# SYNAPSE



**JULY 2008** 

**RESTRICTED TO MEMBERS ONLY** 



Title: "Riding is good exercise for the horse" Peter CY WONG

Photographer: Dr. Kui-chun LAM

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## SYNAPSE



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## The 18<sup>th</sup> Gordon Arthur Ransome Oration Some Milestones: Specialist Education, Training and Assessment in Singapore

Chin-hin CHEW

Past Master Academy of Medicine Singapore

#### **Abstract**

Singapore had its most significant milestone in 1905 when the Singapore Medical School was founded. The Academy of Medicine, founded in 1957, celebrates its Golden Anniversary in 2007. Thus, the events that influenced the development of postgraduate medicine, specialist education, training and examinations commenced rightly from 1957. These are presented chronologically. The significant roles played by the Academy, the University's Medical School and the Ministry of Health are highlighted, bearing in mind the ongoing developments in Singapore and globally over the years. To keep pace with the further developments and advances, the high gold standards in specialist training and assessment need to be refined with time. This can only be to the benefit of our patients and the community in Singapore and beyond.

#### **Prologue**

First, let me thank the Master and Council, Academy of Medicine, for inviting me to speak at this celebration of the Academy's 50<sup>th</sup> Anniversary. It is indeed an incredible privilege and honour, even more so to be associated with the oration that bears the name of our founding Master - Sir Gordon Arthur Ransome.

Professor Ransome was my first Chief of Medicine when I joined his Department (Medical Unit I) at the Singapore General Hospital (or SGH) 51 years ago in July 1956. Besides his clinical prowess, he is fondly remembered for another attribute - his frequent lapses of memory, I suspect sometimes for convenience. In the course of a ward round, "Chew", he quipped: "May I have your stethoscope, I left mine in the office" while his was dangling around his neck! I believe he wanted the use of my diaphragmatic chest piece for an aortic murmur - those were the days when the bell was the only norm for routine use. Ten years on, he asked me to join him in consultation to see his royal patient across the Causeway. On the way to Bukit Serene, "Chin Hin" he addressed me by my first

name this time: "I'm sure you know we do not send medical bills to royalty!" I trust I had not contravened any Civil Service general orders.

A central role of the Academy has always included the advancement of postgraduate medical education and conduct of higher professional examinations. This mission has been dearly by Academicians since the foundation of the Academy. A review of some significant milestones would I hope also meet with the approval of our founder Master if he were here today.

#### **The Early Years**

Singapore had its most significant medical milestone in 1905 when the Singapore Medical School was established by the British Colonial Government. The School's standards were consistently high and by 1916, its graduates were fully recognised by the General Medical Council (GMC) of Britain for full registration.<sup>2</sup>

While the School's undergraduate curriculum followed wellestablished and traditional Commonwealth patterns, there were no formal postgraduate training programmes. Indeed specialist training was unheard of and the Colonial Government discouraged further postgraduate training. Dr G Haridas, the first local graduate to obtain an MRCP, was given a scholarship on the condition that he would not sit for any higher examination. Nevertheless, sit he did and passed on his first attempt in London.<sup>3,4</sup> While it was the Government's policy to discourage local doctors form pursuing postgraduate studies and qualifications, our doctors form the outset felt the need to update themselves professionally. Clinical meetings were organised mainly at SGH and Tan Tock Seng Hospitals (TTSH) and later at the Kandang Kerbau Hospital (KKH).<sup>2</sup> The forte of the Medical School had always been bedside teaching of clinical medicine and surgery. This was conducted in the course of daily rounds and the teaching of medical students. There were a good number o teachers who, although colonial, were truly



committed and dedicated to the profession and teaching. The late Dr Wong Heck Sing, a former President of the College of Family Physicians (CFPS) and Fellow of our Academy highlighted two such teachers, namely, Gordon Ransome and Eric Mekie, Professors of Medicine and Surgery respectively. He described them as complete doctors, imparting knowledge and skills to their local colleagues who not only succeeded them but in turn produced many more local professors and teachers for our country.<sup>5</sup>

#### The War Years

Formal medical education practically ceased during the Japanese Occupation from 1942 to 1945. With all expatriate doctors away in internment, the Occupation brought local doctors and staff in the hospitals, especially TTSH and KKH, much closer to each other, sharing the common experience of death, dreadful diseases and scarce resources. These were the only general hospitals serving the local population. administered and manned entirely by local doctors and nurses. They became centres where doctors not only discussed their patients, teaching and learning daily by the bedside but also practical policies which they felt deeply about well before and during the War, e.g. the imperative need for a unified service with the equal treatment of local and colonial doctors. The three and a half years of Japanese Occupation gave the local health team tremendous opportunities to assume full responsibility for the medical services under the most trying conditions.<sup>6</sup> Dr Benjamin Sheares, our 2<sup>nd</sup> President, founding member and Patron of our Academy, wrote, "The Japanese invasion caused a general awakening of the people of Malaya. In no small measure, the local graduates contributed to this awakening despite having been deliberately excluded from the higher echelons of the medical service".2

I still remember some names of our local medical leaders. From KKH we had Dr Sheares himself, BR Sreenivasan, K Vellasamy and Tay Teck Eng; from TTSH were W Balhatchet, Clarence Smith, Benjamin Chew and ATS Chong; and from Middleton, Ernest Monsteiro.<sup>2</sup> They were all colleagues and friends of Professor Ransome.

#### **Early Post-war Years**

The War ended with the formal Japanese surrender on 2 September 1945 and Singapore came under the British Military Administration of Lord Mountbatten, Supreme Allied Commander, Southeast Asia shortly thereafter, In April 1946, Singapore became a British Crown Colony following the dissolution of the Straits Settlements. Even with the establishment of a unified service, the pace of sending our doctors for formal specialist training was slow. A new scheme in the early post-war years was to send a limited number of doctors to Britain on scholarship for a period of 1-2 years to attend courses and sit for examinations but offered little or no training. Most were

successful but the programme was nonetheless wasteful in some measure. They were absent from work in Singapore for months or more and were focused mainly in passing the membership or fellowship examinations of the Royal Colleges rather than acquiring new skills.<sup>4,7</sup>

#### The Establishment of Postgraduate Institutions

It was inevitable that when our doctors pursued further studies, they would follow the British and Commonwealth pattern. Formal postgraduate education became organised only with the founding of the Academy of Medicine in 1957 and the establishment of the Committee of Postgraduate Medical Studies in 1961. Shortly after the foundation of the Academy, this Committee was formed as a result of a carefully prepared Memorandum sent to the Government and the University. The Committee was the predecessor of the School of Postgraduate Medical Studies, now know as the Division of Graduate Medical Studies (DGMS). Patterned on the Royal Colleges of Britain and Commonwealth but unlike these Colleges, which are responsible only for individual disciplines, the Academy embraces all specialties. These were indeed significant milestones in postgraduate education and the beginning of specialist training programmes. This was also the period when Singapore became more politically independent. 4,8

In the early years of the Academy and the School, regular courses were organised for candidates preparing for qualifications awarded by the various Royal Colleges in Australasia and Britain. The Academy had always felt that Singapore should have its own professional examinations and qualifications of internationally recognised standards. Many memoranda on this matter had been sent to the Ministry of Health and the University but progress had been painfully slow.

On 8 October 1967 Deputy Prime Minister Toh Chin Chye delivered a speech in which he censured the Faculty of Medicine for not making any progress in the field of higher professional education and examinations. This was prominently reported in the Straits Times of 9 October 1967. The response by the Academy was almost immediate. I recall receiving phone calls from the Master, Dr K Shanmugaratnam, and the Assistant Master, Dr Seah Cheng Siang, proposing for an emergency Council meeting to respond to Dr Toh's speech. This was held on 11 October and a letter was soon despatched by hand to him indicating that the Academy existed for the advancement of medical specialisation and establishment of higher professional qualifications. We also requested an opportunity for the Council to meet him. He promptly agreed and I remember vividly the morning coffee we had with him in the Conference Room at the City Hall on 4 November 1967. At this meeting Dr Toh suggested that the Academy, the Faculty and the Singapore Medical Association form a Committee under chairmanship of the Master,

and jointly send a Memorandum to the Minister for Health. The Committee recommended, "that higher professional qualifications in various clinical specialities be awarded by the University and that the School of Postgraduate Medical Studies be reconstituted to enable the Academy to participate as equal partners in the training programmes and examinations".<sup>7,9</sup>

In April 1968, Dr Toh was appointed Vice Chancellor. A new statute for the School provided for it to function independently of the Faculty under a Board comprising the Vice Chancellor as Chairman, the Director and Deputy Director, 4 teachers of the Faculty, 4 members of the Academy and the Director of Medical Services. At its first meeting, Dr Toh placed on record his appreciation of the services rendered by the Committee under the chairmanship of the Academy's Master. Thus, the meeting on 4 November 1967 was historically significant and the Academy will always be grateful to Drs Toh and Shanmugaratnam for their role in establishing and placing postgraduate education and examinations in Singapore on a firm and formal foundation.

In addition to taking on the functions of the former Committee, higher professional examinations commenced in 1970 leading to the degree of Master of Medicine (or MMed) in Internal Medicine, Paediatrics, Surgery and Obstetrics & Gynaecology. Examinations in other disciplines were later added. To ensure that standards obtained would be equal to those of the Royal Colleges, external examiners from these bodies were appointed. Reciprocity was often granted and since 1986, joint examinations were also established in several disciplines (Table 1). Of equal importance, were we

Table 1 Higher Professional Examinations of Singapore

Master of Medicine	
Internal Medicine	Psychiatry
Paediatric Medicine	Ophtahalmology
General Surgery	Diagnostic Radiology
Obstetrics & Gynaecology	Public Health
Anaesthesia	Occupational Medicine
Orthopaedic Surgery	Otorhinolaryngology
Family Medicine	
Emergency Medicine	
Joint Examinations	
General Surgery	MRCS(Edin)/MMed
Ophthalmology	MRCS(Edin)/MMed
Internal Medicine	MRCP(UK)/MMed
Paediatric Medicine	MRCPCH/MMed
Obstetrics & Gynaecology	MRCOG/MMed
Emergency Medicine	MRCS(Edin)/MMed

without these courses and examinations, doctors seeking higher professional qualifications would have to take leave to proceed abroad, sometimes for many months or even years. Now there is no wastage of time, manpower and money for the candidate and for the country.

## Specialist Training, Certification and Assessment

In keeping with its major responsibility to maintain the highest standards of specialist practice, Fellowship of the Academy of Medicine, Singapore (FAMS) had always based on stringent standards. This principle continues unchanged. Apart from the possession of a higher qualification, a minimum period of accredited training of at least 5 years in a specialty and evidence of sound professional standing, character and conduct are mandatory criteria.<sup>8</sup>

With the rapid development of specialisation, it was recognised that our local MMed and its overseas equivalent qualification did not denote the completion but the beginning of advanced specialist training of a further 3 to 4 years. Thus, in 1975, a Standing Committee on Specialist Certification was formed which led to the institution of the Roll of Specialists. The committees and its specialist boards also laid criteria for basic and advanced training in accredited units in our hospitals. This was the precursor of the present Specialist Register.

