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Enterovirus 71: Candidates for vaccines and antivirals

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Hand, foot and mouth disease (HFMD) is commonly caused by a group of Enteroviruses such as Enterovirus 71(EV71) and Coxsackievirus CVA5, CVA8 and CVA 16. Coxsackieviruses generally cause mild symptoms such as high fever, rashes and vesicles in the hand, foot and mouth but EV71 can produce more severe symptoms such as brainstem encephalitis, leading to cardiopulmonary failure and death. China experienced over 2.7 million cases of HFMD infections with 384 deaths in 2014. The lack of vaccines and antiviral drugs against EV71 highlights the urgency of developing preventative and treatment agents against EV71 to prevent further fatalities. The inactivated vaccine (IV) is well advanced in development and has good clinical trial data to support the use of the vaccine. It is ready for production in China but it remains to be investigated if the immunogenicity of the IV is able to confer protection against all EV71 sub-genotypes. Although there is data to support broad protection for some genotypes/sub-genotypes at varying efficacies, more studies need to be carried out on whether the neutralizing levels induced by IV are sufficient to protect against serious HFMD infections. New developments of experimental vaccines and antivirals are presented.

Biography

Chit Laa Poh completed her PhD from Monash University, Australia in 1980 and returned to Malaysia and Singapore to pursue her academic career. Initially trained as an environmental bacteriologist, she started to focus on Medical Virology research since 1999 and worked on the development of rapid molecular diagnostics, novel antivirals and vaccines against Enterovirus 71 which can cause serious hand, foot and mouth disease (HFMD). She has achieved a Google H-index of 33. She is on the editorial board of Journal of Bioscience and Bioengineering (Elsevier) and Austin Journal of Tropical Medicine and Hygiene. She has graduated 12 PhDs, 8 MScs and many BSc (Hons) students. She has published 87 papers in reputed journals and co-authored 3 book chapters in books published by ASM and Humana Press. She has served as Ad Hoc reviewers for papers submitted to PLoSOne. After working for 25 years in the National University of Singapore (NUS), she is currently engaged as a Distinguished Professor by Sunway University. In her current role, she hopes to attract good graduate students and provide them with excellent supervision in research. She is often invited by reputable journals to contribute review papers and original research papers.

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