

## Research Fund for the Control of Infectious Diseases: Commissioned Studies

After the 2003 outbreak of severe acute respiratory syndrome (SARS), the Hong Kong SAR Government earmarked a one-off grant of \$500 million to support research into emerging infectious diseases. Of this, \$50 million was used to support infectious disease research in the Mainland through the Chinese Ministry of Science and Technology. The remaining \$450 million was directed to support local investigator-initiated research and commissioned projects through the creation of the Research Fund for the Control of Infectious Diseases (RFCID).

The RFCID aims to encourage, facilitate, and support research on the prevention, treatment, and control of infectious diseases, in particular emerging infectious diseases such as SARS and avian influenza A (H5N1). The Fund is administered by the Research Office of the Food and Health Bureau (FHB).

The RFCID considers funding applications for research studies relevant to the control of infectious diseases in the areas of:

- Aetiology, epidemiology, and public health;
- Basic research;
- Clinical and health services research; and
- Enhancement of research infrastructure.

Thematic priorities for the Fund are set by the FHB and are reviewed regularly with input from the Centre for Health Protection (CHP) of the Department of Health. Preferential funding is given to research studies that fall under the thematic priorities.

The RFCID supports studies initiated by individual investigators in addition to those commissioned by the FHB. The latter address specific health problems, fill scientific gaps, and respond to public threats or needs.

Four commissioned projects totalling \$93.2 million have been approved/earmarked:

- \$30 million approved for The University of Hong Kong (HKU) to undertake a 5-year portfolio of basic laboratory, epidemiology and public health research, as well as upgrade its bio-safety level 3 (BL-3) laboratory with enhancement for animal experimentation.
- \$25 million approved for The Chinese University of Hong Kong (CUHK) to undertake a 5-year portfolio of clinical trial and public health research in emerging infectious diseases.
- \$8.2 million approved for the Hospital Authority (HA) to undertake a portfolio of research over 2 years on nosocomial infection and long-term follow-up of SARS patients.
- \$30 million earmarked for the CHP of the Department of Health over 5 years to address important topics in the prevention and control of communicable diseases.

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### The University of Hong Kong

In October 2003, the HKU was invited to submit proposals for research related to basic laboratory, epidemiological and public health research in emerging infectious diseases. The University was invited to participate because of its pioneering work in discovering the SARS-coronavirus, its outstanding work on avian influenza A (H5N1) involving research and surveillance, and its track

record of peer-reviewed publications, especially in journals with high impact factors.

In October 2003, the HKU submitted its proposal titled "Research preparedness for emerging and potentially re-emerging infectious diseases in Hong Kong". The objectives of the proposal were:

- (1) To set up a research team of epidemiologists and microbiologists supported by a BL-3 laboratory to conduct research on the control of potential locally re-emerging infections;
- (2) To provide the logistic and research capability for an immediate response to emerging infectious diseases through the synthesis of microbiology, clinical medicine, and public health epidemiology.

Under this proposal two main projects were envisaged:

- Part A: an epidemiology team under the School of Public Health, Faculty of Medicine, headed by Prof TH Lam and Prof GM Leung.
- Part B: a microbiology team under the Department of Microbiology, Faculty of Medicine which would be directly in charge of the BL-3 laboratory, and headed by Prof JSM Peiris and Prof Y Guan.

#### ***Part A: Epidemiology of emerging or potential emerging infections***

Infectious disease research at the HKU is aimed at characterising the patterns of distribution and prevalence of infectious diseases and the factors responsible for these patterns, and at identifying and testing prevention and treatment measures. The commissioned study aimed to strengthen the research and development infrastructure for infectious disease epidemiology and control, advanced data analysis as well as disease modelling and risk communication research.

#### ***Part B: Microbiology and bio-safety level 3 laboratory capability***

The Department of Microbiology at the HKU played a key role in the response to the 2003 SARS outbreak, as well as avian influenza A (H5N1) incidents in 1997 and subsequently. While these efforts are nationally and internationally recognised and acclaimed, they highlighted the need to strengthen aspects of infrastructure so as to enhance responses to future outbreaks. Areas to target included the need to upgrade and enhance BL-3 biohazard containment facilities, animal BL-3 biohazard laboratories where animal experimentation with hazardous organisms can be carried out, the core response for viral diagnosis, and enhanced research on the epidemiology and mechanisms of antimicrobial resistance. Four priority areas for research under these themes were outlined, as follows:

- (1) Influenza (establishment of the capability to identify influenza viruses with pandemic potential);
- (2) SARS (ecology and mechanism of SARS transmission);
- (3) Rapid diagnostic systems; and

- (4) Multi-drug resistance.

