

**Health and Medical  
Research Fund:**

**2016-17 Annual Report**

## Contents

<b>Health and Medical Research Fund (HMRF)</b> .....	1
<b>Governance</b> .....	3
<b>Highlights of 2016-17</b> .....	4
<b>Appendix A</b>	<b>Membership of the Research Council, the Grant Review Board Executive and the Grant Review Board</b>
<b>Appendix B</b>	<b>Thematic Priorities of the Health and Medical Research Fund for 2016 Open Call</b>
<b>Appendix C</b>	<b>Financial Report for the year ended 31 March 2017</b>

## **Health and Medical Research Fund (HMRF)**

On 9 December 2011, the Legislative Council (LegCo) Finance Committee approved a new commitment of \$1,415 million for setting up the HMRF, by consolidating the former Health and Health Services Research Fund (HHSRF) and the former Research Fund for the Control of Infectious Diseases (RFCID), with a broadened scope for funding health and medical research in Hong Kong. Research projects funded under the former HHSRF and the former RFCID have been subsumed under the HMRF. The commitment comprised an injection of \$1,000 million and unexpended balances of the former HHSRF and the former RFCID amounting to \$190.8 million and \$224.2 million respectively during the establishment.

On 28 May 2016, the LegCo Finance Committee approved an increase to the commitment for the HMRF from \$1,415 million by \$1,500 million to \$2,915 million to sustain its operation for another five years from 2017-18 to 2021-22 and expand the scope of the HMRF to incorporate that of the Health Care and Promotion Fund (HCPF). The consolidation will take effect in 2017-18.

The HMRF aims to build research capacity and to encourage, facilitate and support health and medical research to inform health policies, improve population health, strengthen the health system, enhance healthcare practices, advance standard and quality of care, and promote clinical excellence, through generation and application of evidence-based scientific knowledge derived from local research in health and medicine. It provides funding support for health and medical research activities, research infrastructure and research capacity building in Hong Kong in various forms. The abstracts and the budget of approved Investigator-initiated Research Projects are available at the website <http://rfs.fhb.gov.hk>.

The HMRF, steered by the Research Council (RC), supports health and medical research in the following broad areas –

- (a) public health, human health and health services (e.g. primary care, non-communicable diseases and Chinese medicine) (previously funded by the HHSRF);
- (b) prevention, treatment and control of infectious diseases, in particular emerging and re-emerging infectious diseases (previously funded by the RFCID); and
- (c) advanced medical research in the fields of paediatrics, neuroscience, clinical genetics and clinical trials (a broadened scope under the HMRF).

It provides funding support for the following types of projects –

- (a) Investigator-initiated Research Projects (funding ceiling: \$1.2 million per project) – to support studies from individual researchers in response to "open call" invitations for research grant applications guided by reference to the research areas and thematic priorities.
- (b) Government-commissioned Research Programmes – to support specific programmes commissioned to, inter alia, build research capacity, fill knowledge gaps, support policy formulation, address specific issues, assess needs and threats, etc. Funding may cover research projects, facilities, infrastructure and other capacity building initiatives as appropriate.
- (c) Research Fellowship Scheme – (funding ceiling: \$1.2 million per award) to enhance research capability and build research capacity to facilitate the translation of knowledge into formulation of health policy and clinical practice. Research fellowships will be awarded to eligible candidates covering a range of research areas and specialties on the advice of the RC.

In general, members of any discipline or profession in the health or health-related field can apply for research funding through investigator-initiated projects. Grants may be awarded for research in tertiary institutions, hospitals, medical schools or other appropriate centres, units or services. Members of other disciplines, such as social welfare and education may also apply if the proposed research is within the ambit of the HMRF. Research applications are assessed by a stringent two-tier review process, first by the Referee Panel, and then by the Grant Review Board (GRB) according to the criteria set out below –

