Viral foodborn pathogens: The current understanding and the future prospective

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Middle East Respiratory coronavirus (MERSCoV) continue to pose greater risk to people not only in the Middle East but also worldwide. This is due to the lack of any medication or vaccine to treat or protect the infected persons respectively. It is characterized by high case fatality rates among the affected people up to 42%. Dromedary camels (DCs) remain to be the only known animal reservoir in the MERSCoV/human interaction. However, this does not exclude the possibility of the presence of another animals in the context of a MERSCoV transmission cycle. Furthermore, little is known about the molecular pathogenesis of MERSCoV in DCs. Although, some recent studies reported absence of both MERSCoV specific antibodies and nucleic acids in sera and swabs respectively from other animals such as sheep, goat, chickens, etc. More recent studies reported that Alpaca can support MERSCoV infection and replication. Other studies reported the New Zealand rabbit is the laboratory animal of choice in studying the pathogens of MERSCoV. Our goals are to highlight our current understanding about MERSCoV/animal interactions, to identify the gaps in research and to point out to new hypothesis in the MERSCoV/Human/DCs interaction. Further studies are urgently needed to enrich our understanding about the transmission of MERSCoV from animals to human. In conclusion, animals play important roles in the sustainability of MERSCoV in the environment. Identification of such rules will reduce the shedding of MERSCoV to the environment, thus the risk of human infection can be mitigated.

Biography

Maged Gomaa Hemida has received his PhD from University of Guelph, 2009. He has pursued his PDF training at the the University of British Columbia (James Hogg iCapture Centre). His research area of interest is “One Health Concept” with special emphasis on emerging viruses/host interaction. Currently, studying the molecular evolution and pathogenesis of MERSCoV in the Middle East. He has published more than 40 original Research papers on high impacted journals. Meanwhile, he has received several Research Grants, Prestigious Honors and Scholarship throughout his academic carrier. Currently, he is a reviewer of many granting agencies as well as Editorial Board Member of many international journals.

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