1991 was another milestone when the Joint Committee of Advanced Specialist Training (JCAST) was set up to replace the Academy's Standing Committee, again as a tripartite partnership comprising representatives form the Academy, the Postgraduate School and the Ministry of Health. The objectives included the provision of advanced specialist training and certification and of accreditation of training posts, all of which comprised the mission of the Academy. It was further recognised the need to conduct formal exit certification and assessment by teams of both local and external assessors (Table 2). 4,12

Table 2 Specialists Accreditation Board (Medical Registration Act 1997)

Basic Qualification	Conferring Body
M Med	National University of Singapore
Or Equivalent	
"Exit" Qualification	Conferring Body
	Conferring Body  Academy of Medicine

During the last decade, even more fast moving developments in medical specialisation have taken place in Singapore and



globally, To keep pace with these immense developments, the Medical Registration Act was revised in 1997. This provided for the establishment of the Specialist Accreditation Board and the Specialist Register. The chairman is the Director of Medical Services and the 3 ex-officio members are the Master, the Director, DGMS; and the President, Singapore Medical Council. Other members include senior specialists who are appointed by the Minister for Health. The Academy can take heart that no less than 5 Past Masters are members, including the Director of Medical Services (Fig. 1). The Board is assisted by the Joint Committee of Specialist Training (JCST) comprising the Master of the Academy and the Director of DGMS as co-chairmen and by specialist training committees (STCs) of the 35 recognised disciplines.<sup>4</sup> In 1999, the Academy passed a resolution granting its Fellowship to trainees on the successful completion of their training programmes, and having their names placed on the Specialist Register of the Singapore Medical Council.<sup>7</sup> Thus again, this Board, the JCST and the STCs continue to be responsible in this tripartite partnership which is so important in this relatively small community of our small island-nation.

#### **Epilogue**

The Academy has from the early years formed 10 Chapters to represent the various disciplines. Moving onwards in 2004, 6 of these Chapters were transformed into Colleges. In the last 3 years, they have no doubt enhanced their more independent role in the professional development of their respective specialty. 13

In his keynote address in 2005 at our Medical School's Centenary Celebrations at the 39<sup>th</sup> Singapore-Malaysia Congress of Medicine, Professor K Shanmugaratnam propounded, "the DGMS may well need to evolve further in terms of its status and structure, to meet these developments. The University is empowered to award postgraduate degrees and diplomas...However, it is the Academy of Medicine, which has membership of more than 1800 specialists and corporate Colleges in 6 major medical specialties, which has the full professional capacity to conduct training courses and examinations in these specialties, and it is the Ministry of Health which provides the training facilities, sets the standards of specialist practice and controls the accreditation of medical specialists. Any change that may affect the conduct or regulation of postgraduate medical education and qualifications should therefore be undertaken jointly by the University, the Ministry of Health and the Academy of Medicine."7

I am pleased to report that indeed a Committee on Postgraduate Specialist Training and Examinations was formed this year comprising the 3 established stakeholder parties (Table 3). A clear consensus has emerged and the Academy with its constituent Colleges will be substantially involved in the conduct of higher professional examinations and FAMS will be the statutory yardstick for the successful completion of specialist training.

Table 3 Committee on Postgraduate Specialist Training and Examinations

Name	Designation
Chew Chin Hin	Chairman
Chee Yam Cheng	Deputy Chairman
Raj Nambiar	Member
Lee Eng Hin	Member
Lau Hong Choon	Member
Ho Lai Yun	Member
Fock Kwong Ming	Member
Lim Shih Hui	Member
Chan Yew Weng	Member

The high gold standards of specialist training in keeping with the Academy's mission will continue to be refined. These standards cannot be compromised with ongoing needs and developments. I am convinced that this generation of Academicians and of those to come will continue to lead the Academy to greater heights, keeping faith with the aspirations of our Founders. The Academy can only go forth from strength to strength, continuing to flourish for the next 50 years and beyond. Mr Master, Happy Golden Anniversary and Congratulations.

#### **Acknowledgements**

Ms Yong Bee Choon and Ms Kirat Kaur for secretarial assistance and access to the Academy's archives and annual reports.



Dr Chew was awarded Honorary Fellow of the HKCP in 2003

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### Editor's note

This oration was delivered at the Opening Ceremony of the 41<sup>st</sup> Singapore-Malaysia Congress of Medicine on 19 July 2007 in Singapore. The author has kindly granted his kind permission for the speech to be published in Synapse for a regional pespective of postgraduate medical education.



Prof Yu presented Dr Chew with the medal for delivering the inaugural Gerald Choa Memorial Lecture on "Ethical Medicine" in October 2002.

## **Author's Background**

Dr. Chew Chin-Hin was 76 at the time of the Gordon Arthur Ransome Oration. He had received his medical education at Hong Kong University and did his first Surgical House Job at the Queen Mary Hospital.

The rest of his career was spent in Singapore. He gained the MRCP from Edinburgh University in 1961, specialising in Respiratory disease, particularly TB.

From 1981 to 1991 he was the Deputy Director of Medical Services in Singapore.

He is a Past Master of the Singapore Academy of Medicine, and is presently the Chairman of the Committee of Postgraduate Specialist Training and Examination.

He is an Honorary Fellow of the Hong Kong College of Physicians and gave the First Gerald Choa Memorial Lecture.



Dr Chew maintains close ties with the HKCP, photographed here in Hong Kong with our past Presidents, Prof TK Chan and Prof R Yu in 2003.





Address to New Fellows of the Royal College of Physicians and Surgeons of Glasgow Professor Rosie YOUNG

Professor Rosie Young with President Brian Williams

\* Delivered at the RCPSG Fellowship Admission Ceremony held on 10 May 2008 at the Hong Kong Academy Of Medicine

Professor Williams, Ladies and Gentlemen,

irstly I would like to join the President of the Hong Kong College of Physicians and other Fellows of the Royal college of Physicians and Surgeons of Glasgow to welcome the President of the Glasgow College and his colleagues to Hong Kong Secondly, I wish to thank the Royal College of Physicians and Surgeons of Glasgow for giving me the honour to say a few words this evening to the newly admitted Fellows including the Honorary Fellows.

I hope I am right to say that Hong Kong is not foreign to our friends from Glasgow. Several of them including our President, Professor Williams, Dr.Dai Roberts, Professor Sir Graham Teasdale and Dr. Colin Semple, have visited us in their official capacity and no doubt many others have come to Hong Kong as external examiners of the two medical schools or to visit their friends here. I haste to add that Scotland is also not foreign to our medical colleagues in Hong Kong The bond between the medical profession in Scotland and that in Hong Kong dated back to 121 years ago, in 1887, when Patrick Manson and James Cantlie, both graduates of Aberdeen University came to Hong Kong to practice medicine and later founded the Hong Kong College of Medicine for the Chinese. In 1911 this College became the Faculty of Medicine of the University of Hong Kong. Closer to home, in the last century Professors L J Davies, A J S McFadzean, James Gibson and J. H. Hutchison all from Glasgow took up Chairs, Deanship and Vice-Chancellorship in the University of Hong Kong. Before the handover of Hong Kong to China in 1997, the medical degrees in Hong Kong were recognized and regulated by the Medical Council in the United Kingdom. It is therefore quite logical that our undergraduate education closely follows the British model and benefits from the Scottish tradition. But it needs more than rules and regulations to generate and strengthen the close ties between the Hong Kong College of Physicians and the Glasgow College such as what we witness today.

My mentor, the late Professor A J S McFadzean coming from Glasgow himself sent us to Glasgow for specialty training and in those days to sit for the membership examination of the Royal Colleges. I was in Glasgow from 1958 to 1959 working under Professor L J Davies and Dr. Edward McGirr in the Regius Department of Medicine at the Royal Infirmary. During that year I was trained in endocrinology and passed the MRCP examinations

of the London and Edinburgh Colleges. As a matter of fact I spent many quiet evenings at the Glasgow College library and I thoroughly enjoyed the friendly environment and the hospitality of the library staff. You may wonder why I did not sit for the Glasgow College examination then. The answer is very simple. Despite my attraction to Glasgow and her people and my longing to become a member of the Glasgow College I realized that the my meager scholarship stipend did not permit me this luxury, the examination fee of the Glasgow College being then the most expensive among all the British Colleges . Although not a Scot by birth, the year's sojourn in Glasgow has injected some thrifty trait into my blood.

But all was not lost. In 1985 I was elected Fellow of the College without examination and my dream came true. Regrettably due to one reason or other I could not go to Glasgow to sign the roll. I am therefore overwhelmed with joy when I learned that the President and the office bearers of the Glasgow College would be coming to Hong Kong this year for the William and Elizabeth Davies Foundation Trust International Meeting and the Fellowship Admission. The significance of this formality is more than what meets the eye. It refreshes the strong links between the medical profession in Hong Kong and that in Scotland. Although we are very different in climate, sovereignty, culture and ethnicity, we speak the same language and share a common concern in population health, health policy, training of doctors, medical research and wider global affairs. There is certainly much that we can learn from one another.

Professor Williams, Fellows of the Royal College of Physicians and Surgeons of Glasgow and my colleagues in Hong Kong, luck and goodwill brought us together over 120 years ago. We must build on the ties established by our ancestors. Despite the passage of time and change of personnel the Glasgow College and the medical profession in Hong Kong represented by the Colleges of Physicians and Surgeons will continue to work together in professional training, in medical research and in ways and means to improve healthcare. The award of Honorary Fellowship to Professors Todd, Chan, Lai, Lam and Yu this evening will serve as another milestone in the history of our relationship.

I sincerely hope that Professor Williams and in due course his successor will honour us with more visits in future.

Thank you.



The Inaugural William and Elizabeth Davies Foundation Trust International Meeting was jointly organized by Hong Kong College of Physicians and the Royal College of Physicians & Surgeons of Glasgow. The William and Elizabeth Davies Charitable Foundation supports research, education and training in cancer care and treatment. Mr William Davies was a Scot who worked as a civil servant in Hong Kong after World War II and remained here until 1967. Mrs Davies fought a long battle against cancer.

The meeting held on 10 - 11 May, 2008 at The Academy of Medicine Building, Hong Kong was attended by 180 delegates, including visitors from United Kingdom, China, Malaysia and Australia.

It was a stimulating event providing current knowledge in the fast growing field of oncology. The theme of the conference was 'Pushing the Boundaries in Multidisciplinary Cancer Care' with plenary sessions focusing on cancers of the lung, liver, colon, breast, and B-cell lymphoma. Topics ranging from screening & imaging, surgical oncology, adjuvant therapy, management of advanced disease and palliative care were covered in 19 lectures over the 2 day period by renowned speakers representing both colleges. The highlight was the Davies Memorial Lecture which was entitled 'Molecular Therapeutics in Clinical Practice' and delivered by Dr David Dunlop from Glasgow.

One of the primary aims of the meeting was to encourage young oncologists to present their research. Indeed, thirty five posters were exhibited and prizes were awarded to the authors of the three best posters. They were Dr Roberta Pang (Queen Mary Hospital, HK), Dr Beatrix Elsberger, (Glasgow, UK) and Dr Linda Leung (Prince of Wales Hospital, HK).

For those who missed out on this event, abstracts of the papers will be published in a supplement issue of the Scottish Medical Journal.

The meeting was a huge success, due to the enormous efforts by Prof WK Lam, Prof Anthony Chan, Prof Philip Li and our college secretariat, who collaborated efficiently with Prof Paul Knight (RCPSG) via teleconferencing.

# Admissions Ceremony, Royal College of Physicians and Surgeons (Glasgow)

An admission ceremony was held on the first evening of the Conference where 58 RCPSG fellows, both new fellows as well as fellows previously admitted in absentia were formally welcomed by Professor Brian Williams, President of the RCPSG and invited to sign the roll in Hong Kong. This event also witnessed the bestowment of honorary awards to our distinguished physicians as listed below. Professor Rosie Young was invited to address the new fellows. Dinner followed in a convivial ambience, enjoyed by 80 fellows who cherished the rare occasion to meet RCPSG fellows from different countries.