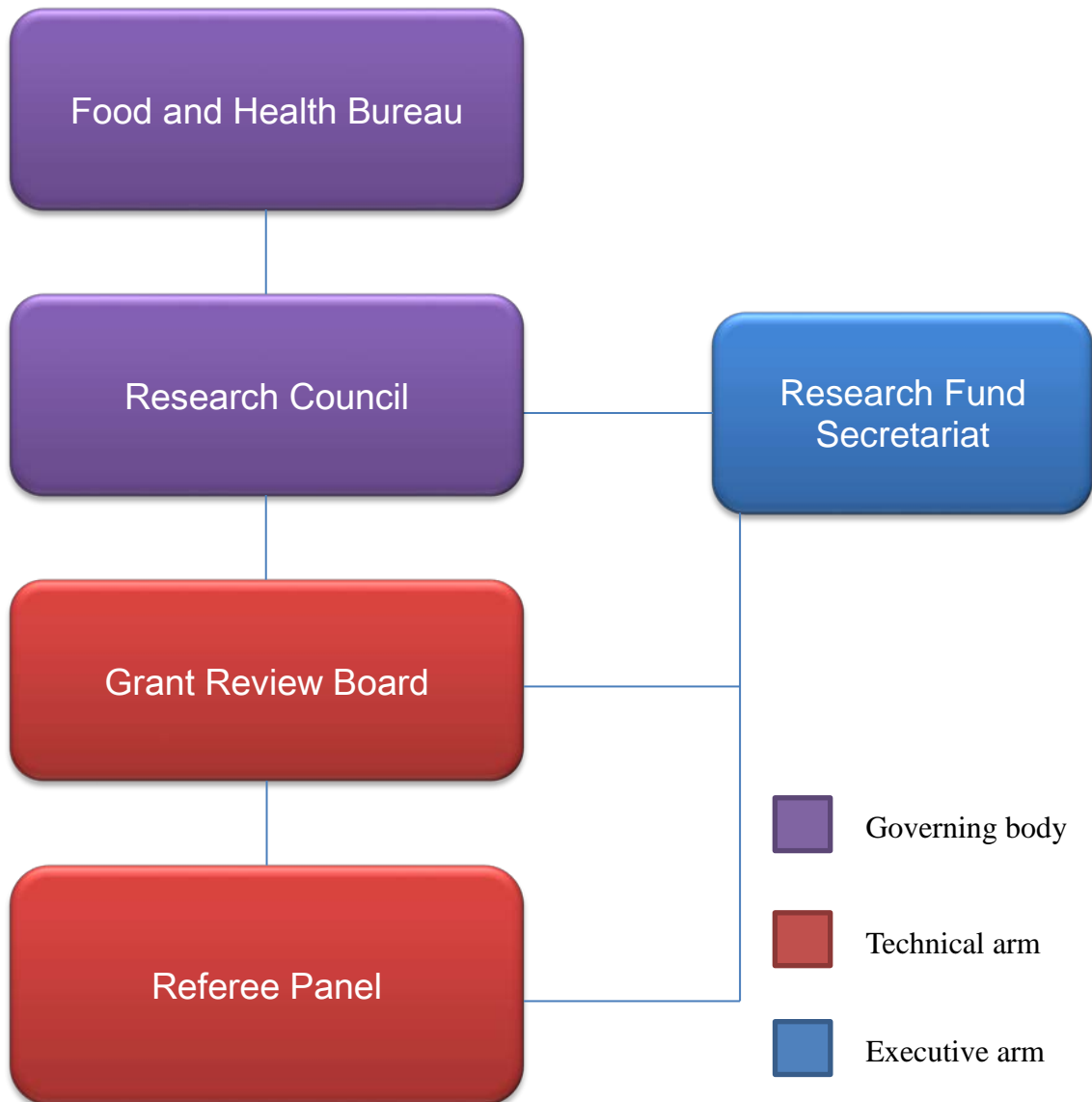
- originality of the research topic
- relevance to the scope of funding and thematic priorities
- significance of the research question
- quality of scientific content
- credibility for study design and method
- feasibility of the intended project
- research ethics
- translational potential/value

The GRB will also take into account the past performance and track records of the grant applicants, research capability of the administering institution, and the proposal's value for money when considering the funding recommendation. The RC will review and endorse the funding recommendations of the GRB. The GRB will provide specific

feedback for each application.

In addition, the HMRF organises the Health Research Symposium from time to time for researchers and healthcare professionals to share their knowledge and achievements in various research topics, and acknowledge outstanding research projects funded by the HMRF. The next Health Research Symposium will be held on 16 June 2017.

### Governance



Chaired by the Secretary for Food and Health, the RC is responsible for providing strategic steer for funding health and medical research, and overseeing the administration of the HMRF including the allocation of funds for approved grants. Its terms of reference are as follows –

- (a) to determine research agenda and funding control mechanism of the HMRF;
- (b) to approve procedures for inviting, and criteria for vetting research applications;
- (c) to approve standard terms and conditions for grant-holders;
- (d) to approve funding allocation after peer-review process;
- (e) to approve processes for the ongoing monitoring and evaluation of approved research projects;
- (f) to establish the GRB to carry out the technical work of the RC; and
- (g) to disseminate key findings of funded projects.