After thorough peer review by a panel of independent external referees, the HKU was commissioned with an amount of \$30 million to complete at least 27 separate studies. The relevant portfolio would cover: basic laboratory, epidemiological and public health research in emerging infectious diseases (\$22 million) and the completion of the construction of a BL-3 laboratory (\$8 million). The commissioned study was due to last 5 years from May 2004. Table 1 shows the individual HKU-commissioned projects at 31 December 2007.

#### **The Chinese University of Hong Kong**

In October 2003, the CUHK was invited to undertake a portfolio of research on clinical trial and public health research on emerging infectious diseases. The CUHK was invited to participate, because of its leadership in synthesising knowledge on SARS (when knowledge was initially non-existent) using bedside observations, clinical algorithms, and pragmatic trial approaches. Other reasons supporting the ability of the university to carry out such work include its outstanding research in hepatitis and related diseases, and its track record in peer-reviewed publications in high impact journals.

In October 2003, the CUHK submitted its proposal titled "Basic, epidemiological, public health and clinical research on emerging infectious diseases", which initially comprised 10 separate projects. In the immediate post-SARS environment in which the proposal was developed, better understanding of the epidemiology, pathogenesis, and management of SARS was the most urgent priority. Other emerging diseases relevant to Hong Kong would also be covered, including tuberculosis, HIV/AIDS, dengue fever, and infectious diarrhoea.

The individual projects proposed by the CUHK aimed to develop methods with high sensitivity and specificity for the early diagnosis of SARS. Other studies were to address why some patients are more susceptible to infection and develop more severe illness than others. On the clinical front, there would be exploration of new therapies for SARS, factors involved in SARS super-spreading events, the effectiveness of hospital infection control measures, and long-term complications among follow-up SARS patients. SARS seroprevalence, environmental factors contributing to SARS outbreaks, and psychological and social impacts of infectious diseases will also be addressed.

After thorough peer review by a panel of independent external referees, the CUHK was commissioned with an amount of \$25 million to complete at least 30 separate studies in their portfolio of clinical trial and public health research on emerging infectious diseases. For administrative convenience, the initial 10 research projects and proposals submitted subsequently were assigned to three broad