#### **Honarary Fellowships (FRCPS(Glasg))**

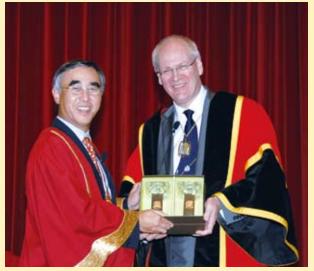
Hon FRCPS(Glasg) (Summa Cum Laude) Prof Sir David Todd Hon FRCPS(Glasg) (Honoris Causa) Prof KN Lai

Prof Sir David Todd Prof KN Lai Prof TK Chan Prof Richard YH Yu Prof WK Lam

#### **COUNCIL NEWS**



A bagpiper in traditional Scottish kilt led the official party into the hall



Presidents of both Colleges exchanging gifts and a friendly handshake



From left to right
Back row: Prof P Li, Mr D Galloway, Prof R Stevenson
3rd row: Prof WK Lam, Prof TK Chan, Mr J Miller, Prof P Knight
2nd row: Prof R Yu, Prof KN Lai
Front row: Prof R Young, Prof B Williams, Prof Sir D Todd



Honorary Fellows Prof R Yu, Prof Sir David Todd and Prof WK Lam sharing a photographic moment with new Fellows.



# Specialty Update: **Neurology The challenge of treating refractory epilepsy**

**Howan LEUNG, Patrick KWAN** 

Department of Medicine and Therapeutics Prince of Wales Hospital, Hong Kong

#### **Defining refractory epilepsy**

Up to 1% of the population has epilepsy, and managing refractory epilepsy remains a major clinical challenge. The term usually refers to a state of resistance to antiepileptic drug (AED) therapy, which is the mainstay of treatment for epilepsy. But how many AEDs would need to be failed before drug resistance can be declared? In a study from Glasgow 525 unselected adolescent and adult patients were given a diagnosis of epilepsy, commenced on AED therapy and followed up for 16 years. Among the 470 patients who had never before received AED treatment, 64% entered terminal remission for at least 1 year. 47% of patients became and remained seizure free on their first drug, 13% on the second drug, but only 4% on the third drug or a combination of two drugs<sup>1</sup>. This observation suggested that when two AEDs have failed, the chance of success with a third agent is slim. Other clinical parameters such as seizure frequency and seizure duration may also be relevant in designating refractoriness but previous studies showed that only absolute seizure freedom may be associated with persistent improvement in quality of life<sup>2</sup>. Based on these observations, there is growing consensus that, for operational purpose, refractory epilepsy may be recognised after failure of two AEDs (appropriately chosen for the seizure type / epilepsy syndrome) in adequate doses due to lack of efficacy<sup>3</sup>. There are, of course, mimickers of refractory epilepsy, which include misdiagnosis of epilepsy, incorrect classification of syndrome (leading to the inappropriate choice of AEDs), dosing problems due to non-compliance/side effects, and, life-style factors<sup>4</sup>.

## Medical treatment of refractory epilepsy: the rationale

It is not uncommon experience that after the use of the first AED or a sequential second AED, some degree of seizure reduction takes place, yet complete seizure freedom is not achieved. In these occasions, combination therapy may be attempted with the addition of AED to either the first or second monotherapy. With between 15 to 17 AEDs available in the market at present, the potential combinations of duotherapy are in excess of 100. There are, however, several rules of thumb to guide "rational"

polytherapy: (1) pharmaco-mechanistic approach, (2) synergistic combinations, (3) attention to drug load and (4) pharmacokinetic interactions.

In the pharmaco-mechanistic approach, combining AEDs requires an understanding of their pharmacology and mechanisms of action. Drugs such as phenytoin, carbamazepine and lamotrigine act by limiting sustained repetitive firing via blockade of voltagegated Na+ channels; barbiturates and benzodiazepines enhance the inhibitory action of y-aminobutyric acid (GABA). Effects on calcium and potassium channels and reduction of glutamate mediated excitation also contribute to the antiepileptic properties of some AEDs (Table 1). It has been proposed that clinical efficacy of AEDs may be enhanced by combining agents with complementary mechanisms of actions. For example, a review paper showed that combining a Na+ channel blocker with a GABA-ergic drug might be particularly beneficial<sup>5</sup>. In the approach using synergistic combinations, the clinicians use the best available data about the therapeutic effects of different drug combinations. Take for example the clinical manoeuvre of an add-on therapy for a patient on lamotrigine - non-randomised controlled data showed that adding lamotrigine to valproate produced a better response than adding lamotrigine to carbamazepine or phenytoin despite similar lamotrigine concentrations<sup>6</sup>.

Avoiding excessive toxicity is another important rule - more neurotoxic effects have been reported with carbamazepine/ oxcarbazepine in combination with lamotrigine, all of which block voltage-gated Na+ channels<sup>6</sup>. Attention should also be paid to the total drug load, which has been shown to correlate with the incidence of adverse effects<sup>7</sup>. Regarding pharmacokinetic interactions, the older AEDs are notorious with their effect on the hepatic cytochrome P450 (CYP) enzyme superfamily<sup>8</sup>. Hence, phenobarbital, primidone, phenytoin, carbamazepine may accelerate the breakdown of CYP-metabolised AEDs as well as many commonly prescribed lipid-soluble drugs including oral contraceptives, cytotoxic drugs, cardiac anti-arrhythmic drugs and warfarin. Sodium valproate, being a weak inhibitor of monooxygenase and conjugating enzymes, demonstrates another example - it slows down the clearance of other AEDs including phenytoin and lamotrigine<sup>8</sup>. Take for example again the combination



Table 1 Dosing and mechanisms of action of antiepileptic drugs currently marketed in Hong Kong

Drug	<b>Starting dose</b> (mg/day)	Commonest dose (mg/day)	Maintenance dose (mg/day)	Perceived primary mode of action
Established antiepileptic drugs				
Carbamazepine	200	600	400-2000	Blockade of Na+ channels
Clobazam	10	20	10-40	Increased GABA transmission
Clonazepam	1	4	2-8	Increased GABA transmission
Ethosuximide	500	1000	500-2000	Blockade of Ca2+ channels
Phenobarbital	60	120	60-240	Increased GABA transmission
Phenytoin	200	300	100-700	Blockade of Na+ channels
Primidone	125	500	250-1500	Increased GABA transmission
Sodium valproate	500	1000	500-3000	Multiple
Newer antiepileptic drugs				
Gabapentin	300-400	2400	1200-4800	Binding to Ca2+ channels ( $\alpha$ 2 $\delta$ subunit)
Lamotrigine	12.5-50	200-400	100-800	Blockade of Na+ channels
Topiramate	25-50	200-400	100-1000	Multiple
Vigabatrin	500-1000	3000	2000-4000	Increased GABA transmission
Oxcarbazepine	150-600	900-1800	900-2700	Blockade of Na+ channels
Pregabalin	150	300	150-600	Binding to Ca2+ channels ( $\alpha$ 2 $\delta$ subunit)
Levetiracetam	500	1000-2000	1000-3000	Binding to SV2A

between valproate and lamotrigine, a "low and slow" regimen of lamotrigine may be advised due to the expected elevation of lamotrigine level brought about by valproate administration.

#### The use of newer AEDs

We have witnessed the licensing of many new AEDs globally in the past 15 years. In chronological order of registration in their national or the international markets, these were: vigabatrin, zonisamide, oxcarbazepine, lamotrigine, felbamate, gabapentin, topiramate, tiagabine, levetiracetam, and pregabalin. Fosphenytoin is a prodrug of phenytoin given parenterally for the treatment of status epilepticus. Collectively, they have broadened the choice of treatment in epilepsy patients. As compared with the established AEDs (phenobarbital, phenytoin, carbamazepine, ethosuximide, primidone, valproate and some benzodiazepines), the newer AEDs may differ in terms of the underlying mechanism of action, side effect profiles and potential drug interactions (Table 1). In the recently published SANAD study, the question of using newer AEDs versus established AEDs was addressed, although the hypothesis was tested in a monotherapy setting and it may not apply to a refractory patient population. For patients with partial onset seizures, lamotrigine was considered to be clinically better than carbamazepine, gabapentin, topiramate and possibly oxcarbazepine in terms of time to treatment failure<sup>9</sup>. In patients with generalized epilepsy, valproate was better tolerated than topiramate and more efficacious than lamotrigine<sup>10</sup>. No large scale head-to-head study comparing the new AEDs in refractory epilepsy has been published.

## Surgical treatment of refractory epilepsy: the rationale

Some patients with epilepsy may be amenable to surgical treatment: this may be further divided into those in whom the condition needs treatment in its own right (e.g. arteriovenous malformation or high-grade brain tumour) or those in whom the primary aim of operation is the control of seizures. "Epilepsy surgery" usually refers to the latter group. Although different centres often have different approaches to patient selection leading to differing extents of investigations and surgical decisions, several general principles are applicable to the process of presurgical evaluation: (1) the patient should satisfy the criteria of drug resistance, (2) an identifiable epileptic focus or testable hypothesis for localizing the epileptogenic zone exists, (3) the functions of the brain region to be resected are delineated to help with decision making.

Because of ethical and logistic reasons, randomized studies of epilepsy surgery are few and far between. In one study of patients with temporal epilepsy randomized to either surgery or continued medical treatment, the cumulative proportion of patients who were free of seizures impairing awareness was 58% at one year in the surgical group compared with only 8% in the medical group<sup>11</sup>. Pooled data analysis of 24 uncontrolled studies suggested that, in patients undergoing anteromesial temporal lobe resections, approximately two-thirds of patients would be rendered free from disabling seizures<sup>12</sup>. For patients undergoing localized neocortical resections, approximately half would become seizure-free<sup>12</sup>. Data from our centre are largely comparable to these figures<sup>13</sup>. In a large single-centre study, operated patients were compared with those

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who were still waiting for presurgical assessment, those who chose to withdraw from presurgical assessment and those who were deemed not eligible for surgery after comprehensive assessment. The operated patients had a better outcome than all three comparison groups regarding seizure frequency, seizure freedom rate and number of AEDs used. The operated patients also scored higher in quality-of-life scales<sup>14</sup>.

# Options in epilepsy surgery: use of multi-modal investigations and intracranial electroencephalography

To provide comprehensive presurgical evaluation, a team of experts including epilepsy specialists, neurosurgeons, neuroradiologists and clinical neuropsychologists is required. Multi-disciplinary case conferences are held where team members meet to make surgical decisions and operative planning. In most cases, localization and lateralization of epileptogenic foci may be achieved with analysis of seizure semiology, ictal/interictal scalp EEG, high-quality magnetic resonance imaging (MRI) with the appropriate sequences performed. In some cases, metabolic scans such as interictal positron emission tomography (PET) and ictal/interictal single photon emission computed tomography (SPECT) may also be needed. Delineation of brain functions may be achieved using information such as hand dominance, age of seizure onset, baseline clinical neuropsychological evaluation, intracarotid amobarbital test and functional MRI.

If a testable hypothesis can be formulated, but the epileptogenic zone remains elusive after non-invasive investigations, intracranial EEG recording may be the "final" decisive step in presurgical evaluation. Implantation with subdural grids, strips and depth electrodes is generally considered safe and well tolerated, with rare complications including bleeding and infection<sup>15</sup>. Locally, the high level of techniques and expertise required for intracranial EEG recording are being developed enthusiastically. The question of identifying subgroups of patients who may benefit from evaluation, exploration and surgery is both an academically interesting and clinically relevant issue.

## Focal lesion on MRI with concordant ictal scalp EEG and congruent results of functional evaluation

Focal lesions may appear in any lobar region but those belonging to temporal regions deserve special attention as patients with such abnormalities stand the highest chance (>70%) of becoming seizure free after resective surgery. The classical prototype is a right-handed patient with seizure onset after age of 15, right mesial temporal sclerosis on MRI, ictal video EEG showing focal right temporal onset, interictal EEG showing right temporal discharges

and baseline clinical neuropsychological tests showing impaired figurative memory and normal verbal memory. Patients belonging to this group may proceed to resective surgery (e.g. selective amygdalohippocampectomy or with anterior temporal lobectomy) without the need for invasive investigations. Studies have shown that patients fulfilling such characteristics but in whom the main discrepant finding is the interictal EEG may still benefit from surgery without the need for intracranial EEG recording<sup>16</sup>.

