Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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EDITORIAL

Proceedings of the Middle East Respiratory Syndrome (MERS) Coronavirus research initiative workshop, September 9—10 2015 in Riyadh, KSA

Middle East Respiratory Syndrome Coronavirus (MERS-CoV) was identified in Saudi Arabia in 2012. More than 1600 cases in 26 countries have been reported to date [1]. Many patients become critically ill, with a reported mortality of up to 70% among MERS CoV patients who require intensive care admission [2]. Hospital-based outbreaks have occurred mainly in the KSA. Outside of the KSA, South Korea experienced the second largest described outbreak. The outbreak, which originated from a single index case who had a history of travel to the Middle East, spread to several acute care facilities [3,4]. More recently, King Abdulaziz Medical City, Riyadh, Saudi Arabia, experienced a significant outbreak that led to the closure of the one of the largest tertiary care hospitals in the country, depriving thousands of patients of routine healthcare [5].

The continued threat and high mortality of MERS require continued collaborative research on the prevention and treatment of this disease. The majority of the burden of MERS is seen in Saudi Arabia. Hence, the Kingdom has led the design and conduct of national and international collaborative research for MERS, with the goal of identifying effective therapies that will benefit patients across the world. In the spirit of achieving these goals, the King Saud Bin Abdulaziz University for Health Sciences and the King Abdullah International Medical Research Center arranged the MERS research initiative workshop, which took place on September 9—10, 2015 in Riyadh, KSA. This workshop was in collaboration with the Ministry of National Guard Health Affairs, the Ministry of Health, the Saudi Food and Drug Authority and with national and international experts [6].

The meeting included a pre-conference solicitation of topics to be included and experts to attend, without distinction between governmental or non-governmental, organizational, academic, private or industry-affiliation participation. Identified individuals and organizations were invited to attend an open meeting in the spirit of broad collaboration to review the current state of knowledge, to identify gaps, and to identify the most promising and important research priorities to improve the care and outcomes of patients with MERS and to more broadly limit the impact of MERS on the population.

The two-day meeting was organized into three daily moderated sessions consisting of 20-min presentations by experts, followed by questions and a discussion of basic and translational sciences, diagnostics, epidemiology, infection prevention and control, drug and biologic therapeutics, research study design, funding opportunities, and regulatory considerations (Table 1). Industry and academic representatives who submitted proposals for specific potential therapeutics were invited to present

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Table 1 Topics covered in the MERS-CoV research initiative workshop, September 9—10, 2015; King Saud Bin Abdulaziz University for Health Sciences, King Abdulla International Medical Research Center, Riyadh, KSA.

Current global status of MERS
MERS in Saudi Arabia — an epidemiological update
BARDA'S approach to MERS and the drug development for emerging infectious diseases
The virology and pathophysiology of MERS
A holistic approach to MERS
Immuno-therapeutic options: an overview
WHO guidance on convalescent plasma treatment
Convalescent plasma in MERS
Novel therapeutics for MERS — a status update on drug development
An overview of the CSIRO Australian Animal Health Laboratory
Preventing MERS: critical issues and gaps in research
Consideration of clinical trials during outbreaks
Passive immunity for emerging and re-emerging high consequence viruses
Presentation, clinical course, and outcomes
Laboratory testing for MERS
Serologic assays
Epidemiological studies to evaluate transmission or studies on viral shedding
Saudi regulations for phase I/II I clinical studies
Potential trial designs (target populations, blinding, inclusion/exclusion criteria, and prioritization of interventions)
Regulatory issues of the US FDA

BARDA, Biomedical Advanced Research and Development Authority; WHO, World Health Organization; CSIRO, Commonwealth Scientific and Industrial Research Organization; USFDA, United States Food and Drug Administration.

privileged or proprietary information in a closed session to help inform attendees of promising and potential therapeutics to consider evaluating in clinical trials.

Both published and unpublished sources at the workshop identified knowledge gaps in the therapeutic and non-therapeutic aspects of MERS research [7]. Articles on selected topics that were presented at the workshop are included in this issue of the *Journal of Infection and Public Health*. Articles include a high-level perspective on the current status of drug development and clinical trials on MERS therapies and a description of the clinical spectrum of the presentation of MERS, both of which are critical for the design of clinical trials. In addition, an overview of drug development and necessary facilities is presented from the perspective of national animal and basic science heath laboratories. Finally, selected promising products are explored, including LCA60 — human-derived monoclonal antibodies, nitazoxanide, and BCX4430 — a broad-spectrum antiviral adenosine nucleoside analog; we acknowledge that other therapeutics are at various stages of development and that new and emerging data require a continual re-evaluation of therapies with the most promise for evaluation. The intent of this workshop and the accompanying proceedings are to enhance the sharing of rapidly evolving basic and clinical sciences and a multidisciplinary early peer discussion and review and to suggest priorities for ongoing MERS therapeutic research.

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Competing interests

None declared.

Ethical approval

Not required.

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