**Table 1. The University of Hong Kong-commissioned study projects at 31 December 2007**

Project code	Title	Principal investigator	Status
<b>Part AA: Advanced data analysis and disease modelling</b>			
HKU-AA-001	The epidemiology of severe acute respiratory syndrome (SARS) in the 2003 Hong Kong epidemic	GM Leung	Completed
HKU-AA-002	SARS incubation and quarantine times	LM Ho	Completed
HKU-AA-003	Case fatality rate with SARS in Hong Kong	GM Leung	Completed
HKU-AA-004	SARS-coronavirus antibody prevalence in all Hong Kong patient contacts	GM Leung	Completed
HKU-AA-005	Seroprevalence of SARS-coronavirus in asymptomatic or subclinical population groups	GM Leung	Completed
HKU-AA-006	Understanding the spatial clustering of SARS in Hong Kong	PC Lai	Completed
HKU-AA-007	Influenza-associated mortality in Hong Kong	CM Wong	Completed
HKU-AA-008	A case-crossover study on health impact of influenza circulation measured by weekly proportion of positive influenza virus isolations	CM Wong	Ongoing
HKU-AA-009	A comprehensive risk assessment of Japanese encephalitis in Hong Kong using mathematical modeling	S Riley	Completed
HKU-AA-012	Using models to identify routes of nosocomial infection: a large hospital outbreak of SARS in Hong Kong	S Riley	Completed
HKU-AA-013	Reducing the impact of next influenza pandemic using household-based public health interventions	J Wu	Completed
HKU-AA-014	Clinical prognostic rules for SARS	BJ Cowling	Completed
HKU-AA-015	Estimating the incubation distribution of SARS	BJ Cowling	Completed
HKU-AA-016	Estimating the efficacy of control measures against SARS in Beijing	BJ Cowling	Ongoing
HKU-AA-017	Comparing the SARS epidemics in Hong Kong, Taiwan and Beijing	BJ Cowling	Ongoing
HKU-AA-018	Estimating the efficacy of treatments for SARS in Hong Kong	BJ Cowling	Ongoing
HKU-AA-019	The effectiveness of contact tracing in SARS on infectiousness	BJ Cowling	Ongoing
HKU-AA-020	Age-period-cohort analysis of tuberculosis notifications in Hong Kong	BJ Cowling	Ongoing
HKU-AA-021	A robust statistical model of the transmission of SARS in a single residential building during the 2003 SARS outbreak in Hong Kong	S Riley	Ongoing
<b>Part AB: Risk communication research</b>			
HKU-AB-001	Longitudinal assessment of community psycho-behavioral responses during and after the 2003 SARS outbreak in Hong Kong	GM Leung	Completed
HKU-AB-002	Knowledge of risk and self-protection practices and estimate degree of influenza hazard from live animal poultry sales	R Fielding	Completed
HKU-AB-003	Avian flu prevention and genetic assortment between H5 and human influenza	AJ Hedley	Completed
HKU-AB-004	A tale of two cities: community psycho-behavioral surveillance and related impact on outbreak control in Hong Kong and Singapore during the SARS epidemic	GM Leung	Completed
<b>Part B: Microbiology and bio-safety level 3 laboratory capability</b>			
<b>B1: Influenza</b>			
HKU-B1-001	The genetic characteristics of H5 subtype influenza viruses of Eurasian lineage	HL Chen	Ongoing
HKU-B1-002	The genetic origin of H5N1 influenza viruses from poultry in different regions of south China	HL Chen	Ongoing
HKU-B1-003	The circulation and evolution trend of H9N2 influenza viruses from minor poultry in Southern China	HL Chen	Ongoing
HKU-B1-004	Receptor for influenza viruses in human cells	HL Chen	Ongoing
HKU-B1-005	Immunological study of H5N3, a low pathogenic virus, and H5N1, a highly pathogenic influenza virus, in mice	Yi Guan	Ongoing
HKU-B1-006	Surveillance of wild birds in Mai Po	JSM Peiris	Ongoing
<b>B2: Severe acute respiratory syndrome (SARS)</b>			
HKU-B2-001	The ecology of SARS-coronavirus-related viruses in wild and domestic animals in China	HL Chen	Ongoing
HKU-B2-002	Establishment of cell culture system for the isolation of SARS-like coronavirus from animals: to understand the mechanism of how SARS-like coronavirus gains the ability to infect humans	HL Chen	Ongoing
HKU-B2-003	Viral loads in clinical specimens and SARS manifestations	IFN Hing	Completed
HKU-B2-004	Comparative host gene transcription by microarray analysis early after infection of the Huh7 cell by SARS-coronavirus and human coronavirus 229E	SF Tang	Completed
HKU-B2-005	Clinical features and molecular epidemiology of coronavirus-HKU1-associated community acquired pneumonia	CY Woo	Completed
<b>B3: Rapid diagnostic systems</b>			
HKU-B3-001	Rapid diagnostic system for detection of respiratory pathogens in human clinical samples	JSM Peiris	Ongoing
<b>B4: Multi-drug resistance</b>			
HKU-B4-001	Detection and characterisation of extended-spectrum beta-lactamases among blood stream isolates of <i>Enterobacter</i> spp. in Hong Kong	PL Ho	Completed
HKU-B4-002	Detection and characterisation of extended-spectrum beta-lactamases among blood stream isolates of <i>Proteus mirabilis</i> in Hong Kong	PL Ho	Ongoing
HKU-B4-003	Epidemiology of methicillin-resistant <i>Staphylococcus aureus</i> in the Hong Kong community	PL Ho	Ongoing
HKU-B4-004	Community associated methicillin-resistant <i>Staphylococcus aureus</i> skin and soft tissue infections in Hong Kong	PL Ho	Ongoing

research themes: basic science, clinical studies, and public health studies. The commissioned work is due to last 5 years from June 2004. Table 2 shows the individual CUHK-commissioned projects at 31 December 2007.

