Canadian Journal of Infectious Diseases and Medical Microbiology

Hindawi

Special Issue on

Emerging Resistance Mechanisms in Critical and High Priority Gram-Negative and Gram-Positive Pathogens

CALL FOR PAPERS

The emerging threat of multidrug-resistant pathogens has become a worldwide health issue. In 2017, the World Health Organization published a global priority list of antibiotic-resistant pathogens in order to prioritize the research and development of new drugs for the treatment of infections caused by these organisms (http://www.who.int/medicines/publications/WHO-PPL-Short_Summary_25Feb-ET_NM_WHO.pdf). Among these critical pathogens were the carbapenem-resistant *Acinetobacter baumannii*, carbapenem-resistant *Pseudomonas aeruginosa*, and carbapenem-resistant and 3rd-generation cephalosporin-resistant Enterobacteriaceae. Moreover, other important pathogens that have become an issue worldwide have been included in a high priority list: vancomycin-resistant *Enterococcus faecium*, methicillin-resistant, vancomycin intermediate, and resistant *Staphylococcus aureus*, clarithromycin-resistant *Helicobacter pylori*, fluoroquinolone-resistant *Campylobacter*, fluoroquinolone-resistant *Salmonella* spp., and 3rd-generation cephalosporin-resistant and fluoroquinolone-resistant *Neisseria gonorrhoeae*.

There is an increasing description of acquired resistance mechanisms to fosfomycin (*fosA* genes) and colistin (i.e., *mcr* genes): two old drugs now used as last-resort antibiotics as well as in combination therapy for the treatment of multidrug-resistant Gram-negative pathogens. These conditions represent an increasing problem, especially in countries presenting endemic prevalence of carbapenem-resistant Gram-negative pathogens.

In most cases, the multidrug-resistance phenotype in these pathogens, which cause most of difficult-to-treat bacterial infections worldwide, is due to the acquisition of acquired resistance genes through mobile genetic elements.

To date, there has been an increasing need for good-quality and open-access research that describes the epidemiology and mechanisms of resistance of these pathogens in order to limit their spread.

This special issue welcomes original research and review articles focusing on the epidemiology, resistance mechanisms, and treatment of critical and high priority multidrug-resistant pathogens.

Potential topics include but are not limited to the following:

- Epidemiology and characterization of resistance mechanisms to 3rd-generation cephalosporins, carbapenems, fosfomycin, and colistin in Gram-negative pathogens
- Epidemiology and characterization of resistance mechanisms to glycopeptides and oxazolidinones in Gram-positive pathogens
- Epidemiology and characterization of fluoroquinolone resistance in *Campylobacter* spp., *Salmonella* spp., and *Neisseria gonorrhoeae*
- Epidemiology and characterization of clarithromycin-resistant *Helicobacter pylori*

Authors can submit their manuscripts through the Manuscript Tracking System at https://mts.hindawi.com/submit/journals/cjidmm/armc/.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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