The RC is supported by the GRB, the GRB Executive (GRBE) and the Referee Panel for technical input. Individual members of the Referee Panel are selected according to their specific field of expertise to review grant applications.

The membership of the RC, the GRBE and the GRB is at *Appendix A*. Their operation is supported by the Research Fund Secretariat of the Research Office under the Food and Health Bureau.

## **Highlights of 2016-17**

### *2016 HMRF Open Call*

The 2016 Open Call was issued in December 2016 and by the closing date of 31 March 2017, a total of 856 funding applications were received. In accordance with the thematic priorities (*Appendix B*) and the established assessment criteria, the GRB's funding recommendations will be considered by the RC. Funding results will be announced in November 2017.

During the year, final reports of 164 completed projects were assessed by circulation.

### Investigator-initiated Research Projects

Of the 1,378 Investigator-initiated Research Projects funded under the HMRF, 883 projects have been completed. These projects cover most research topics under the thematic priorities on –

- (a) Health and Health Services – management and prevention of major non-communicable diseases including cardiovascular illnesses, cerebrovascular diseases, cancers; modifiable lifestyle factors including tobacco control, alcohol consumption behaviour and harm, mental health, injury prevention, sleep deprivation, exercise and health and environmental pollution; health services including primary care, chronic disease management and palliative care, elderly care and Chinese medicine;
- (b) Infectious Diseases – epidemiology, surveillance and control of emerging and re-emerging infectious diseases, antimicrobial resistance and vaccination programmes;
- (c) Advanced Medical Research – paediatrics; neurosciences; clinical genetics, and clinical trials.

Projects whose findings merit wider dissemination to the research community are published as a supplement to the Hong Kong Medical Journal.

### Government-commissioned Research Programmes

Twenty portfolios of commissioned programmes have been approved in the research areas of infectious diseases, mental health morbidity survey, healthcare manpower planning and projection, regulatory framework for healthcare professionals, Phase I Clinical Trials Centres, quality of healthcare for the ageing, risk of breast cancer and evaluation of Government's colorectal cancer screening pilot programme in Hong Kong. Nine portfolios have been completed.

The final reports and dissemination reports of satisfactorily completed research portfolios are posted on the website (<http://rfs.fhb.gov.hk>) for wider dissemination to the research community.

### Research Fellowship Scheme

The Research Fellowship Scheme was launched in August 2015 to support researchers or professionals in their early to mid-career, particularly healthcare professionals to enhance their skills in public health research. Tertiary institutions funded by the University Grants Committee were invited to nominate fellowship applicants annually. The grant ceiling per award is \$1.2 million including \$0.2 million for local/overseas training/attachment relating to health services or public health, in particular public health policy topics.

The 2016 Open Call was issued in August 2016 with closing deadline on 18 November 2016. The number of nominations by each institution and the total number of awards were increased from three to five and from four to eight respectively. Among the 12 applications received by the closing deadline, eight fellowship applicants were invited for interview. The provisional results of the interview are being considered by the RC.

### Consolidation of HMRF and HCPF

The incorporation of the HCPF into the HMRF will take effect in 2017-18. To streamline operation after the consolidation, the governance structure of the HMRF and the HCPS was reviewed. The HCPF and the HCPF Committee (the governing body of the HCPF) will be renamed as the Health Care and Promotion Scheme (HCPS) and the Health Care and Promotion Committee (HCPC) respectively. The RC and the HCPC are responsible for providing strategic steer for funding health and medical research projects, and health promotion projects respectively.

### Financial Position

The cash balance of the HMRF as at 31 March 2017 is \$2,327.2 million, with an uncommitted funding balance of \$1,699.5 million (i.e. funding available for new projects/programmes). The financial position for the HMRF for the 2016-17 financial year is at **Appendix C**.



