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.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.
**Conclusion** This systematic review showed that increased CRP levels appeared to have a trend towards a higher probability of developing DHF/DSS. However, a larger population size and more studies are needed to further establish a statistically significant relationship.

https://doi.org/10.1016/j.jiph.2020.01.176

**PP145**

Generating and characterizing of monoclonal antibody against non-structural proteins one of Zika virus

C. Lin

*Kaohsiung Medical University*

Zika virus belongs to Flaviviridae family. For flaviviruses, NS1 protein has been used as a marker for early infection diagnosis and to trigger protective antibodies. Currently, there is no drug or vaccine available to treat and prevent the Zika virus. The purpose of this study is to produce an anti-Zika NS1 monoclonal antibody and to identify the characteristics of monoclonal antibodies and their application in the diagnosis of the Zika virus. Firstly, the mice were immunized with Zika virus NS1 recombinant proteins of SPH2015 virus. The monoclonal antibodies produced in mice sera were detected by ELISA. The monoclonal antibodies were then prepared by the fusion tumour technique and restrictive dilution method. 6 monoclonal antibodies (4-1E, 4-1H, 4-3C, 5-5E, 5-5F, 5-7H) were selected. The binding properties of monoclonal antibodies were evaluated by ELISA and denatured and non-denatured Western Blot. The results showed that 6 monoclonal antibodies bind to both structural and linear antigens. Then, phage display was used to identify the antigen sites of a monoclonal antibody. The results showed that the antigen sites identified by 4-1E antibody were 225, 226, 244 and 246. The antigen sites identified by 4-1H antibody were 100, 102 and 103. The antigen sites identified by 4-3C antibody were 17, 18 and 19. The antigen sites identified by 5-5E antibody were 57, 58, 60 and 62. The antigen sites identified by 5-5F antibody were 103, 104 and 106. The antigen sites identified by 5-7H antibody were 97, 98 and 100.

Next, we evaluated the neutralizing properties of these monoclonal antibodies by FRNT. The results showed that neutralizing ability to zika virus was not detected. Following these results, these monoclonal antibodies will be used to establish a detection platform for Zika virus and to evaluate whether these monoclonal antibodies may display protective ability by using in vivo mouse models.

https://doi.org/10.1016/j.jiph.2020.01.177

**PP146**

Cross-sectional prevalence study of MERS-CoV in local and imported dromedary camels in Saudi Arabia, 2016-2018

A. Tolah, S. El-Masaoudi, S. El-Kafrawy, A. Mirza, S. Harakeh, A. Hassan, A. Alzahrani, G. Alsaad, A. Alagaili, A. Hashem, E. Azhar

*1 Special Infectious Agents Unit, King Fahd Medical Research Center, King Abdulaziz University, Jeddah, Saudi Arabia*

*2 Department of Biological Science, Division of Microbiology, Faculty of science, King Abdulaziz University, Jeddah, Saudi Arabia*

**Background and Purpose** MERS-CoV, a highly pathogenic virus in humans, is associated with high morbidity and case fatality. Inflammatory responses have a significant impact on MERS-CoV pathogenesis and disease outcome. However, CD4+ T-cell induced immune responses during acute MERS-CoV infection are barely detectable, with potent inhibition of effector T cells and down-