

COMBACTE-CDI

Combatting Bacterial Resistance in Europe - *Clostridium difficile* Infections

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Clostridium difficile infection is one of the most prevalent infections associated with health care, affecting both hospitalized patients and individuals in the community. Notably, there is an increasing realization that cases also occur in people not recently exposed to antibiotics or other health care interventions. CDI carries a considerable level of threat, with far-reaching impacts in both endemic and epidemic settings. It is a major cause of diarrhea and more serious intestinal conditions, such as colitis. Infections pose an extensive burden in terms of morbidity, mortality and health care resource utilization, so they require effective prevention and management strategies.

Despite much progress in our understanding of *Clostridium difficile*, therapeutic and preventive options remain limited. There is a lack of robust, comprehensive data on infections across Europe. In addition, studies have typically examined only part of a health care economy and have usually focused on single countries or health care systems. Furthermore, large variations in the frequency of testing and the accuracy of CDI diagnostics mean that the size of the problem is probably underestimated.

PROJECT OUTLINE

COMBACTE-CDI merges outstanding European expertise on clinical, diagnostic and therapeutic issues related to CDI. It brings together experts who previously partnered in large international CDI projects, such as EUCLID, LUCID, ORCHID and ECDIS-NET, and combines all that knowledge with CLIN-Net and LAB-Net, the largest existing clinical and laboratory networks in Europe for carrying out challenging epidemiological and interventional studies. Add to the sum EPI-Net, a network mapping all European surveillance activities related to antimicrobial resistance. The combination of all these parties has invigorating potential. It is an ideal platform to extend our knowledge of this key infection, and ultimately to help with the development of better management modalities.

ACTIVITIES

The three-year project – started in November 2017 – is subdivided into three scientific work packages (WP):

A large epidemiology study will be undertaken across Europe in WP1-Epidemiology to quantify the burden of CDI. This will collect data on incidence, distribution, recurrence, morbidity, mortality and transmission across the whole health care economy.
Status: 119 sites recruited from 12 countries. Sample collection completed, case/control study launched.

This will be followed by a survey in WP2-Current practices. The data collected in a questionnaire will enable the consortium to assess current practices in Europe and their potential impacts, including guidelines, testing, surveillance, treatment and costs, with an aim to develop a best practice model.
Status: survey launched.



The next stage (WP3) is creating a rich, European wide research platform to provide support for future proof-of-concept and clinical studies of new prevention and treatment strategies for CDI.
Status: A task force team established, with representatives from academic and EFPIA partners to map the relevant stakeholders and develop a strategic agenda for CDI.

The three interrelated research WPs are supported by a management work package (WP4).

COLLABORATION

In COMBACTE-CDI, eight academic and research organizations collaborate with six EFPIA members.

Participating EFPIA members:

- Pfizer Ltd.
- GlaxoSmithKline
- bioMérieux
- AstraZeneca/MedImmune
- Sanofi Pasteur
- Da Volterra

Participating academic institutes and research organizations:

- University Medical Center Utrecht (the Netherlands)
- University of Leeds (United Kingdom)
- Leiden University Medical Center (the Netherlands)
- National Laboratory of Health, Environment and Food, Maribor (Slovenia)
- University Hospital of Cologne (Germany)
- Karls Eberhard University Tübingen (Germany)
- University of Antwerp (Belgium)
- Lazzaro Spallanzani National Institute for Infectious Diseases, Rome (Italy)

PRESENTATIONS OF DATA AT ECCMID 2019

Abstract number 2411. Comparison of PCR-ribotypes and toxinotypes causing community versus hospital *Clostridium difficile* infection. Oral session: Controlling *C. difficile* in and out of the hospital. 13th April, 13.30-14.30

Abstract 2394. Detection of *Clostridium difficile* infection across whole healthcare economies in Europe: results from COMBACTE-CDI. Paper poster session: CDI epidemiology and control. 13th April, 15.30-16.30

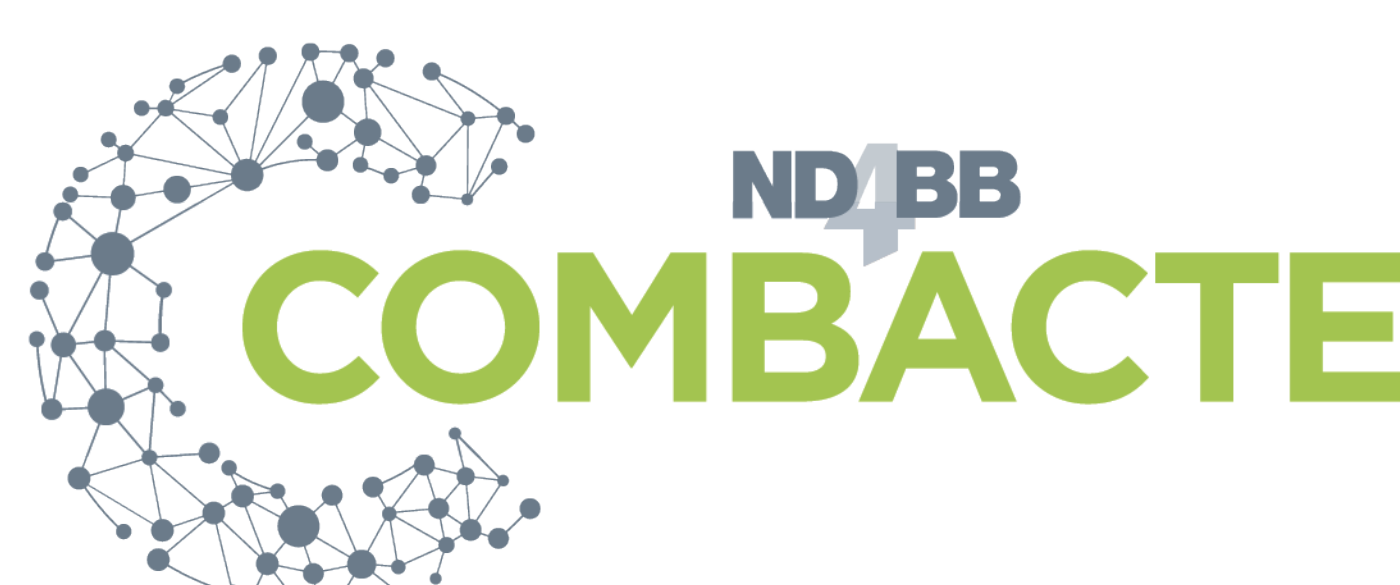
Abstract 2486. Investigation of *Clostridium difficile* positive and negative samples using an ultra-sensitive toxin detection assay and BIOFIRE FILMARRAY Gastrointestinal Panel. Paper poster session: More to learn about CDI; molecular diagnostics and epidemiology/ 13th April, 15.30-16.30

CONTACT INFORMATION

Unique in its scale, ambition, and its potential benefits for patients, public health and pharmaceutical research in Europe, the COMBACTE projects have the potential to become the powerhouse of anti microbial drug development in Europe that could serve as a standard for other groups. **Join us!**

Visit us at booth 1.84 in the exhibition hall!

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