### The Hospital Authority Consortium

In December 2003, the HA was invited to submit proposals

for research related to nosocomial infection and long-term follow-up of SARS patients. The HA was invited because:

- The HA has a pool of committed clinicians with proven research and publication track records;
- The HA has a unique comprehensive database, derived from the Clinical Management System with linkage to other relevant information technology systems such as those involving pharmacy and pathology laboratories;

**Table 2. The Chinese University of Hong Kong-commissioned study projects at 31 December 2007**

Project code	Title	Principal investigator	Status
<i>Basic science theme</i>			
CUHK-BS-001	Molecular epidemiology of SARS-coronavirus infection	Dennis YM Lo	Completed
CUHK-BS-002	Identification of the cellular receptor of the SARS-coronavirus spike protein	Stephen KW Tsui	Ongoing
CUHK-BS-003	Immunogenetics study in SARS	Nelson LS Tang	Completed
CUHK-BS-004	SARS diagnosis, monitoring and prognostication by SARS-coronavirus RNA detection	Dennis YM Lo	Completed
CUHK-BS-005	Proteomic profiling in SARS: diagnostic and prognostic applications	Terence CW Poon	Completed
CUHK-BS-006	Investigation of properties of antibody responses in SARS infection	Paul KS Chan	Completed
CUHK-BS-007	Small interfering RNA in the prevention and treatment of SARS-coronavirus	Joseph JY Sung	Completed
CUHK-BS-008	Subtyping of viral genotypes by mass spectrometry	Dennis YM Lo	Completed
CUHK-BS-009	Immunogenetics study in tuberculosis	Nelson LS Tang	Ongoing
CUHK-BS-010	Complete genome sequencing of HIV-1 viruses in Hong Kong	Stephen KW Tsui	Completed
CUHK-BS-011	Determination of viral load and tissue tropism for fatal SARS-coronavirus infections	Paul KS Chan	Completed
CUHK-BS-012	The functional roles of 3a in the pathogenesis of SARS	Stephen KW Tsui	Ongoing
CUHK-BS-013	Unknown viral mutant discovery and simultaneous quantification using base-specific cleavage and MALDI-TOF mass spectrometry	CM Ding	Completed
CUHK-BS-014	Pathogenesis of avian influenza viruses	Paul KS Chan	Completed
CUHK-BS-015	Identification of serum proteomic fingerprints for prediction of sepsis in pre-term neonates	Dennis YM Lo	Completed
CUHK-BS-016	Non-invasive diagnosis of liver cirrhosis in chronic hepatitis B patients by serum total	Terence CW Poon	Completed
CUHK-BS-017	Analysis of size distributions of HVB DNA in plasma of HBV positive individuals	Dennis YM Lo	Ongoing
<i>Clinical studies theme</i>			
CUHK-CS-001	Long-term sequelae of SARS: physical, neuropsychiatric and quality of life assessment	David SC Hui	Completed
CUHK-CS-002	Application of personal protective equipments in minimising transmission of infectious agents by contact spread in high-risk procedures	Margaret Ip	Completed
CUHK-CS-003	Small interfering RNA in the prevention and treatment of SARS-coronavirus	Joseph JY Sung	Completed
CUHK-CS-004	Correlation of clinical outcome and radiological features in SARS	David SC Hui	Completed
CUHK-CS-005	SARS-lung function correlation with thin-section computed tomography features during convalescent period	David SC Hui	Completed
CUHK-CS-007	Natural history of cervicovaginal papillomavirus infections in immunocompetent and immunocompromised Chinese women	Edmund Li	Ongoing
CUHK-CS-008	Role of cytokines and chemokines in severe and complicated influenza infections	Nelson Lee	Completed
CUHK-CS-009	Pilot study on the feasibility of fever surveillance in hospital setting	KW Choi	Completed
CUHK-CS-010	Long term outcome of patients with acute respiratory distress syndrome secondary to SARS	David SC Hui	Completed
CUHK-CS-011	The risk of oxygen therapy and non-invasive positive pressure ventilation: a pilot study	David SC Hui	Completed
<i>Public health theme</i>			
CUHK-PH-001	Super-spreading events of SARS in hospital setting: who, when and why?	Joseph JY Sung	Completed
CUHK-PH-002	A comparative study of stigma associated with infectious diseases (SARS, AIDS, TB)	Fanny Cheung	Completed
CUHK-PH-003	Potential clinical and economic impact of an outreach healthcare service for prevention of sexually transmitted diseases in Hong Kong	William Wong	Completed
CUHK-PH-004	Bisexuality and HIV-related risk behaviours among men who have sex with men in Hong Kong	Joseph TF Lau	Completed
CUHK-PH-007	The determination of the prevalence of hepatitis C infection in injection drug users in Hong Kong	SS Lee	Completed
CUHK-PH-008	A study of behaviour, attitudes and knowledge regarding antibiotic use in the community of Sydney and Hong Kong	SS Lee	Completed
CUHK-PH-010	A population-based study of acute gastrointestinal illness-burden, associated risk factors and social economic impact	Suzanne Ho	Ongoing
CUHK-PH-011	Spatiotemporal analysis of heroin addiction and associated infection risks in Hong Kong	SS Lee	Ongoing
CUHK-PH-012	The changing pattern of hepatitis E infection in Hong Kong	Paul KS Chan	Ongoing
CUHK-PH-013	Acute gastroenteritis in the elderly homes of Hong Kong: a case-control study	Suzanne Ho	Ongoing