### Focal lesion on MRI with discordant scalp EEG +/-incongruent results of functional evaluation

Take for example a right-handed patient with seizure onset before age of 15, left mesial temporal sclerosis, scalp EEG showing bilateral independent ictal onset and interictal epileptiform discharges, impaired baseline figurative and verbal memory, and, intracarotid amobarbital test suggesting bilateral cerebral dominance. Intracranial EEG recording for delineation of the epileptogenic zone would be generally recommended, although some authors have advocated that, in the presence of lateralising findings from PET scan (or other metabolic scans)<sup>17</sup>, a history of febrile convulsion<sup>17</sup>, and lateralized memory deficit<sup>18</sup>, surgery may nonetheless be contemplated without resorting to intracranial EEG recording. Variations on this example may generate many scenarios: subtle left temporal atrophy and left hippocampal atrophy with ictal left temporal onset, interictal bilateral temporal discharges and poor verbal memory but good figurative memory at baseline; bilateral mesial temporal sclerosis with ictal scalp EEG showing right temporal onset, interictal right temporal discharges and baseline impaired figurative and verbal memory. In these instances, intracranial EEG is likely to be required to resolve the incongruent data prior to surgery.

#### Resection close to eloquent areas

Neocortical lesionectomies in epilepsy surgery may seem straightforward when considered purely from an anatomical point of view (e.g. frontal lobe glioma, temporal lobe cavernous haemangioma). However, some lesions may infiltrate adjacent functional cortex without displacing it or may have boundaries close to important functional ("eloquent") areas. In such situations, it is crucial to ensure that brain tissues with important functions (motor, sensory, speech) are avoided in any resection. To do so, both intraoperative and grid implantation with extraoperative stimulation are acceptable ways to achieve functional "mapping" (Figure 1). Grid implantation, however, has an extra advantage of providing more sophisticated testing (and speech mapping) e.g. naming, counting, repetition of proverbs, body commands, reading and token tests. In these circumstances, subdural grids serve a dual mission in the role of epilepsy surgery, namely informing where to resect and where not to resect<sup>19</sup>.



#### Non-lesional or "cryptogenic" cases

With the ever advancing MRI machines and sequences, many "cryptogenic" cases may turn out to be lesional or "symptomatic". There still remains a group of patients who plague the minds of epileptologists and neuroradiologists by showing up no lesion at all in the "best" MRI. (Idiopathic generalised epilepsy syndromes such as juvenile myoclonic epilepsy do not belong to this category). Metabolic scans are, once again, useful modalities for the formation of a testable hypothesis. One promising subgroup has been dubbed "MRI-negative, PET-positive temporal lobe epilepsy", which may

be considered a surgically remediable syndrome. In one study the surgical outcomes of such non-lesional cases were no different from those with temporal lobe epilepsy and hippocampal sclerosis<sup>20</sup>. Overall, intracranial EEG is still considered to be of paramount importance in the work-up of non-lesional cases for accurate delineation of the epileptogenic zone and for carrying out functional mapping.

#### Hemispheric lesions

For patients who have diffuse pathology of one cerebral hemisphere (such as hemimegalencephaly,

Rasmussen's encephalitis), particularly children with catastrophic epilepsy, hemispherectomy may produce 70-80% chance of seizure freedom according to the first reported series<sup>21</sup>. However, whether the perceived functional loss would be acceptable, is an individualized consideration for each and every patient. The classical procedure has been progressively replaced by functional hemispherotomy – a procedure focusing more on disconnection rather than resection and it may produce less immediate intraoperative blood loss and less chance of cerebral haemosiderosis<sup>22</sup>. While the procedure has been mostly performed in children, a recent series also demonstrated its usefulness in selected adult patients with intractable unihemispheric epilepsy, unilateral hemiplegia and visual field loss<sup>23</sup>.

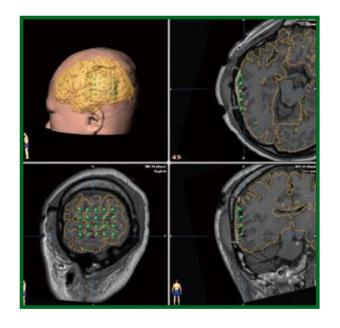
#### Palliative procedures

There exists a group of patients in whom no localizing surgical hypothesis can be formulated, or the lesions in questions may prove too extensive to resect. The use of vagus nerve stimulation (VNS) is considered a palliative approach. It comprises a multiprogrammable pulse generator, usually implanted under the skin in the patient's left upper chest, that delivers intermittent electrical current to

the vagus nerve with the aim of reducing the frequency and/or severity of seizures. In two multicentre, double-blind, randomized studies, high stimulation (30 Hz, 30 sec on, 5min off) was shown to produce significantly more seizure reduction than low stimulation (1 Hz, 30 sec on, 90~180 min off) - 24.5% vs 6.1% in one study and 28% vs 15% in another<sup>24,25</sup>. VNS is considered to be safe although it is costly and is rarely curative. VNS may also render future MRI for the patient problematic, so if intracranial monitoring is contemplated, it is best to defer VNS placement. For those patients with potentially injurious drop attacks and disabling generalized seizures, corpus callosotomy may also be contemplated.

In a recent non-randomised study, >50% reduction in seizures was observed in 79.5% of patients after corpus callosotomy, compared with 50% after implantation of vagus nerve stimulator<sup>26</sup>. Complications for both procedures were rarely permanent.

#### remediable syndrome. In one Figure 1 Neuronavigation showing the placement of a subdural grid to study the surgical outcomes delineate the epileptogenic area and to perform functional mapping



#### **Conclusion**

Recent advances in drug development, imaging technologies and surgical techniques have enabled epilepsy specialists to devise a diversified portfolio of treatment options for patients with refractory epilepsy. These include more rational selection and use of new AEDs, use of advanced technology in localizing

seizure foci and brain functions in the planning of epilepsy surgery. It is hoped that, through better use of these modalities, more patients can become seizure free and live more fulfilling and safer lives.

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# Renal Disaster Relief Work for Wenchuan Earthquake

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n May 12, 2008, an 8.0-magnitude earthquake struck Wenchuan of Sichuan province, resulting in massive destruction & great loss of lives. Many people were injured. Official figures (as of June 23, 2008) confirmed 69,185 dead, including 68,636 in Sichuan province, and 374,171 injured, with 18,467 listed as missing. The earthquake left about 4.8 million people homeless, though the number could be as high as 11 million.

The term "Renal Disaster" was coined by nephrologists who in previous earthquakes found the aftermath of injuries and crush syndrome led to a high incidence of acute kidney injury and many required renal replacement support [Table 1] 1. The acute renal failure mainly resulted from rhabdomyolysis and dehydration. Hyperkalemia is a major complication leading to death. Past experience showed that poor support and coordination resulted in suboptimal results in managing these patients1. The International Society of Nephrology (ISN) set up a Renal Disaster Relief Task Force (RDRTF) after the severe earthquake in Armenia in 1988 to provide future renal aid in action wherever needed around the globe. The Task Force consists of a worldwide network of experts in the management of patients with acute renal failure and works in close collaboration with the Medecins sans Frontiéres (MSF).

**Table 1:** Statistics Related to Major Earthquakes in the Past 18 Years. (Adapted from Reference 1)

Location and Year	Death	<b>Crush Syndrome</b> Overall number of crush victims	Dialysis
Spitak, Armenia, 1988	25,000	600	225–385
Northern Iran, 1990	>40,000	?	156
Kobe, Japan, 1995	5,000	372	123
Marmara region, Turkey, 1999	>17,000	639	477
Chi-Chi, Taiwan, 1999	2,405	52	32
Gujarat, India, 2001	20,023	35	33
Boumerdes, Algeria, 2003	2,266	20?	15?
Bam, Iran, 2003	26,000	124	96
Kashmir, Pakistan, 2005	>80,000	118	65
Total	>217,000	>1900	>1200

On May 13, with a strong urge to help in such a renal disaster, I contacted Dr. Li WANG, the Chairman of Sichuan Society of Nephrology and the Chief of Nephrology, Sichuan Provincial Hospital in Chengdu who was previously an ISN fellow in my Unit in 2007-8. Liaison work was started right away with the ISN RDRTF, MSF, Hong Kong Society of Nephrology (HKSN) and the Hospital Authority (HA).

On May 16, representing the above organisations, I went to Chengdu for relief work with the following objectives:

- 1. Scouting the extent of renal injured patients
- 2. Giving advice on managing patients with crush induced acute kidney injury
- 3. Training of local staff on Renal Disaster and Crush Injury
- 4. Assessing the scope and impact of earthquake induced damage on renal centres
- 5. Assessing the needs of support from Hong Kong and international renal organisations

As a member of the ISN RTDRF, I was joined by 2 other ISN experts from Belgium (1 nephrologist and 1 renal nurse), both with earthquake renal relief experiences, on the mission.



Figure 1. Visit and ward round in Sichuan Provincial Hospital (L-3) with 2 ISN RDRTF colleagues (R-4 & R-5) and Dr. Li WANG (R-1) and her team of doctors and nurses.

I did rounds on patients in 3 hospitals with their renal doctors: Sichuan Provincial Hospital, Chengdu (2,600 beds) [Fig 1], Hua

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Xi Hospital, Chengdu (4,400 beds) and Deyang Peoples' Hospital, Deyang (1,300 beds). It was very sad to see many patients, including amputees with crush syndrome requiring renal replacement therapy, mainly with haemodialysis (HD) and continuous haemofiltration. One 3 year old child was put on peritoneal dialysis [Fig 2]. Altogether there were 147 acute kidney injury patients requiring dialysis (as of June 23, 2008)



**Figure 2**. A 3 year old boy with acute renal failure on peritoneal dialysis with his father on the left and a volunteer assisting with the PD exchanges on the right.



Figure 3. Lecturing to renal doctors and nurses at the Hua Xi Hospital

I gave 2 lectures in Putonghua to renal teams of Sichuan Provincial Hospital and Hua Xi Hospital on "Renal disaster and Crush Injury" [Fig 3]. Educational pamphlets on the crush syndrome and prevention of AKI were translated into Chinese by local doctors and distributed to hospitals in the entire affected area.

Discussions with local nephrologists centred on the need for rapid transfer of severely injured victims to hospitals with facilities for dialysis, organisation of the increased demands for dialysis, doctors and renal nurses in the functional dialysis units, screening of acute kidney injury (AKI) in all areas and the choices of modality treatment of dialysis in renal disasters.

There were at least 4 cities/towns (Mian Zhu, Shifang, Dujiangyan and Jiangyau) with HD centres which had collapsed in the quake. Chronic HD patients and survivors of the earthquake were transferred to other centres for HD in Chengdu and Deyang.

Another major area of my work is the assessment of the needs of support from Hong Kong and international renal organisations. This is focused on the resources needed for RRT, including availability of manpower, dialysis machines, and dialysis consumables.

The government has donated more than 100 dialysis machines and that should be sufficient. The first 4-5 days after the earthquake created an immense workload for all the hospitals and RRT services. Renal doctors and nurses worked extremely hard without much sleep. The 140 AKI patients requiring RRT was fortunately far below the initial estimates for the large numbers injured and the Sichuan teams were able to cope with the help of renal experts from Beijing, Shanghai and Guangzhou. This reduced the need for help from Hong Kong or overseas. However, dialysis consumables, including dialyzers, haemofilters, catheters, dialysate, replacement fluid, and intravenous nutrition, were really in short supply. A list was drawn up with donations from MSF/ISN RDRTF, HKSN and Hong Kong Kidney Foundation (HKKF). Dr. L Wang as Chairman of the Sichuan Society of Nephrology acted as the central point for distribution of consumables to other centres in Sichuan.

