

EDITORIAL

We are delighted to bring you another series of dissemination reports of research projects supported by the *Research Fund for the Control of Infectious Diseases* (RFCID) and the *Health and Health Services Research Fund* (HHSRF). This issue features projects related to cardiovascular diseases, food-borne diseases and immunology. Several projects are highlighted due to their significant findings, impact on health care delivery and practice, and/or contributions to health policy formulation in Hong Kong.

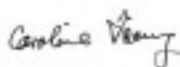
In Hong Kong, heart disease has been the second highest cause of mortality over the past few years (after cancer), and accounted for about 10% of all deaths. McGhee et al¹ developed an impact model to relate recent coronary heart disease (CHD) trends to treatments and changes in population risk factors with a view to predicting future trends. The model incorporated extensive data from a variety of sources on population demographics, morbidity and mortality figures, and health resource utilisation. The model also included data on changes in major risk factors. After extensive validation, it was inferred that up to 78% of the CHD mortality reduction between 1989 and 2001 was attributed to improvements in treatment, while 28% was related to changes in population risk factors. The fact that improvement of treatment uptake levels can have a substantial effect in reducing CHD mortality may have important implications for health planning—although considerable effort is still needed to decrease health risks.

Developing rapid diagnostic tests that are robust enough to use with clinical samples, food and environmental samples is not a trivial undertaking. Ling² developed methods based on the polymerase chain reaction (PCR) and real-time (RT)-PCR for 5-hour and 3-hour detection, respectively, of salmonellae and *Vibrio cholerae* in stool, food and water samples. The RT-PCR assays for both organisms had lower limits of detection than the corresponding PCR assays. For all the assays, the limits of detection in stool samples were lower than those in food and water samples. In addition, the RT-PCR assays were cheaper than traditional culture and identification techniques. Although results were available on the same day, the overall sensitivity of the RT-PCR tests was low. Despite these promising findings, it is likely that further evaluation on a broader range of samples will be needed before routine implementation of these assays in public laboratory settings. Ultimately, such tests may be useful for the prompt identification of infections, timely control of their spread, and for epidemiological tracing of sources and contacts.

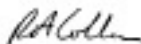
Why did some people succumb to severe acute respiratory syndrome (SARS) yet others exposed to similar or even higher risk remain unaffected? Part of the reason could be related to the innate genetic susceptibility of certain individuals. During immune responses, cytokines and chemokines are known to play important roles in antiviral activity and in cell trafficking, respectively. Lau and Peiris³ investigated the association of polymorphisms of certain cytokine and chemokine genes with SARS. They found that one particular polymorphism of an interferon gamma allele and an allele of the chemokine RANTES were associated with SARS, and that both may affect its pathogenesis. The findings of this study may have implications for novel targets or potential mechanisms of action for future antiviral compounds.

We hope you find this selection of dissemination reports informative and enjoyable to read. These dissemination reports and the projects' full reports may be downloaded individually from the Research Fund Secretariat website (<http://www.fhb.gov.hk/grants>), where more information about the funds, including application procedures, can also be found.

Supplement co-editors



Dr Caroline SH Tsang
Senior Medical Officer (Research Office)
Food and Health Bureau



Dr Richard A Collins
Scientific Review Director (Research Office)
Food and Health Bureau



Dr Janice M Johnston
Consultant (Research Office)
Food and Health Bureau

References

1. McGhee SM, So JC, Thomas GN. Explaining coronary heart disease trends in Hong Kong: creation of a model for policy and planning. *Hong Kong Med J* 2009;15(Suppl 2):22-5.
2. Ling JM. Rapid detection of food-borne pathogens in clinical specimens, food and environmental samples. *Hong Kong Med J* 2009;15(Suppl 2):26-9.
3. Lau YL, Peiris JS. Association of cytokine and chemokine gene polymorphisms with severe acute respiratory syndrome. *Hong Kong Med J* 2009;15(Suppl 2):43-6.