**Table 3. Commissioned projects conducted by the Hospital Authority Consortium**

Project No.	Title	Principal investigator / institution	Status
<i>Clinical studies</i>			
HA-CS-001	Data cleaning, maintenance and analysis of the HA SARS Collaborative Groups (HASCOG) Database	Edwina Shung / Hospital Authority Head Office	Completed
HA-CS-002a	Use of magnetic resonance imaging for screening for avascular necrosis post-SARS	Ernest MK Yuen / Tuen Mun Hospital	Completed
HA-CS-002b	Use of magnetic resonance imaging to screen for avascular necrosis post-SARS: the effects of corticosteroids on avascular necrosis of bones	Yok Lam Kwong / Queen Mary Hospital	Completed
HA-CS-002c	Use of magnetic resonance imaging for screening for avascular necrosis post-SARS: MRI screening for avascular necrosis in atypical pneumonia	Gregory E Antonio / Prince of Wales Hospital	Completed
HA-CS-003	Preparation for a multi-centre, double-blinded, randomised, placebo-controlled trial on the efficacy of lopinavir / ritonavir plus ribavirin in the treatment of SARS	Wai Cho Yu / Princess Margaret Hospital	Completed
<i>Nosocomial studies</i>			
HA-NS-001	Source profiling of biohazardous aerosols in hospitals	Ming Fang / University of Science and Technology	Completed
HA-NS-002	Understanding droplets due to nebuliser and respiratory activities	Yuguo Li / University of Hong Kong	Completed
HA-NS-003	Evaluating factors that affect ventilation effectiveness in SARS wards	Yuguo Li / University of Hong Kong	Completed
HA-NS-004	Controlling infectious bioaerosols at source by novel local exhaust ventilation devices	Joseph KC Kwan / University of Science and Technology	Completed
HA-NS-005	An evaluation of nursing practice models in the context of SARS: a clinical trial	E Angela Chan / Hong Kong Polytechnic University	Completed

- The HA has an established forum, called the Collaborative Research Group on SARS, to facilitate collaborative research and cross-fertilisation of ideas with partners including the Hong Kong Polytechnic University, the Hong Kong University of Science and Technology, and the HKU.

In January 2004, the HA submitted 16 detailed research proposals. These were broadly divided into clinical studies and nosocomial studies. The Bureau convened an independent Assessment Panel comprising leading local health professionals. After external peer review and assessment, eight proposals worth \$8.2 million were approved. A project manager based in the HA and supported by the Fund coordinated all projects.

The approved projects are detailed in Table 3. The HA Head Office coordinated the participation of relevant public hospitals. All projects received ethical approval prior to commencement from the relevant institutional review board of academic institutions and the appropriate HA cluster. Progress was monitored by the FHB's Research Office.