During those few days of relief work, it was sad to see crush injury patients requiring fasciotomy, amputations and dialysis. Some developed multi-organ failure requiring intensive care. Some died. At the same time, I was deeply impressed by the dedicated and highly efficient mobilisation of manpower and resources over the earthquake sites and in the hospitals. Assistance came from all over the country and volunteers flowed in from everywhere. As I talked to the staff and general public, I felt deeply the strong sense of solidarity among the Sichuan people despite this unfortunate disaster.

Most of the acute relief work has now been done though there are still very sick multi-organ failure patients in Chengdu requiring dialysis. I am still in close contact with the Sichuan nephrologists on the updates of new cases of AKI requiring RRT in Sichuan as well as the need for other support. Telephone conferences on management of seriously ill and complicated AKI patients continue as needed.

In the longer term, the rebuilding of the area, in particular, the collapsed HD units will require more planning and work. Enhanced training of the local renal doctors and nurses will be a major area that Hong Kong can do more in future, with the support from HA, HKSN, HKKF and ISN.

Once again, I express my deepest hope and wish that Sichuan and her people can recover very soon.

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## "Brace up, Sichuan" and "Brace up, China"

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ive days after the 8.0 magnitude earthquake in Wenchuan (May 16), Dr. Owen Tsang and I received urgent calls from Dr. Ho Pak Leung asking us to fly with him to the disaster area to assess and advise on infection control related issues because of rumours of infection outbreak there. We had less than 48 hours for preparation. Apart from oral antibiotics, hand gloves, anti-tetanus toxoid, surgical masks and



alcohol hand rub, we brought more than 700 little toys with us. Unfortunately, the alcohol hand rub was not permitted on board as it was classified as inflammable and dangerous substance. On the plane we met the members of Medical Services International (MSI). They invited us to join them to visit the refugee site at Miangyang (near Beichuan, another area hit badly by the earthquake with higher mortality) after completing our work at the West China Hospital (WCH), which is the biggest hospital in Mainland China with 4500 beds and the designated hospital for Hospital Authority Medical Team to work with. Thus we extended our stay from 3 days to 5 days.

Upon arrival at Chengdu airport, we were brought to WCH directly. The hospital infection control staff met us at the Emergency Department and guided us to the triage station at the Emergency Department, Orthopaedic wards, isolation areas and the microbiology laboratory. We were really impressed by what they had done. Within 7 days, they had received more than 1000 patients from disaster areas and other hospitals and most of them



required urgent operations. One patient we saw at the emergency room was a baby whose left leg was severely injured and his parents were killed by the quake. Despite have witnessed many "parting forever" experiences in our medical practice, we almost wept at that moment.

At 2:28pm, May 19, exactly a week after the quake, the entire country paused for three minutes to mourn for the dead. Traffic came to a halt, car horns were honked, flags were half-lowered and people everywhere stood in tearful silence. At this moment, we felt our unity as a Chinese nation growing closer and closer together.

On May 20, we were driven to Miangyang by a volunteer who took leave from his job to join the relief effort. In fact, there were tens of thousands of others like him, leaving their jobs and families and rushing to aid their compatriots. In Miangyang, we joined MSI to visit a small village where many houses including the village hospital were collapsed by the quake. Thousands of refugees moved to the village. A medical team from the Chinese Center for Diseases Control and Prevention (CDC) was sent to the site and they were working closely with non-governmental organizations (NGOs) such as Red Cross and MSI. Dried food and bottled water

were distributed for free. Health e d u c a t i o n messages such as good hand hygiene practices, safe preparation of food and water, and advice to seek early treatment



in case of fever were well distributed in the form of posters and pamphlets. At least two cement-made latrines, measuring 2 meters in depth and 20 meters length, were constructed by the liberation army and the villagers within a day. Designated areas for dumping solid waste were located and the waste was being removed regularly. Primary health services included early diagnosis and treatment for a wide range of diseases was made easily accessible. We met the Chinese CDC there and had very good discussion with them on public health issues. Sichuan is one of the provinces in China with the highest annual incidence of Japanese B encephalitis (JE) cases. Children aged < 10 years accounted for 90% of reported cases. Almost all of these cases presented in June to September. Unfortunately, most children in the region were not immunized against JE. Our discussion indicated that vaccination against JE should be considered for children in the affected areas. (According

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to the information provided by the Ministry of Health website, the vaccination program against JE was launched on June 1.Up till June 10, more than 130,000 children (88.85%) in the affected areas had received the vaccine.)

On May 22, we completed our task and returned to Hong Kong. No doubt, we were deeply impressed by the speed and scale with which the government responded. Premier Wen Jiabao was on an airplane to the earthquake zone within 2 hours and stayed there for four days to direct the relief action. More than 100,000 relief workers, including soldiers, police and medical teams were mobilized to join the rescue work and to provide food and shelter to those who lost everything in the quake. Tens of thousands of people gathered in the major cities, shouting tearfully, "Brace up,

Sichuan" and "Brace up, China". The whole country and Chinese people all over the world suddenly become united. It was really miraculous.



#### ANNOUNCEMENTS



### **Synapse: An Invitation to HKCP Fellows, Members and Trainees**

#### CALL FOR ARTICLES

Synapse welcomes articles for publication which can be on medical aspects of topics such as art, law, politics, sport, travel, and volunteer work experience.

Articles should be no more than 1,000 words, or 700 words and one picture, or 400 words and two pictures. Articles should be written in English, in Microsoft Word format and submitted by e-mail addressed to the Editor, Synapse (elaineleung@hkcp.org) with author's contact details (name, hospital, email address, contact telephone). Illustrations submitted in JPEG format with resolution of at least 300dpi.

Articles will be accepted for publication only after review by the Editorial Board. The author will be obliged to sign a disclaimer that the author's views do not necessarily represent those of the HKCP.

## PHOTOGRAPHS FOR FRONT COVER

Please submit your photographs, which can be of any subject, for example, landscape photos, photos illustrating healthy lifestyle or photos related to medicine and health care. The photograph(s) should be the original work of the participant and must be accompanied by a title. It may be in color or black and white. Both electronic (resolution at least 300dpi, in JPEG format) or printed copies (preferred dimensions 8x10 inches or 8R in size) are acceptable.

Photographs will be selected by the editorial board judged on technical excellence, originality and artistic creativity.

Please send the electronic copy by email to the Editor, Synapse (elaineleung@hkcp.org) with author's contact details (name, hospital, email address, contact telephone).

#### Addendum

The editorial board apologise for an error on page 18 in the March 2008 edition of Synapse. Dr Stephan Chan Lam, Gold Award winner of the Best Thesis Award is from the "Department of Clinical Oncology Prince of Wales Hospital" instead of the "Department of Medicine & Therapeutics"



## Joint HKCPIE/MRCP(UK) Examinations

#### **Examination Calendar 2009**

#### **Part I Examination**

Tuesday 20 January 2009 Tuesday 22 September 2009

#### **Part II Written Examination**

Wednesday 8 April – Thursday 9 April 2009 Wednesday 29 July – Thursday 30 July 2009 Wednesday 25 November – Thursday 26 November 2009

#### **Part II PACES**

23 - 27 February 2009 19- 23 October 2009

# Pass list of the Joint HKCPIE/MRCP(UK) Part II PACES — March 2008

Chan Chi Lin Jaclyn	Chan Fuk Woo Jasper
Chan Hiu Lam	Chan Sheung Hey Thomas
Chan Wai Chung	Chang Li Li
Cheng Hon Wai Benjamin	Chu Wing Yan
Chung Yat Kiu	Ciang Chu Oi
Fu Kar Mun Louisa	Hau Lap Man
Ho Chun Ho	Ip Ling Ling Lina
Kwan Ming Chit	Lam Chung Yan
Lam Sing	Lam Yiu Wing
Lam Yuk Keung	Lee Kin Tong Joe
Lee Yin Yin Candice	Luk Ngai Hong Vincent
Mak Lai Yee	Ng Shun Chin
Pang Ching Wai	Shea Yat Fung
Sin Kai Cheuk	Tam Chi Chun Terence
Tam Chun Hay	Tam Oi Yan
Tong Bik Sai Bessie	Wong Ching Han Priscilla
Wong Ka Lam	Wong Wai Chuen

The above-named doctors will receive the Intermediate Examination Certificates after our Annual General Meeting in October 2008.

Yuen Mae Ann Michele

#### **Examination Pass Rates**

Joint HKCPIE/MRCP(UK) Part II (Written) examinations

	Sitting	Pass
2 July 02	53	27 (51%)
13 November 02	50	24 (48%)
13 August 03	110	62 (56%)
10 December 03	54	31 (57%)
28 July 04	65	42 (65%)
8 December 04	46	32 (70%)
13 April 05	32	15 (47%)
27 July 05	76	56 (74%)
7 & 8 December 05	26	16 (62%)
12 & 13 April 06	29	13 (45%)
26 & 27 July 06	91	68 (75%)
6 & 7 December 06	33	18 (55%)
11 & 12 April 07	34	22 (65%)
25 & 26 July 07	80	70 (88%)
5 & 6 December 07	19	13 (68%)
9 & 10 April 08	21	13 (62%)

## Joint HKCPIE/MRCP(UK) Part II PACES (2001-2008) October 2001 36/72 = 50%

October 2001	36/72 = 50%
February 2002	34/74 = 46%
October 2002	29/72 = 40%
February 2003	30/69 = 43%
October 2003	27/59 = 46%
March 2004	39/64 = 61%
October 2004	26/69 = 38%
March 2005	35/75 = 47%
October 2005	28/75 = 37%
March 2006	36/75 = 48%
October 2006	16/73 = 22%
March 2007	44/74 = 59%
June 2007	44/74 = 59%
October 2007	36/55 = 65%
March 2008	36/74 = 49%

**Woo Kam Wing** 



The current Higher Physician Training (HPT) fee of HK\$6,000.00 for the entire duration of HPT will be amended. With effect from 1 July 2008, all new HPT trainees will be charged HK\$6,000.00 for the training period required for two concurrently trained specialties. An additional charge of HK\$4,000.00 will be levied on further HPT training in every specialty thereafter.

#### **Higher Physician Training: Exit Assessment Update**

At its 201<sup>st</sup> Meeting 26 June 2008, the Council decided that, in accordance with the Guidelines on Postgraduate Training in Internal Medicine, Fourth Edition, July 2007, Page 148, Note 4 under Summary of possible results for Failure at Exit Assessment, should read "Candidates who have scored "borderline fail" in either part of the Exit Assessment will only be required to repeat the failed section at their subsequent Exit Assessment."

Score*	Failure Category	Total Score	1 section of Exit Assessment	2 sections of Exit Assessment
90-99% of section pass mark	Borderline fail	<50	Remedial action and repeat Exit Assessment in the failed section only after an additional 6-month training in the relevant specialty.	Remedial action and repeat full Exit Assessment after an additional 12-month training in the relevant specialty.
80-89% of section pass mark	Fail	Any	Remedial action and repeat full Exit Assessment after an additional 6-month training in the relevant specialty.	Remedial action and repeat full Exit Assessment after an additional 12-month training in the relevant specialty. Trainees should be exposed to trainers in other institution(s) for six months.
<80% of section pass mark	Bad fail	Any	Remedial action and repeat full Exit Assessment after an additional 12-month training in the relevant specialty.	Remedial action and repeat full Exit Assessment after an additional 12-month training in the relevant specialty, of which 6 months should be undertaken in programmes and/ or training centres specified by the Specialty Board.