**Membership of  
the Research Council, the Grant Review Board Executive and  
the Grant Review Board  
(as at 31 March 2017)**

**(A) *Research Council***

**Chairperson**

Secretary for Food and Health (or Permanent Secretary for Health)

**Members**

Prof Francis CHAN Ka-leung

Prof Annie CHEUNG Nga-yin

Prof FOK Tai-fai

Prof David HUI Shu-cheong

Prof Mary IP Sau-man

Prof Nancy IP Yuk-yu

Prof LAU Yu-lung

Prof Diana LEE Tze-fan

Prof Gabriel M LEUNG

Prof Dennis LO Yuk-ming

Prof Alex MOLASIOTIS

Prof Joseph Sriyal Malik PEIRIS

Prof Paul TAM Kwong-hang

Dr Dominic TSANG Ngai-chong

Prof Maurice YAP Keng-hung

Prof YEOH Eng-kiong

Dr YU Wai-cho

Secretary for Innovation and Technology (or representative)

Director of Health (or representative)

Chief Executive of Hospital Authority (or representative)

**Secretary**

Head of Research Office

Food and Health Bureau

***(B) Grant Review Board Executive***

**Terms of Reference:**

The terms of reference of the Grant Review Board Executive are –

- (a) to assess and recommend action (on behalf of the Grant Review Board (GRB)) on requests for additional funds, budget revision and/or reallocation, changes to study design or methods, and changes to the principal applicant or administering institution;
- (b) to monitor the quality of the peer review including the assignment of referees to grants for review;
- (c) to monitor the response of grant applicants and grant holders to requests by the GRB;
- (d) to evaluate and advise the GRB regarding changes to the grant or final report review process; and
- (e) to advise the Research Fund Secretariat on the monitoring of the progress of current research projects.

**Members**

Dr Felix CHAN Hon-wai

Prof Francis CHAN Ka-leung

Prof David HUI Shu-cheong

Prof Nancy IP Yuk-yu

Prof Timothy KWOK Chi-yui

Prof Cindy LAM Lo-kuen

Prof LAU Yu-lung

Prof Gabriel M LEUNG

Dr Patrick LI Chung-ki

Dr LO Su-vui

Dr Dominic TSANG Ngai-chong

Prof YEOH Eng-kiong

Prof YIP Shea-ping

Prof YUEN Kwok-yung

***(C) Grant Review Board***

**Terms of Reference:**

The terms of reference of the Grant Review Board are –

- (a) to set Standard Operating Procedures for the grant submission and review process, and the assessment and dissemination of final reports;
- (b) to distribute guidelines for the formulation of research proposals, grant applications and the submission of final and dissemination reports;
- (c) to review and assess applications and recommend projects for funding;
- (d) to review and assess final and dissemination reports;
- (e) to promote the development of research in the areas of health & health services, controlling infectious diseases and advanced medicine in the wider community;
- (f) to monitor the progress of approved projects; and
- (g) to monitor the financial performance of approved projects.