Upon completion, the HA reviewed the results of the individual studies and submitted a proposal on how the findings could be implemented within the context of its operations and function. The final reports and implementation proposal were reviewed by the Assessment Panel and comments and suggestions fed back to the HA for their consideration. Further studies may be conducted with the mutual consent of HA and the FHB. Table 3 shows the individual HA-commissioned projects.

### Centre for Health Protection

The Research Council administering the RFCID earmarked \$30 million to the CHP of the Department of Health to conduct research, in collaboration with local, Pearl River Delta Region and overseas institutions, to address important topics on the prevention and control of communicable diseases. In January 2005, the CHP was invited to undertake a portfolio of research on the following:

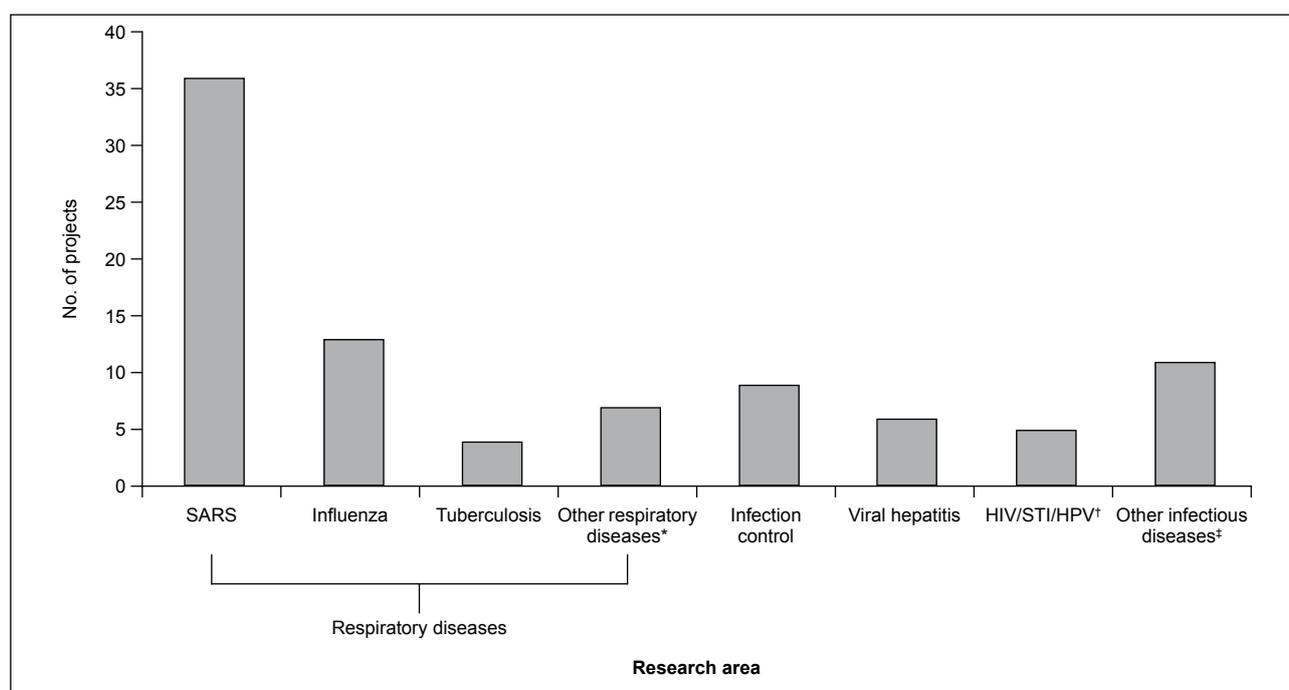
- Cost-effectiveness of primary prevention of infections covered (or potentially covered) by the immunisation programme (cost-effectiveness theme);
- Surveillance, epidemiology and public health control of infections with a regional/cross-border significance (public health theme); and
- Prevention of spread of health care-associated infections in community settings (nosocomial theme).