#### Notes

1	(i)	Section pass mark for Dissertation	=	20
		90% of pass mark	=	18
		80% of pass mark	=	16
	(ii)	Section pass mark for Clinical Viva	=	30
		90% of pass mark	=	27
		80% of pass mark	=	24

- 2 Candidates who have failed the written part of their dissertations can be allowed to proceed to the Clinical Viva section of the Exit Assessment.
- A candidate who has failed the dissertation does not have to write a new dissertation on a different topic at subsequent Exit Assessment. He/she is only required to re-write or revise his/her previous dissertation to improve his/her knowledge and presentations on the same topic.
- 4 Candidates who have scored "borderline fail" in either part of the Exit Assessment will only be required to repeat the failed section at their subsequent Exit Assessment.
- 5 Candidates failing both sections but with different levels of failure in the two sections will be required to undergo remedial training in accordance with the recommendation for the worse level of failure

#### The AIM Corner

Moon-sing LAI ≡

Examination Coordinator, Specialty Board in AIM

#### Guidelines for Candidates on Writing Case Report for AIM Annual Assessment

- 1. Objectives of case report is part of training of candidates on:
  - Logical approach to a problem
  - Critical thinking on logic employed
  - Critical analysis of data available
  - Knowledge of contents of the quoted literature
  - Appraisal of the published literature relevant to the case
- 2. Assessment is based on:
  - Clarity and logic of presentation of case
  - Demonstration of critical review of relevant literature
  - Independent thinking and analyses
  - Discussion RELEVANT to the case
- 3. Case report with the following conditions are **REJECTED** 
  - Text of < 1000 or >2000 words
  - Tables or figures used > 2
  - References > 10
  - Closely related to the other specialty(ies) of the candidate
- Candidate should write the case report in the following Format. Marks will be deducted for failure to do so
  - Use complete sentences and paragraphs. Point form of presentation is not allowed
  - Use standardized or acceptable abbreviations e.g. RFT, with the full term specified when they first appear in the case reports
  - Use generic name of drugs e.g. propanolol, rather than trade name, e.g Inderal®
  - The use of "Cut-and-paste" of contents, tables, diagrams and pictures from original articles or literature is not allowed

References should be relevant and up-to-date. They should be retrievable through e-KG or the internet. A copy of the reference(s) should be submitted if they cannot be retrieved from the internet. All reference should be quoted in the same format as that of Hong Kong Medical Journal

e.g. "Yuen YP, Lai CK, Poon WT, Ng SW, Chan AY, Mak TW. Adulteration of over-the-counter slimming products with pharmaceutical analogues – an emerging threat. Hong Kong Med J 2007;13:216-20"

- 5. Case reports on rare medical diseases with uncommon presentations are discouraged. Instead, case reports should be on
  - Common medical problems with common presentations
  - Uncommon medical problems with common presentations
  - Common medical problems with atypical presentations

#### Guidelines for Examiners on Marking Case Report for AIM Annual Assessment

- 6. Objectives of case report is part of training of candidates on:
  - Logical approach to a problem
    - Critical thinking on logic employed
    - Critical analysis of data available
    - Knowledge of contents of the quoted literature
    - Appraisal of the published literature relevant to the case
- 7. Assessment is based on
  - Clarity and logic of presentation of case
  - Demonstration of critical review of RELEVANT literature
  - Independent thinking and analyses
  - Discussion RELEVANT to the case
- 8. Case report with the following conditions should be **REJECTED** 
  - Text of < 1000 or > 2000 words
  - Tables or figures used > 2
  - References > 10
  - Closely related to the other specialty(ies) of the candidate
- Candidate should write the case report in the following Format. Marks should be deducted for failure to do so
  - Use complete sentences and paragraphs. Point form of presentation is not allowed
  - Use standardized or acceptable abbreviations e.g. RFT, with the full term specified when they first appear in the case reports
  - Use generic name of drugs e.g. propanolol, rather than trade name, eg Inderal®
  - The use of "Cut-and-paste" of contents, tables, diagrams and pictures from original articles or literature is not allowed
  - References should be relevant and up-to-date. They should be retrievable through e-KG or the internet. A copy of the reference(s) should be submitted if they cannot be retrieved from the internet. All reference should be quoted in the same format as that of Hong Kong Medical Journal
- Case reports on rare medical diseases with uncommon presentations are discouraged. Instead, case reports should be on
  - Common medical problems with common presentations
  - Uncommon medical problems with common presentations
  - Common medical problems with atypical presentations
- 11. Reasons must be given for a score of failure (≤4) in case reports, or when the score is "exceptionally good" (≥9). All cases reports, marked or unmarked, should be returned by reviewers to the AIM Annual Assessment Coordinator at least two weeks before the Annual Assessment day.



#### Summary and Logistics

Updated on 27 May 2008

#### **Summary**

- 1. The minimum requirement is 90 Points in each 3-year cycle.
- 2. The minimum annual requirement is 10 Points.
- 3. Due to the introduction of the Continuous Professional Development (CPD) concept by the Academy, all Fellows must fulfill both active and passive components of CME. All Fellows should attain a minimum of 30 passive Points and a minimum of 30 active Points in the cycle. For ease of accounting, new Fellows whose first CME/CPD cycles require fewer than 35 CME/CPD Points each will only have to acquire the CME/CPD Points prescribed regardless of the proportion of active and passive categories.
- 4. CME Points awarded by Physician Colleges in Australasia, Singapore, United Kingdom and United States are recognised for CME accreditation by the Hong Kong College of Physicians. Formal CME reports from national accreditation bodies should be submitted to the College for award of CME Points.

Overseas Fellows should submit the formal CME/CPD reports from national accreditation bodies on an annual basis in order to be recognised as having satisfied the CME/CPD requirement of our College. Additional submission of CME/CPD active/passive participation is not required.

CME for trainees

The same CME/CPD requirement of 90 Points in every CME/CPD cycle also applies to all Trainees. Trainees will be assessed by supervisors and Programme Directors on log books.

Minimum attendance: 2 out of the first 3 meetings every year as listed below.

- Advances in Medicine organized by the Chinese University of Hong Kong
- b. Medical Forum organized by the University of Hong Kong
- c. Annual Scientific Meeting organized by Hong Kong College of Physicians (Every Trainee must attend at least once every 2 years)
- d. Annual and other Scientific Meetings of respective Specialties under the auspices of the College

#### Logistics of accrediting Formal College Approved Activities (FCAA), Overseas Conferences and Certificate Courses

- Formal College Approved Activities (FCAA): Local meetings/conferences
  - 1.1 Application for CME accreditation of local educational activities should be sent to the

- address listed below, or fax to 2556 9047 at least one month before the meeting. Only prospective accreditation will be awarded. Late applications will not be entertained.
- 1.2 Doctors who have attended local meetings and conferences and signed on Attendance Sheets do not have to return Certificates of Attendance to the College after the meeting.
- 1.3 Meetings solely organised by the industries/ pharmaceutical companies will not be accredited for CME/CPD.
- 1.4 Local and overseas meetings or conferences organised by the pharmaceutical or equipment industry will not be accredited for CME/CPD.

#### 2 Overseas Meetings

- 2.1 Retrospective accreditation will be awarded for attendance at overseas meeting up to two months after the meeting.
- 2.2 Applications must be supported by the following documents, which should be forwarded to the Secretariat by mail (copies) or fax (2556 9047):

  Details of the programme and Certificate of Attendance.

#### Certificate Courses

5

- 3.1 Application for CME accreditation of Certificate Course should be sent to the address below at least one month before commencement of the course. Only prospective accreditation will be awarded. Late applications will not be entertained.
- 3.2 Award of CME Points for pre-approved Certificate Courses will be effected on submission of Certificate of Attendance after completion of the course, and will be distributed over the years covered by the course on a pro-rata basis.
- 3.3 Certificate Courses straddling two CME cycles will have all awarded CME Points assigned to the cycle in which the Attendance Certificates are received. This will be effected on submission of Certificate of Attendance after completion of the course.
- 4 Apart from the minimum of 10 CME Points in each year, the CME Board will not record further CME Points into the College CME Registry for Fellows who have fulfilled 90 CME Points in each cycle.
  - Every Fellow is required to acquire a minimal of 10 CME/CPD Points per year regardless of the proportion of active and passive categories. A maximum of 70 CME/CPD Points therefore may only be acquired in the first year, and a maximum of 80 CME/CPD Points may be acquired for the first and second year combined. Applications for exemption from the minimal annual requirement will be individually assessed by the CME/CPD Board.



		Category [Active		Maximum CME/CPD Points accredited		
	Activities	(CPD)/Passive]	CME/CPD accreditation	Per year	Per 3-year cycle	Remarks
A	Formal College Approved Activities (FCAA)					
A1	FCAA organised by hospitals: Grand Round, Journal Club in Internal Medicine or its subspecialties	Active (Chairman & Speaker) OR Passive	<ol> <li>Maximum of 2 Points per session of active participation for Chairman.</li> <li>Maximum of 2 Points per presentation of active participation for speaker.</li> <li>1 Point per hour of passive participation.</li> </ol>	30 Points for active participation. 30 Points for passive participation.	60 Points for active participation. 60 Points for passiive participation.	1. Prior approval from the CME/CPD Board is required.
A2	FCAA organised by professional societies/ associations	Active (Chairman & Speaker) OR Passive	Maximum 2 Points per session of active participation for Chairman.     Maximum of 2 Points per presentation of active participation for speaker.     Maximum 1 Point per hour of passive participation.	30 Points for active participation. 30 Points for passive participation.	60 Points for active participation. 60 Points for passive participation.	<ol> <li>Prior approval from the CME/CPD Board is required.</li> <li>Activities organized by pharmaceutical / equipment industry will not be approved for CME.</li> <li>Time spent on lunch/tea break will not be accredited as CME activity.</li> <li>Meetings on topics in Internal Medicine or its Specialties will be accredited the maximum CME/CPD Points.</li> <li>Meetings on Internal Medicine-related subjects may be accredited at up to 50% of the maximum CME/CPD Points.</li> <li>Speakers delivering lectures related to Internal Medicine at meetings of other Colleges/professional societies should request the organizers to apply CME/CPD Points from our College and/or prospectively apply for CME/CPD Points from our College. Applications after the meetings will not be entertained.</li> </ol>
A3	Local or overseas Conference	Active (Chairman & Speaker) OR Passive	Maximum 2 Points per session of active participation for Chairman.     Maximum of 2 Points per presentation of active participation for speaker.     1 Point per hour of passive participation for maximum of 8 Points/day AND maximum of 35 Points per conference/meeting.	30 Points for active participation. 30 Points for passive participation.	60 Points for active participation. 60 Points for passive participation.	<ol> <li>A Fellow may not claim both active and passive CME/CPD Points for the same session in which he/she is a Chairman.</li> <li>Time spent on lunch/tea break will not be accredited as CME/CPD activity.</li> <li>Meetings on topics in Internal Medicine or its Specialties will be accredited the maximum CME/CPD Points.</li> <li>Meetings on Internal Medicine-related subjects may be accredited at up to 50% of the maximum CME/CPD Points.</li> <li>Prior approval for local conference from the CME/CPD Board is required.</li> <li>Speakers delivering lectures related to Internal Medicine at meetings of other Colleges/professional societies should request the organizers to apply CME/CPD Points from our College and/or prospectively apply for CME/CPD Points from our College. Applications after the meetings will not be entertained.</li> </ol>
A4	Certificate course	Passive	Approved for defined number of CME/CPD Points, up to a maximum of 10 Points per course.	15 Points for passive participation.	30 Points for passive participation.	Prior approval from the CME/CPD Board is required.     Courses organised by hospitals for hospital doctors (in-house training for hospital) will not be accredited as Certificate Courses.     Courses on topics in Internal Medicine or its Specialties may be accredited the maximum CME/CPD Points.     Courses on Internal Medicine-related subjects may be accredited at up to 50% of the maximum CME/CPD Points.
В	Self study			30 Points (Total)	60 Points (Total)	
B1	Journal Reading	Active	Not more than 1 Point per article.	25 Points	45 Points	Submit list of authors, name of article, journal, year, page numbers.
В2	Self-study programmes of accredited Colleges and Academies	Active	Approved for defined number of CME/CPD Points per programme, up to a maximum of 20 Points.	30 Points	60 Points	Approved programmes (including approved programmes from Internet) are attached in Appendix.