**Members**

Prof Anil Tejbhan AHUJA

Dr Alma AU May-lan

Prof John BACON SHONE

Prof BIAN Zhao-xiang

Prof Kenneth BOHELER

Prof CAI Zongwei

Prof CHAIR Sek-ying

Prof Chetwyn CHAN Che-hin

Prof Godfrey CHAN Chi-fung

Prof Juliana CHAN Chung-ngor

Dr Engle Angela CHAN

Prof Henry CHAN Hin-lee

Dr Karen CHAN Kar-loen

Prof Paul CHAN Kay-sheung

Prof Allen CHAN Kwan-chee

Prof Andrew CHAN Man-lok

Prof Daniel CHAN Tak-mao

Dr CHAN Wai-chi

Dr Johnny CHAN Wai-man

Prof CHAN Wai-yee

Prof CHAN Ying-shing

Prof Emily CHAN Ying-yang

Prof Kathryn CHEAH Song-eng

Prof Gladys CHEING Lai-ying

Dr CHEN Honglin

Dr CHEN Zhiwei

Prof Christopher CHENG Hon-ki

Dr CHEUNG Kin

Prof Bernard CHEUNG Man-yung

Prof Annie CHEUNG Nga-yin

Prof Raymond CHEUNG Tak-fai

Prof CHEUNG Yiu-fai

Prof CHIEN Wai-tong

Prof James CHIM Chor-sang

Dr Wilson CHING Yick-pang

Dr CHOI Cheung-hei

Prof Winnie CHU Chiu-wing

Dr Brian CHUNG Hon-yin

Dr Benjamin John COWLING

Prof Richard FIELDING

Dr Daniel FONG Yee-tak

Prof FUNG Kwok-pui

Prof Tony GIN

Dr William B GOGGINS

Prof James GRIFFITH

Prof Sian Meryl GRIFFITHS

Prof GUAN Yi

Prof Joseph HARWELL

Prof Karl HERRUP

Dr HO Lai-ming

Dr HO Pak-leung

Dr Daniel HO Sai-yin

Prof HUANG Yu

Prof Mamie HUI

Prof Ivan HUNG Fan-ngai

Dr Dennis IP Kai-ming

Prof Margaret IP

Prof Mary IP Sau-man

Dr Patrick IP

Prof JIN Dong-yan

Dr Janice M JOHNSTON

Prof KHONG Pek-lan

Prof KHOO Ui-soon

Prof KWAN Hoi-shan

Dr Patrick KWAN Kwok-leung

Prof Paul LAI Bo-san

Prof Jimmy LAI Shiu-ming

Dr Timothy LAI Yuk-yau

Dr David LAM Chi-leung

Prof LAM Ching-wan

Prof Linda LAM Chiu-wa

Prof Karen LAM Siu-ling

Prof Carly LAM Siu-yin

Prof LAM Tai-hing

Prof LAM Tai-pong

Dr Wiley LAM Tak-chiu

Dr Wendy LAM Wing-tak

Prof LAU Chak-sing

Prof Joseph LAU Tak-fai

Prof Simon LAW Ying-kit

Dr Calvin LEE Kai-fai

Prof Nelson LEE Lai-shun

Prof Tatia LEE Mei-chun

Dr Jenny LEE Shun-wah

Dr LEE So-lun

Prof Diana LEE Tze-fan

Dr LEUNG Chi-chiu



Dr Gilberto LEUNG Ka-kit

Mr LEUNG Kwok-fai

Prof Cynthia LEUNG Man

Prof LEUNG Po-sing

Prof LEUNG Suet-yi

Prof LEUNG Ting-fan

Prof LEUNG Wai-keung

Prof Ronald Adolphus LI

Dr William LI Ho-cheung

Dr Teresa LI Mun-pik

Dr Wilina LIM Wei-ling

Prof LIN Zhi-xiu

Prof LO Kwok-wai

Dr Raymond LO See-kit

Dr Janice LO Yee-chi

Prof LU Aiping

Dr Grace LUI Chung-yan

Dr Christopher LUM Chor-ming

Prof Maria LUNG LI

Dr Margaret MAK Kit-yi

Prof David MAN Wai-kwong

Prof Bradley MCPHERSON

Prof Alex MOLASIOTIS

Prof John Malcolm NICHOLLS

Dr Eddy NG Kwok-po

Prof Irene NG Oi-lin

Prof Simon NG Siu-man

Prof Gabriel NG Yin-fat

Prof Hextan NGAN Yuen-sheung

Prof Joseph Sriyal Malik PEIRIS

Prof Leo POON Lit-man

Prof Randy POON Yat-choi

Prof John RUDD

Dr C Mary SCHOOLING

Prof SHEN Jiangang

Prof SO Kwok-fai

Prof SZETO Cheuk-chun

Dr TAM Cheuk-yin

Prof TAM Lai-shan

Prof Kathryn TAN Choon-beng

Prof Sydney TANG Chi-wai

Prof TANG Jin-ling

Prof Nelson TANG Leung-sang

Prof Agnes TIWARI Fung-yee

Prof TO Ka-fai

Dr Tony TO Shing-shun

Dr Antonio TONG Chi-kit

Dr Thomas TSANG Ho-fai

Prof Kenneth TSANG Wah-tak

Prof George TSAO Sai-wah

Prof TSE Hung-fat

Dr Gary TSE Man-kit

Prof Karl TSIM Wah-keung

Prof Stephen TSUI Kwok-wing

Prof WING Yun-kwok

Prof Martin WONG Chi-sang

Dr William WONG Chi-wai

Prof Lawrence WONG Ka-sing

Prof Frances WONG Kam-yuet

Prof Chris WONG Kong-chu

Dr Grace WONG Lai-hung

Dr Cesar WONG Sze-chuen

Prof WONG Tze-wai

Prof Vincent WONG Wai-sun

Prof Gary WONG Wing-kin

Prof Samuel WONG Yeung-shan

Prof WONG Yung-hou

Prof Patrick WOO Chiu-yat

Prof Justin WU Che-yuen

Dr Joseph WU

Prof WU Wutian

Prof WU Zhenguo

Prof Hannah XUE Hong

Dr YAM Wing-cheong

Prof Bryan YAN Ping-yen

Prof Michael YANG Mengsu

