

# Editorial

Dissemination reports are concise informative reports of health-related research supported by funds administered by the Food and Health Bureau, for example the *Research Fund for the Control of Infectious Diseases* (which was consolidated into the *Health and Medical Research Fund* in December 2011). In this edition, 12 dissemination reports of projects related to respiratory infectious diseases, gastrointestinal diseases, viral hepatitis, and miscellaneous infection are presented. In particular, three projects are highlighted due to their potentially significant findings, impact on healthcare delivery and practice, and/or contribution to health policy formulation in Hong Kong.

Multidrug-resistant tuberculosis often entails prolonged treatment and the use of more toxic drugs. It is also associated with higher rates of treatment failure and death. As the mechanisms for rifampicin (RIF) and isoniazid (INH) resistance in many isolates of *Mycobacterium tuberculosis* are predictable, molecular methods are used for direct detection of RIF and INH resistance. Ho et al<sup>1</sup> evaluated genotypic tests to detect RIF and INH resistance in *M. tuberculosis* in clinical specimens. The rapid tests improved patient management by enabling earlier admission, more timely use of World Health Organization category IV antituberculosis regimens, and discontinuation of ineffective drugs.

*Helicobacter pylori* infection is associated with gastritis, gastric and duodenal ulcers, and gastric cancer. The effect of host factors on colonisation with *H. pylori* remains poorly understood. Cho et al<sup>2</sup> studied the effect of cathelicidin, a host defence

peptide, on *H. pylori* colonisation in an animal model. Deficiency of cathelicidin enhanced *H. pylori* infection and inflammation in the gastric mucosa. Oral delivery of cathelicidin-secreting bacteria reduced *H. pylori* infection and gastric inflammation. The authors obtained a patent in relation to this study.

Entecavir is an oral reverse transcriptase inhibitor used in the treatment of hepatitis B virus (HBV) infection. Wong et al<sup>3</sup> found that 21% of HBV-infected patients had detectable HBV DNA after 1 year of entecavir therapy. Twenty reverse transcriptase variants were found exclusively in entecavir partial responders, and four variants had significantly different distribution among optimal and partial responders. Further in-depth studies are required to confirm the significance of the results.

A research impact evaluation was conducted 2 years after the project end date for all of the studies reported in this supplement. Impact was reported through knowledge generation, capacity building, and influence on health policy and health care practices through changes in behaviour of health care professionals and/or other decision makers.

We hope you will enjoy this selection of research dissemination reports. Electronic copies of these dissemination reports and the corresponding full reports can be downloaded individually from the Research Fund Secretariat website (<http://www.fhb.gov.hk/grants>). Researchers interested in the funds administered by the Food and Health Bureau also may visit the website for detailed information about application procedures.

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## References

1. Ho PL, Yam WC, Leung CC, et al. Molecular tests for rapid detection of rifampicin and isoniazid resistance in *Mycobacterium tuberculosis*. *Hong Kong Med J* 2015;21(Suppl 4):4-7.
2. Cho CH, Yu J, Zhang L, Wu WK. The role of cathelicidin in

control of *Helicobacter pylori* colonisation in the stomach. *Hong Kong Med J* 2015;21(Suppl 4):17-9.

3. Wong DK, Fung J, Lai CL, Yuen MF. Identification of hepatitis B virus DNA reverse transcriptase variants associated with partial response to entecavir. *Hong Kong Med J* 2015;21(Suppl 4):35-8.