#### TRAINING

			T	Ι	1	
С	Publications					
C1	Non-indexed international journals, journals published by constituent Colleges of HKAM, or other College- approved local journals.	Active	Maximum 4 Points and 2 Points for first and co-authors respectively.	25 Points	45 Points	The following must be submitted: Title of publication, journal, textbook with year, volume and page numbers for journal articles, and chapter/section, and page numbers for textbook.
C2	Indexed international journals and journals published by HKAM.	Active	Maximum 6 Points and 3 Points for first and co-authors respectively.	25 Points	45 Points	Publications on topics in Internal Medicine or its     Specialties may be accredited the maximum CME/CPD     Points.
С3	Medical textbook	Active	Maximum 10 Points and 5 Points for first author and co-authors respectively of each chapter or section.	25 Points	45 Points	Publications on Internal Medicine-related subjects may be accredited at up to 50% of the maximum CME/CPD Points.
D	College-approved Quality Assurance report	Active	Maximum 5 CME Points for each author depending on venue of publication	15 CME Points	30 CME Points	Prior approval from the CME Board is required.     Full QA report and venue of publication should be submitted for approval.     (i) Quality Assurance Report in the form of abstracts but without oral presentation will not be awarded CME/CPD Points.     (ii) Presenting authors of Quality Assurance report for oral presentation in local/overseas conferences may be considered for award of active CME/CPD Points as speakers, provided prior approval is obtained from the CME/CPD Board.
Е	Exclusion					
E1 E2	examinations					
112	application					
Е3	Development of new technologies					
E4	Undergraduate teaching					
E5	Postgraduate teaching other than those listed above	Not applicable	Not approved for CME/CPD accreditation	Not applicable	Not applicable	Not applicable
Е6	Postgraduate diploma or degree course	11	,	11		··
E7	Thesis or Treatise					
E8	Online video-taped seminars for both local and overseas seminars					
E9	Self study by reading books					
E10	Audit, Mortality and Morbility Meetings					

#### Contact Address for CME application

Phone: 28718766, Fax: 25569047,

Address: c/o The Secretariat, Rm 603, 6th Floor, Hong Kong Academy of Medicine,

99 Wong Chuk Hang Road, Aberdeen, Hong Kong

E-mail: enquiry@hkcp.org

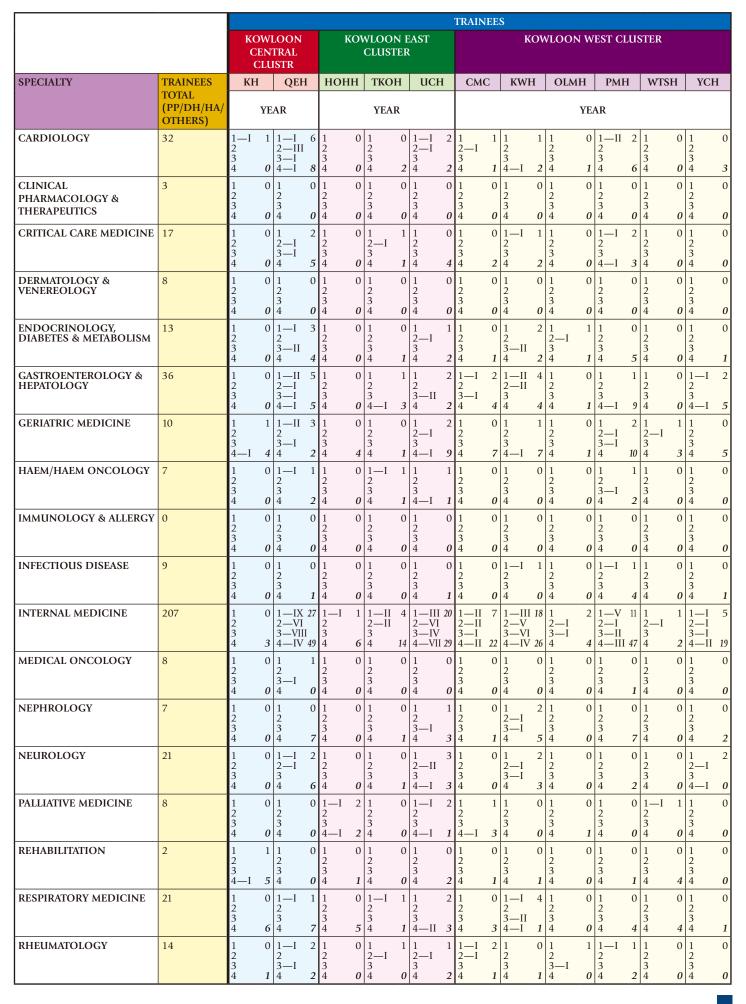
#### Self-Assessment Programmes

Please refer to the HKCP web site for Self-Assessment Programmes (http://www.hkcp.org)

## Statistics on No. of Trainees in all Specialties Updated in May 2008

								TRAIN	EES						
		1OH	NG K	ONG E	AST (	CLUSTE	R	HONG KONG WEST CLUSTER							
SPECIALTY	TRAINEES TOTAL	PYNE	Н	RH		TWE	Н	FYKI	H	GH		QMI	Н	TWI	Н
	(PP/DH/HA/ OTHERS)			YEA	R						YE	EAR			
CARDIOLOGY	32	1—I	2	1	2	1	0	1	0	1	0		5	1	0
		2—I 3		2—I 3—I		2 3		2 3		2 3		2 3—I	_	2 3	
CLINICAL PHARMACOLOGY &	3	4	0	1	0	1	0	1	0	4	0	4	5 0	4	0
THERAPEUTICS	3	1 2	U	2	U	2	U	2	U	1 2	U	1 2	U	1 2	U
		3 4	0	3 4	0	3 4	0	3 4	0	3 4	0	3 4	1	3 4	0
CRITICAL CARE MEDICINE	17	1 2	5	1 2	0	1 2	1	1 2	0	1 2	0	1 2	2	1 2	0
		3—IV 4—I	2	3 4	0	3—I	0	3 4	0	3 4	0	3—II 4	4	3 4	0
DERMATOLOGY & VENEREOLOGY	8	1	0	1	0	1	0	1	0	1	0	1	0	1	0
		2 3		2 3		2 3		2 3		2 3		2 3		2 3	
		4	0	4	0	4	0	4	0	4	0	4	1	4	0
ENDOCRINOLOGY, DIABETES & METABOLISM	13	1 2	0	1 2	0	1 2	0	1 2	0	1 2	0	1 2	1	1 2	0
		3	0	3 4	2	3 4	2	3 4	0	3 4	0	3—I	6	3 4	0
GASTROENTEROLOGY &	36	1—II	2	1—I	1	1	0	1	0	1	0	1—I	5	1	0
HEPATOLOGY		2 3		2 3		2 3		2 3		3		2—III 3		3	
CERLATRIC LARRICANIA	10	4	6	4	2	4	0	4	0	4	0	4—I	5	4	1
GERIATRIC MEDICINE	10	1 2	0	1 2	0	1 2	0	1 2	0	1 2	0	1 2 3	0	1 2	0
		3 4	5	3 4	11	3 4	3	3 4	3	3 4	0	3 4	2	3 4	0
HAEM/HAEM ONCOLOGY	7	1—I 2	1	1	0	1	0	1	0	1	0	1—I	1	1	0
		3	2	2 3	0	2 3	0	3	0	2 3	0	3		2 3	0
IMMUNOLOGY & ALLERGY	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
IMMUNOEOGI & MEELKGI	o a	2 3	U	$\begin{bmatrix} \frac{1}{2} \\ 3 \end{bmatrix}$	U	2 3	U	2 3	U	$\begin{bmatrix} 1\\2\\3 \end{bmatrix}$	U	$\begin{bmatrix} \frac{1}{2} \\ 3 \end{bmatrix}$	U	$\begin{bmatrix} 1\\2\\3 \end{bmatrix}$	Ü
		4	0	4	0	4	0	4	0	4	0	4	1	4	0
INFECTIOUS DISEASE	9	1 2—I	1	1 2—I	1	1 2	0	1 2	0	1 2	0	1—I 2	1	1 2	0
		3 4	0	3 4	0	3 4	0	3 4	0	3 4	0	3 4	1	3 4	0
INTERNAL MEDICINE	207	1—V	16	1—I	5	1	2	1	1	1	1	1—XI	24	1	0
		2—III 3—II		2—II 3—II		2—I 3—I		2 3		2—I 3		2—IV 3—VI		2 3	
WEDICH ONCOLOGY		4—VI		4	19		5		2	4	5	+		4	6
MEDICAL ONCOLOGY	8	1—I 2	1	1 2 3	0	1 2 3	0	1 2	0	1 2	0	1 2 3	0	1 2	0
		2 3 4	0	4	0	4	0	3 4	0	3 4	0	4	6	3 4	0
NEPHROLOGY	7	1 2 3—I	1	1	0	1 2	0	1 2	0	1 2	0	1—I 2	1	1	0
		3—I 4	5	2 3 4	0	3 4	0	3 4	0	3 4	0	3 4	8	2 3 4	2
NEUROLOGY	21	1	5	1	1	1	1	1	0	1	0	1—I	5	1—I	1
		2 3 4	Ü	2 3—I	-	2—I	-	2 3		2 3	Ü	2—II 3—II	J	2 3	-
		4	4	4	3	4	0	4	0	4	0	4	5	4	0
PALLIATIVE MEDICINE	8	1 2	0	1 2	0	1 2	0	1 2	0	1 2—I	1	1 2	0	1 2	0
		2 3 4	0	3 4	1	3 4	0	3 4	0	3 4	2	2 3 4	0	3 4	0
REHABILITATION	2	1	0	1	0	1	0	1	0	1	0	1	0	1	0
		2 3		2 3 4		2 3		2 3		2 3		2 3		2 3	
DECDIDATORY APPROVE	21	4	0		3	4	3	4	1	4	0	4	1	4	4
RESPIRATORY MEDICINE	21	1 2—I	2	1 2 3—I	1	1 2	0	1 2	0	1 2 3	0	1—I 2 3	1	1 2 3	0
		3—I 4	3	3—I 4	6	3 4	0	3 4	1	3 4	6	3 4	6	3 4	0
RHEUMATOLOGY	14	1	0	1	0	1	0	1	1	1	0	1—I	2	1	0
		2 3 4	2	2 3 4		2 3 4		3	^	3	^	2 3—I	_	2 3 4	
		4	3	4	1	4	1	4—I	0	4	0	4	2	4	1

