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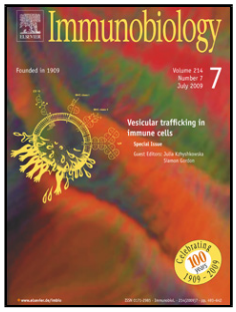

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Authors: Ka Tik Cheung, Daniel Man-yuen Sze, Kwok Hung Chan, Polly Hang-mei Leung

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Involvement of Caspase-4 in IL-1 beta Production and Pyroptosis in Human Macrophages During Dengue Virus Infection

Ka Tik Cheung1, Daniel Man-yuen Sze2, Kwok Hung Chan3, Polly Hang-mei Leung1*

1 Department of Health Technology and Informatics, The Hong Kong Polytechnic University, Hong Kong Special Administrative Region, China.

2 School of Health and Biomedical Sciences, RMIT University, Australia.

3 Department of Microbiology, The University of Hong Kong, Hong Kong Special Administrative Region, China

***Corresponding author:**

Email: polly.hm.leung@polyu.edu.hk<mailto:polly.hm.leung@polyu.edu.hk>Abstract

Caspase-4 physically interacts with caspase-1 and is believed to be a proinflammatory caspase that can induce the inflammatory form of programmed cell death (pyroptosis) and the release of mature interleukin (IL)-1β. However, the function of caspase-4 is not yet fully understood. We examined the function of caspase-4 in IL-1β production and pyroptosis during dengue virus serotype-2 (DENV-2) infection in human macrophages. In this study, DENV-2 infection increased IL-1β protein level with activated caspase-4 activity. Using primary macrophages, we observed that caspase-4 induces activation of caspase-1 and secretion of IL-1β in response to DENV-2 infection, without the need for secondary signals to stimulate the assembly of the