Prof Maurice YAP Keng-hung

Prof YEUNG King-lun

Prof YIP Kam-shing

Prof Doris YU Sau-fung

Dr YU Wai-cho

Dr YU Weichuan

Prof Benny ZEE Chung-ying

Prof ZHANG Zhangjin

Prof ZHAO Guoping

Prof ZHAO Zhongzhen

**Thematic Priorities of the Health and Medical Research Fund for 2016 Open Call**

**Research Area 1: Health and Health Services**

This area focuses on the cause, treatment, prevention of human diseases and the effectiveness and cost-effectiveness of healthcare services and policy.

**Theme 1: Public Health**

<b>Ref. Code</b>	<b>Major non-communicable diseases (NCD)</b>
<b>PH-NC-1</b>	<ul style="list-style-type: none"><li>○ Identification and surveillance of socioeconomic and health-related risk factors associated with quality of life and major NCD in local population</li></ul>
<b>PH-NC-2</b>	<ul style="list-style-type: none"><li>○ Risk factors of cancers that has rising trends in Hong Kong in recent years including thyroid cancer, corpus cancer, prostate cancer, kidney cancer, non-small cell lung cancer and ovarian cancer</li></ul>
<b>PH-NC-3</b>	<ul style="list-style-type: none"><li>○ Effectiveness of interventions to tackle NCD and their contributing factors, e.g. cancer, cardiovascular diseases, cerebrovascular diseases, childhood nutrition and obesity</li></ul>
<b>PH-NC-4</b>	<ul style="list-style-type: none"><li>○ Extent and impact of food marketing on children's eating behaviour and body weight</li></ul>
	<b>Modifiable lifestyle factors</b>
	<ul style="list-style-type: none"><li>○ <b>Tobacco control</b></li></ul>
<b>PH-MF-1a</b>	<ul style="list-style-type: none"><li>▪ Identification of factors and evaluation of methods to prevent uptake of smoking</li></ul>
<b>PH-MF-1b</b>	<ul style="list-style-type: none"><li>▪ Effectiveness of strategies to reduce smoking prevalence in general population</li></ul>
<b>PH-MF-1c</b>	<ul style="list-style-type: none"><li>▪ Effectiveness of smoking cessation programmes and publicity including new media</li></ul>
<b>PH-MF-1d</b>	<ul style="list-style-type: none"><li>▪ Evaluation of tobacco control policies (including surveillance and intervention)</li></ul>
	<ul style="list-style-type: none"><li>○ <b>Alcohol consumption behaviour and harm</b></li></ul>
<b>PH-MF-2a</b>	<ul style="list-style-type: none"><li>▪ Identification of factors influencing drinking behaviour</li></ul>
<b>PH-MF-2b</b>	<ul style="list-style-type: none"><li>▪ Effectiveness and cost-effectiveness of interventions to reduce alcohol-related harm</li></ul>
<b>PH-MF-2c</b>	<ul style="list-style-type: none"><li>▪ Public health impact of alcohol tax change</li></ul>
<b>PH-MF-2d</b>	<ul style="list-style-type: none"><li>▪ Effect of restricting off-premises alcohol sale to underage people</li></ul>

- **Promoting good mental health**
  - PH-MF-3a   ▪ Assessment of people suffering from and at risks of developing mental disorders
  - PH-MF-3b   ▪ Risk and protective factors for mental disorders
  - PH-MF-3c   ▪ Effectiveness of interventions to promote mental well-being and optimize recovery from mental disorders
  - PH-MF-3d   ▪ Mental health literacy of the general public
  
- **Injury and poisoning**
  - PH-MF-4a   ▪ Identification of risk factors and effectiveness of prevention methods, especially in the areas of domestic injury, sports injury, falls and drowning/ near drowning
  - PH-MF-4b   ▪ Study on the epidemiology and the clinical aspects of metal poisoning in Hong Kong
  
- **Sleep deprivation**
  - PH-MF-5a   ▪ Effects of sleep deprivation on physical and mental health outcomes
  - PH-MF-5b   ▪ Effectiveness of strategies to promote sleep hygiene
  - PH-MF-5c   ▪ Effects of sleep intervention to reverse the adverse outcomes in chronically sleep deprived individuals
  