The CHP were invited to participate because of the following reasons:-

- (1) The central role of the CHP in enhancing existing disease control and addressing new threats and its commitment to applied research;
- (2) The use of a Board of Scientific Advisors and Scientific Committees to advise and coordinate activity on varying aspects of infectious diseases;
- (3) The existence of the Public Health Services Branch to undertake surveillance, treatment, health education, public health management and regional/international liaison; and
- (4) CHP's connections with regional and international health authorities and agencies.

**Table 4. Centre for Health Protection–commissioned projects at 31 December 2007**

Project No.	Title	Principal investigator / institution	Status
<i>Cost-effectiveness theme</i>			
CHP-CE-02	Economic analysis of <i>Haemophilus influenzae</i> b, chickenpox, pneumococcal, hepatitis A and combination vaccines in the Childhood Immunisation Programme in Hong Kong	SM McGhee / University of Hong Kong	Ongoing
CHP-CE-03	Effectiveness of vaccinating children in reducing influenza among household contacts: a community-based, randomised, placebo-controlled trial	GM Leung / University of Hong Kong	Ongoing
CHP-CE-04	Economic evaluation of routine childhood influenza vaccine in Hong Kong	Edmund AS Nelson / Chinese University of Hong Kong	Ongoing
CHP-CE-05	Modelling the potential impact of HPV vaccination on Hong Kong's cervical cancer burden	GM Leung / University of Hong Kong	Ongoing
<i>Public health theme</i>			
CHP-PH-01	Improving HIV surveillance in Hong Kong through molecular characterisation with a regional perspective	Wilina WL Lim / Centre for Health Protection	Ongoing
CHP-PH-02	Evaluation of the T.Spot-TB test in the targeted screening of close contacts of smear-positive tuberculosis patients	CC Leung / Shau Kei Wan Jockey Club Clinic	Ongoing
CHP-PH-04	Comparison of T.Spot-TB and QuantiFERON-TB Gold test with tuberculin test in the targeted screening of HIV-infected subjects in Hong Kong	CC Leung / Shau Kei Wan Jockey Club Clinic	Ongoing

**Fig. Research areas of individual projects commissioned by the Food and Health Bureau**

\* Includes studies on non-SARS coronaviruses, influenza-like illness, rhinovirus, bocavirus, etc

† HIV denotes human immunodeficiency virus, STI sexually transmitted infections, and HPV human papillomavirus

‡ Pathogens causing diseases outside these categories (eg gastroenteritis, methicillin-resistant *Staphylococcus aureus*, *Proteus* spp, *Enterobacter* spp, etc)

In April 2005, the first batch of proposals was submitted. Further proposals will be submitted at regular intervals thereafter. After thorough peer review by a panel of independent external referees, four projects worth \$5.1 million were approved and commenced in December 2005. Subsequently, three projects worth \$9.27 million were approved and are due to commence in 2008. It should be noted that the CHP is not primarily a research organisation and that the majority of research proposals submitted are collaborations with academic institutions and public

health organisations, with sufficient research capacity and capability to ensure the successful completion of the proposed projects. Table 4 shows the individual CHP-commissioned projects at 31 December 2007.

### Distribution of projects

As at 31 December 2007, the four commissioned studies comprised 91 separate projects reflecting the specific research aims of the Hong Kong SAR Government. As

the commissioned studies were initiated in the post-SARS period, in which the major public concern was the re-emergence of the disease, the majority (36/91, 40%) of projects were directly concerned with its ecology, natural history, prevalence, transmission, detection, treatment, and control. As southern China is considered a hotspot for the evolution of influenza viruses, another prominent research area of direct relevance to public health in Hong Kong was the surveillance of influenza and the monitoring of its potential to evolve into a pandemic strain (13/91, 14%). Other areas of interest included infection control, especially in hospital ward settings, and studies on viral hepatitis. The subject areas of the 91 separate projects are summarised in

the Figure.

### **Conclusion**

The FHB has commissioned a series of long-term studies to research various aspects of the control of infectious diseases in Hong Kong, particularly those that have the potential to re-emerge. The majority of these commissioned projects are completed. Several individual projects have already produced valuable information and the results have been published in peer-reviewed scientific journals. In addition, the results of several studies are available on the Research Fund Secretariat website <http://www.fhb.gov.hk/grants>.