Clostridioides difficile Infection.
7. [Advances in the treatment of Clostridium difficile infection in children].
8. Medial Patellofemoral Ligament Reconstruction Improves Patella Alta.
9. Clostridioides difficile infection: an update.
10. Therapeutics involved in managing initial and recurrent Clostridium difficile infection: An updated literature review.
11. End-to-end donor screening and manufacturing controls: complementary quality-based strategies to minimize patient risk for donor-derived microbiome therapeutics.
12. Real-world effectiveness of fidaxomicin in patients at high risk of Clostridioides difficile recurrence.
13. Dysbiosis and fecal microbiota transplant: Contemplating progress in health, neurodegeneration and longevity.
14. Rational Design of Live Biotherapeutic Products for the Prevention of Clostridioides difficile Infection.
15. Identification and preclinical evaluation of MMV676558 as a promising therapeutic candidate against Clostridioides difficile.
16. Fecal microbiota spores, live-brpk (VOWST™/VOS) for prevention of recurrent Clostridioides difficile infection.
17. Gut Microbial and Metabolic Features Associated With Clostridioides difficile Infection Recurrence in Children.
18. Clostridium difficile infection following colon subtotal resection in a patient with gallstones: A case report and review of literature.
19. A Retrospective Assessment of Guideline Adherence and Treatment Outcomes From Clostridioides difficile Infection Following the IDSA 2021 Clinical Guideline Update: Clostridioides difficile Infection.
20. A multivalent mRNA-LNP vaccine protects against Clostridioides difficile infection.
21. Fidaxomicin versus oral vancomycin for Clostridioides difficile infection among patients at high risk for recurrence based on real-world experience.
22. Early treatment for Clostridioides difficile infection: retrospective cohort study.
23. Safety and Tolerability of CP101, a full spectrum, oral microbiome therapeutic for the prevention of recurrent C. difficile infection: A Phase 2 Randomized Controlled Trial.
24. Recurrent Clostridioides difficile infections in solid organ transplant recipients: the international CALIPSO study.

Clostridioides difficile/ Clostridium difficile

1. Evaluating the antibacterial, antibiofilm, and anti-toxigenic effects of postbiotics from lactic acid bacteria on Clostridium difficile.
2. Purified CDT toxins and a clean deletion within the CDT locus provide novel insights into the contribution of binary toxin in cellular inflammation and Clostridioides difficile infection.
3. Data for action: the crucial role of hospitals in controlling Clostridioides difficile infection in England.
4. Clostridioides difficile Infections in Children: What Is the Optimal Laboratory Diagnostic Method?
5. Crystal structure of a Clostridioides difficile multiple antibiotic resistance regulator (MarR) CD0473 suggests a potential redox-regulated function.
6. Progranulin protects against Clostridioides difficile infection by enhancing IL-22 production.
7. Postoperative outcomes after receipt of ertapenem antimicrobial prophylaxis for colon surgery: a multicenter retrospective cohort study.
8. Clostridioides difficile toxin B suppresses human neutrophil migration.
9. The sympathetic nervous system drives hyperinflammatory responses to Clostridioides difficile infection.

Fidaxomicin & Clostridium difficile

1. Insights into Gut Dysbiosis: Inflammatory Diseases, Obesity, and Restoration Approaches.
2. Diagnostic and therapeutic management of Clostridioides difficile infection.
3. 'Does this fecal microbiota transplant work?' Quality assurance of capsule based fecal microbiota transplant production.

Clostridioides difficile vaccine

Vancomycin & CDI

1. Dysbiosis of the gut microbiota is associated with in-hospital mortality in patients with antibiotic-associated diarrhoea: a metagenomic analysis.
2. Adaptation mechanisms of Clostridioides difficile to auranofin and its impact on human gut microbiota.
3. Comprehensive analyses of a large human gut Bacteroidales culture collection reveal species- and strain-level diversity and evolution.
4. [Molecular characteristics and antibiotic resistance of Clostridioides difficile isolated from children in China].
5. Which trials do we need? Fidaxomicin plus either intravenous metronidazole or tigecycline versus vancomycin plus either intravenous metronidazole or tigecycline for fulminant Clostridioides difficile infection.
6. Identification of Antimicrobial-Resistant Zoonotic Bacteria in Swine Production: Implications from the One Health Perspective.
7. Evaluation of an automated far ultraviolet-C light technology for decontamination of surfaces and aerosolized viruses in bathrooms.

CDI

1. Epidemiologic characteristics and risk factors of Clostridioides difficile infection in patients with active tuberculosis in the Republic of Korea: A nationwide population-based study.