- **Exercise science and health**
  - PH-MF-6a   ▪ Effectiveness of exercise intervention to promote physical and psychological well-being in disease populations
  - PH-MF-6b   ▪ Effective strategies to promote physical activity in general population
  - PH-MF-6c   ▪ Relationships between fundamental motor development and physical literacy
  - PH-MF-6d   ▪ Exercise and cognitive health
  
- **Environmental pollution and climate change**
  - PH-EP-1    ▪ Epidemiology, identification and quantification of pollutants
  - PH-EP-2    ▪ Impact on health
  - PH-EP-3    ▪ Improve public health knowledge about linkages between health and climate
  - PH-EP-4    ▪ Effectiveness of climate change adaptation and mitigation to protect health

**Theme 2: Health Services**

- **Primary care**
  - HS-PC-1 ■ Developing multidisciplinary health service models
  - HS-PC-2 ■ Evaluation of adoption of the Hong Kong Reference Frameworks in Primary Care Settings and identification of the associated enabling factors and/or barriers
  - HS-PC-3 ■ Effectiveness of primary care programmes
  
- **Chronic disease management and palliative care**
  - HS-CD-1 ■ Service delivery models and effectiveness for chronic disease management
  - HS-CD-2 ■ Health economic analysis of the new target/biological therapies
  - HS-CD-3 ■ Effectiveness and safety of new medications or innovative devices in the management of obesity
  - HS-CD-4 ■ Effectiveness of end-of-life programmes in residential care homes
  - HS-CD-5 ■ Effectiveness of supportive and palliative/end of life care
  
- **Reducing avoidable hospitalisation**
  - HS-RH-1 ■ Effectiveness of programmes to reduce avoidable hospitalisation
  - HS-RH-2 ■ Evaluation of models of ambulatory care
  - HS-RH-3 ■ Health systems research to support enhancing care in the community
  
- **Elderly care**
  - HS-EC-1 ■ Prevention of cognitive decline in old age, exploring intervention methods and models of care for dementia
  - HS-EC-2 ■ Promote the bone health of elderly population and to promulgate secondary prevention of fragility fractures
  - HS-EC-3 ■ Early return to function and quality of life after fragility fractures in elderly
  - HS-EC-4 ■ Effectiveness of structured fall prevention programmes for elders in the community



- **Evaluation on efficiency**
- HS-EE-1     ▪ Cost-effectiveness models for better management plans
- HS-EE-2     ▪ Cost-utility comparisons between treatment options
  
- **Use of modern information technology in healthcare**
- HS- IT-1     ▪ Improve quality and safety of patient care
- HS- IT-2     ▪ Enhance efficiency
- HS- IT-3     ▪ Facilitate public private collaboration
- HS- IT-4     ▪ Enhance the capacity and ability in ambulatory / community care

**Theme 3: Chinese Medicine**

- CM-1           Integrated approaches in combining Chinese and Western models of health care
- CM-2           Effectiveness of Chinese medicine in prevention/ treatment of human diseases
- CM-3           Interactions including efficacy and toxicity of combined Chinese-western medicine
- CM-4           Identifying quality control parameters for Chinese medicines

**Research Area 2: Infectious Diseases**

This area focuses on the research of infectious diseases which pose potential threats in Hong Kong and neighbouring areas.

**Theme 1: Respiratory Pathogens (including influenza and tuberculosis)**

- RP-1           Epidemiology (including mathematical modelling)
- RP-2           Transmission
- RP-3           Pathogenesis
- RP-4           Rapid diagnostic tests
- RP-5           Novel control approaches
- RP-6           Economic burden of disease
- RP-7           Vaccine and therapies

**Theme 2: Emerging & Zoonotic Diseases**

- EZ-1           Characterise new pathogens in animals that can infect humans

- EZ-2** Identification of risk factors that contribute to the emergence of disease
- EZ-3** Transmission
- EZ-4** Pathogenesis
- EZ-5** Development of diagnostic tests
- EZ-6** Surveillance methods for emerging infections
- EZ-7** Vaccine and therapies

### **Theme 3: Antimicrobial Resistance**

- AR-1** Epidemiology of multi-drug resistant organisms
- AR-2** Identification of risk factors for colonisation and infection
- AR-3** Mechanisms of resistance and its transfer
- AR-4** Laboratory-based strategies for detection
- AR-5** Optimal infection control measures
- AR-6** Appropriate antimicrobial therapy and avoidance of antibiotic overuse
- AR-7** Effectiveness of programmes to promote antibiotic awareness in community and antimicrobial resistance

### **Theme 4: Vaccination Programmes**

- VP-1** Development of new vaccines
- VP-2** Acceptability of vaccination programmes (e.g. pneumococcal vaccination in elderly) and factors affecting vaccination
- VP-3** Effectiveness and economic analysis of vaccine (e.g. effectiveness in seasonal influenza vaccine in local community and cost-benefit analysis of hepatitis A vaccine)
- VP-4** Measures to enhance vaccination of elderly, institutionalised or other at-risk populations

### **Theme 5: Technology Platforms**

- TP-1** Application of the “omics” technologies in infectious diseases diagnosis and epidemiology studies
- TP-2** Application of the new mobile IT technologies in infectious disease surveillance and contact tracing
- TP-3** Genome sequencing and molecular epidemiology

**TP-4** Technology substitution/supplement for traditional pathogen typing methods

**Theme 6: Severe Sepsis**

**SS-1** Epidemiology in Hong Kong

**Research Area 3: Advanced Medical Research**

This area focuses on the development and use of new technologies, and treatment paradigms to improve human health. The following 4 themes are our priorities:

**Theme 1: Clinical Genetics**

- CG-1** Genetic and genomic study of major chronic and hereditary diseases in Hong Kong
- CG-2** Identification of biomarkers for common cancers using molecular biology approaches
- CG-3** Genetic counselling
- CG-4** Research on ethical, legal and social issues associated with advances in medical genetics and genomics

**Theme 2: Clinical Trials**

- CT-1** Assessing the safety and effectiveness of a new medication/ new device/ new indication of existing medication or device on a specific group of patients
- CT-2** Comparing the effectiveness in patients with a specific disease of two or more already approved or common interventions for that disease

**Theme 3: Neuroscience**

- NS-1** Epidemiology, identification of risk factors, prevention, diagnosis, treatment, management and rehabilitation of neurological diseases, particularly neurodegenerative diseases, stroke and injuries
- NS-2** Stem cell therapy and regenerative medicine

**Theme 4: Paediatrics**

**PD-1**      Epidemiology, identification of risk factors, prevention, diagnosis, treatment, management in the following special areas: Neonatology, respiratory, allergy, clinical immunology, dermatology, gastroenterology, haematology, oncology, metabolic, cardiovascular, surgical diseases and nutrition (Vitamin D supplementation to exclusive breastfed babies)

**Appendix C**

**Health and Medical Research Fund  
Financial Report for the year ended 31 March 2017**

	HK\$	HK\$
<b>Cash balance as at 31.3.2016</b>		<b>1,012,039,737.13</b>
Grants paid for the period from 1.4.2016 to 31.3.2017		(184,806,311.93)
<u>Former HHSRF</u> Commissioned project grants	(937,967.47)	
Investigator-initiated project grants	<u>(8,091,579.26)</u>	
	9,029,546.73	
<u>Former RFCID</u> Commissioned project grants	(11,196,139.16)	
Investigator-initiated project grants	<u>(19,371,121.57)</u>	
	30,567,260.73	
<u>HMRF</u> Commissioned project grants	(39,831,025.55)	
Investigator-initiated project grants	<u>(102,803,346.71)</u>	
	142,634,372.26	
Direct operation costs paid	(2,575,132.21)	
Injection approved on 28 May 2016		1,500,000,000.00
<b>Cash balance as at 31.3.2017</b>		<b><u>2,327,233,425.20</u></b>
Less:		(627,706,159.25)
<u>Former HHSRF</u> Fund committed but not yet paid:		
Commissioned project grants	(6,081,372.45)	
Investigator-initiated project grants	<u>(3,944,996.30)</u>	
	10,026,368.75	
<u>Former RFCID</u> Fund committed but not yet paid:		
Commissioned project grants	(1,183,110.50)	
Investigator-initiated project grants	<u>(1,003,161.22)</u>	
	2,186,271.72	
<u>HMRF</u> Fund committed but not yet paid:		
Commissioned project grants	(141,638,388.13)	
Investigator-initiated project grants	(469,002,051.45)	
Research fellowships	<u>(4,853,079.20)</u>	
	615,493,518.78	
<b>Uncommitted balance as at 31.3.2017</b>		<b>1,699,527,265.95</b>