FMT/ Fecal Microbiota Transplant

1. Insights into Gut Dysbiosis: Inflammatory Diseases, Obesity, and Restoration Approaches.
2. Diagnostic and therapeutic management of Clostridioides difficile infection.
3. 'Does this fecal microbiota transplant work?' Quality assurance of capsule based fecal microbiota transplant production.

Competitors

1. The Role of the Gut, Urine, and Vaginal Microbiomes in the Pathogenesis of Urinary Tract Infection in Women and Consideration of Microbiome Therapeutics.
2. Brain mitochondrial damage attenuation by quercetin and N-acetyl cysteine: peripheral and central antiemetic effects.
3. The DAV132 colon-targeted adsorbent does not interfere with plasma concentrations of antibiotics but prevents antibiotic-related dysbiosis: a randomized phase I trial in healthy volunteers.
4. 6-PPD quinone at environmentally relevant concentrations induced damage on longevity in C. elegans: Mechanistic insight from inhibition in mitochondrial UPR response.
5. Novel agents in development for the treatment of resistant Gram-negative infections.
6. The Precision Resuscitation With Crystalloids in Sepsis (PRECISE) Trial: A Trial Protocol.
7. Clinical Effectiveness of Genetic Testing Guidelines in Patients with Thoracic Aortic Aneurysms.
8. Neutrophil-to-Lymphocyte Ratio Predicts Sepsis in Adult Patients Meeting Two or More Systemic Inflammatory Response Syndrome Criteria.
9. A real-world study of persistence and adherence to prescription medications in patients with chronic idiopathic constipation in the United States.
10. Driver gene alterations in NSCLC patients in southern China and their correlation with clinicopathologic characteristics.

CDAD

1. Efficacy of prophylactic antibiotics in the adjuvant treatment of alcohol-related liver disease (ALD): a Systematic review and meta-analysis: Prophylactic antibiotics in ALD.
2. Analysis of factors affecting the length of hospitalization of patients with Clostridioides difficile infection: a cross-sectional study.
3. Positive Intervention of Distinct Peptides in Clostridioides difficile Infection in a Mouse Model.
4. Infections following chimeric antigen receptor T cell therapy: 2018-2022.
5. Management of C2 fractures following multiple classifications, a narrative review.
6. Comparison of toxin gene expression levels and molecular typing of Clostridioides difficile strains isolated from patients with diarrhea.
7. Impact of Clostridium difficile Infection Versus Colonization on Postoperative Outcomes After Oncological Colorectal Surgery: An Observational Single-Center Study With Propensity Score Analysis.
8. Incubation period of Clostridioides difficile infection in hospitalized patients and long-term care facility residents: a prospective cohort study.
9. De novo design of mini-protein binders broadly neutralizing Clostridioides difficile toxin B variants.
10. Development of an Electronic Clinical Surveillance Measure for Unnecessary Rapid Antibiotic Administration in Suspected Sepsis.
11. Real world evidence on the effectiveness and safety of tofacitinib in ulcerative colitis in Lebanon.

CMC

1. Defect-rich N, S Co-doped porous carbon with hierarchical channel network for ultrafast capacitive deionization.

Guidelines

1. Toxin inhibition: Examining tetracyclines, clindamycin, and linezolid.
2. Health risk assessment and contamination of lead and cadmium levels in sediments of the northwestern Arabian Gulf coast.
3. Intraoperative Transient Central Diabetes Insipidus Status Post-Cerebellopontine Meningioma Resection: A Case Report.
4. Oncologic outcomes of neoadjuvant chemotherapy and lymph node dissection with partial cystectomy for muscle-invasive bladder cancer.
5. New risk classification adapting SCAI shock stages to patients with pulmonary embolism (RISA-PE).
6. Outpatient use of antibiotics in uncomplicated diverticulitis decreases hospital admissions.
7. Hand and environmental hygiene: respective roles for MRSA, multi-resistant gram negatives, Clostridioides difficile, and Candida spp.
8. Spatiotemporal evolution and driving factors of the coupling coordination of the population‒land‒water‒industry system in the lower Yellow River.
9. Hospitalized Patients on Proton Pump Inhibitors for Stress Ulcer Prophylaxis Have a Higher Risk of Clostridioides difficile Infection Compared to Those on Histamine-2 Receptor Antagonists.

Non-toxigenic C. difficile

1. Comparative genomics of zoonotic pathogen Clostridioides difficile of animal origin to understand its diversity.

MGB

Other news of possible interest