#### TRAINING





								TRAINE	ES						
				NEW T	ERRI	TORIES :	EAS	T CLUST	ER			NEW T WEST		TORIE JSTER	
SPECIALTY	TRAINEES TOTAL	AHN	Н	NDH	I	PWH		SH		TPH		РОН		TMH	I
	(PP/DH/HA/ OTHERS)					YEAR							YEAI	R	
CARDIOLOGY	32	1—I 2	1	1—I 2	3	1—I 2	2	1 2	0	1 2	0	1 2		l—II 2—III	
		3 4	2	3—II 4	2	3—I 4	5	3 4	0	3 4	0	3	1 3	3	
CLINICAL PHARMACOLOGY &	3	1	0	1	0	1—II	3	1	0	1	0	1	0 1	l.	-
THERAPEUTICS		2 3	0	2 3	0	2—I 3	2	2 3	0	2 3	0	2 3	2 3	3	
CRITICAL CARE MEDICINE	17	1	<u>0</u> 1	1	1	1	0	1	0	1	0		0 4		_
		2 3	-	2—I	-	2 3	Ü	2 3	Ü	2 3	Ü	2 3	-   -	2—I	
		4—I	1	4	2	4	1	4	0	4	0	4	0 4	1	_
DERMATOLOGY & VENEREOLOGY	8	1 2	0	1 2	0	1—I 2	2	1 2	0	1 2	0	2	0   1	2	
		3 4	0	3 4	0	3 4—I	0	3 4	0	3 4	0	3 4	0 3		
ENDOCRINOLOGY, DIABETES & Metabolism	13	1 2	0	1 2—I	1	1 2	1	1 2	0	1 2	0	1 2		1—II 2—I	
		3 4	2	3 4	1	3—I 4	9	3 4	0	3 4	0	3	0 3	3	
GASTROENTEROLOGY &	36	1	0	1—I	3	1—I	4	1	0	1	0		0 1		-
HEPATOLOGY		2 3 4	0	2—I 3	2	2 3—III	1	2 3 4	0	2 3	0	2 3	3	2—I 3—II	
GERIATRIC MEDICINE	10	1	0	4—I	0	1	0	1	1	1	0		0 4	<u>1—I</u> L	-
		2 3		2 3		2 3		2 3	_	2 3		2 3	2	<u>2</u>	
WARLA WARLA ON OOK OOK	-	4	2	4	1	4	5	4—I	7	4	1		0 4		_
HAEM/HAEM ONCOLOGY	7	1 2	0	1 2	0	1 2	1	1 2	0	1 2	0	2	0   1	2	
		3 4	0	3 4	0	3 4	3	3 4	0	3 4	0	3 4	0 4	3—I 1	
MMUNOLOGY & ALLERGY	0	1 2	0	1 2	0	1 2	0	1 2	0	1 2	0	1 2	0 1		
		3 4	0	3 4	0	3 4	0	3 4	0	3 4	0	3 4	0 3	3	
INFECTIOUS DISEASE	9	1	1	1—I	1	1	2	1	0	1	0	1	0 1	1	
		2—I 3 4	1	2 3 4	0	2—I 3—I 4	1	2 3 4	0	3	0	3	$a \begin{vmatrix} 2 \\ 3 \end{vmatrix}$	3	
INTERNAL MEDICINE	207	1—I	2		13	1—IV	$\frac{1}{17}$	1—II	6	1	0		0 4		
		2—I 3		2—III 3—IV		2—III 3—VIII		2 3—I		2 3		2 3	3	2—XII 3—III	
MEDICAL ONCOLOGY	8	4	16 0	4—II	0	4—II 1—I		4—III	7	4	0		_	l—II	
MEDICAL ONCOLOGI	0	1 2 3	U	1 2 3	U	2—I 3—II	5	1 2 3	U	1 2 3	U	1 2 3	0   1   2   3	2	
		4	0	4	0	4—I	8	4	0	4	0		0 4		
NEPHROLOGY	7	1 2	0	1 2	0	1 2	0	1 2	0	1 2	0	2		2—II	
		3 4	2	3 4	1	3 4	4	3 4	0	3 4	0	3 4	1 3	3 1	
NEUROLOGY	21	1 2	0	1	0	1—I 2	1	1—I	1	1 2	0		0 1		
		3 4	1	2 3 4	2	3 4	3	2 3 4	0	3 4	0	2 3 4	$0 \begin{vmatrix} \frac{2}{3} \\ \frac{3}{4} \end{vmatrix}$	2—I 3 1	
PALLIATIVE MEDICINE	8	1	0	1	0	1	0	1—I	1	1	0		0 1		_
		2 3		2 3		2 3		2 3		2 3		2 3	2	3	
		4	0	4	0	4	0	4	1	4	0	4	0 4	1	

2—I 3—I 4

3-

-II

 $\begin{array}{c} 1 \\ 2 \\ 3 \\ 4 \end{array}$ 

1—I 2—I 3

REHABILITATION

RHEUMATOLOGY

RESPIRATORY MEDICINE

<sup>\*</sup> Total No. of trainees is shown in upper right corner of each hospital \*\* No. of trainers is shown in italics & bold in lower right corner of each hospital

SPECIALTY	TRAINEES TOTAL (PP/DH/HA/OTHERS)	TRAINEES						
		DH						
DERMATOLOGY & VENEREOLOGY	8	1—I 2—II 3						
		4—III 11						
IMMUNOLOGY & ALLERGY	0	1 0						
		4 2						
RESPIRATORY MEDICINE	21	1 2—I 3						
		4 7						

#### Statistics on No. of Fellows in all Specialties Updated in May 2008

		FELLOWS										
		HONG	KON	G EAST	CLUSTER	НО	NG I	HONG KONG				
SPECIALTY	FELLOWS TOTAL (PP/DH/HA/ OTHERS)	PYNEH	RH	TWEH	Subtotal	FYKH	GH	QMH	TWH	Subtotal	EAST + WEST CLUSTER	
CARDIOLOGY	187	7	3	0	10	0	6	9	0	15	25	
CLINICAL PHARMACOLOGY & THERAPEUTICS	5	0	0	0	0	0	0	1	0	1	1	
CRITICAL CARE MEDICINE	59	5	0	0	5	0	0	8	0	8	13	
DERMATOLOGY & VENEREOLOGY	79	0	0	0	0	0	0	1	0	1	1	
ENDOCRINOLOGY, DIABETES & METABOLISM	80	4	2	3	9	0	0	8	0	8	17	
GASTROENTEROLOGY & HEPATOLOGY	118	7	2	0	9	0	0	8	1	9	18	
GERIATRIC MEDICINE	160	8	12	4	24	3	0	5	0	8	32	
HAEM/HAEM ONCOLOGY	44	4	0	0	4	0	0	10	0	10	14	
IMMUNOLOGY & ALLERGY	6	0	0	0	0	0	0	1	0	1	1	
INFECTIOUS DISEASE	27	2	0	0	2	0	0	3	0	3	5	
INTERNAL MEDICINE	996	48	26	10	84	2	10	67	7	86	170	
MEDICAL ONCOLOGY	35	0	0	0	0	0	0	8	0	8	8	
NEPHROLOGY	107	7	0	0	7	0	0	8	2	10	17	
NEUROLOGY	73	5	4	0	9	0	0	5	1	6	15	
PALLIATIVE MEDICINE	14	0	1	0	1	0	2	0	0	2	3	
REHABILITATION	45	0	3	4	7	1	0	1	4	6	13	
RESPIRATORY MEDICINE	152	8	7	1	16	1	10	10	0	21	37	
RHEUMATOLOGY	47	4	2	1	7	0	0	2	1	3	10	

<sup>\*</sup> Total No. of trainees is shown in upper right corner of each hospital
\*\* No. of trainers is shown in italics & bold in lower right corner of each hospital



		FELLOWS														
		CI	OWLOON KOWLOON EAST CENTRAL CLUSTER CLUSTER							KOW	KOWLOON CENTRAL + EAST + WEST					
SPECIALTY	FELLOWS TOTAL (PP/DH/HA/ OTHERS)	КН	QEH	Subtotal	нонн	ТКОН	исн	Subtotal	СМС	KWH	OLMH	РМН	WTSH	YCH	Subtotal	CLUSTER
CARDIOLOGY	187	0	10	10	0	3	6	9	1	4	1	9	0	3	18	37
CLINICAL PHARMACOLOGY & THERAPEUTICS	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRITICAL CARE MEDICINE	59	0	5	5	0	2	6	8	5	5	0	4	0	0	14	27
DERMATOLOGY & VENEREOLOGY	79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENDOCRINOLOGY, DIABETES & METABOLISM	80	0	4	4	0	3	5	8	2	3	2	6	0	2	15	27
GASTROENTEROLOGY & HEPATOLOGY	118	0	7	7	0	4	3	7	4	4	1	10	0	6	25	39
GERIATRIC MEDICINE	160	8	3	11	7	2	13	22	8	10	1	12	4	6	41	74
HAEM/HAEM ONCOLOGY	44	0	4	4	0	1	1	2	0	0	0	3	0	0	3	9
IMMUNOLOGY & ALLERGY	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INFECTIOUS DISEASE	27	0	3	3	0	0	2	2	0	1	0	4	0	1	6	11
INTERNAL MEDICINE	996	5	59	64	9	21	46	76	28	37	7	60	4	24	160	300
MEDICAL ONCOLOGY	35	0	1	1	0	0	0	0	0	0	0	1	0	0	1	2
NEPHROLOGY	107	0	9	9	2	2	4	8	2	5	1	8	0	2	18	35
NEUROLOGY	73	0	6	6	0	2	3	5	0	4	1	3	1	0	9	20
PALLIATIVE MEDICINE	14	0	0	0	3	0	1	4	3	0	1	0	0	0	4	8
REHABILITATION	45	10	0	10	2	0	3	5	1	1	0	2	4	0	8	23
RESPIRATORY MEDICINE	152	6	8	14	6	3	4	13	6	5	0	4	7	2	24	51
RHEUMATOLOGY	47	1	3	4	0	0	2	2	1	2	0	2	0	1	6	12

							FELLO	WS						
		NE	W TERI	RITORI	ES EA	ST CLU		V TERR EST CL	NEW TERRITORIES					
SPECIALTY	FELLOWS TOTAL (PP/DH/HA/ OTHERS)	AHNH	NDH	PWH	SH	ТРН	Subtotal	РОН	ТМН	Subtotal	EAST + WEST CLUSTER			
CARDIOLOGY	187	4	5	11	0	0	20	1	7	8	28			
CLINICAL PHARMACOLOGY & THERAPEUTICS	5	0	0	3	0	0	3	0	0	0	3			
CRITICAL CARE MEDICINE	59	2	4	1	0	0	7	0	2	2	9			
DERMATOLOGY & VENEREOLOGY	79	0	0	1	0	0	1	0	0	0	1			
ENDOCRINOLOGY, DIABETES & METABOLISM	80	2	2	11	1	0	16	0	3	3	19			
GASTROENTEROLOGY & HEPATOLOGY	118	2	3	5	0	0	10	1	7	8	18			
GERIATRIC MEDICINE	160	2	1	5	7	3	18	0	12	12	30			
HAEM/HAEM ONCOLOGY	44	0	0	4	0	0	4	0	4	4	8			
IMMUNOLOGY & ALLERGY	6	0	0	0	0	0	0	0	0	0	0			
INFECTIOUS DISEASE	27	1	0	1	0	0	2	0	5	5	7			
INTERNAL MEDICINE	996	19	20	56	7	6	108	4	62	66	174			
MEDICAL ONCOLOGY	35	0	0	12	0	0	12	0	0	0	12			
NEPHROLOGY	107	3	1	6	0	0	10	1	6	7	17			
NEUROLOGY	73	1	2	7	1	0	11	0	4	4	15			
PALLIATIVE MEDICINE	14	0	0	0	1	0	1	0	0	0	1			
REHABILITATION	45	0	1	2	1	1	5	0	4	4	9			
RESPIRATORY MEDICINE	152	4	4	6	0	1	15	1	8	9	24			
RHEUMATOLOGY	47	1	1	3	0	3	8	0	3	3	11			





# Professor Lap-Chee Tsui

OC, PhD, FRS, FRSC Vice-Chancellor and President, The University of Hong Kong

#### John Mackay

ap-Chee Tsui was born in 1950 into a well-to-do family in Hangzhou. His parents had both been to university. His father enjoyed skills such as calligraphy, art and Peking Opera, not attributes cherished by the new communist government.

It was not a good time for them to be in the Mainland so his father came to Hong Kong to establish a new home. Lap-Chee and his mother followed in 1953, leaving behind all their family possessions

The family settled in Kowloon with thousands of other recent arrivals from across the border. His father found temporary work in his friend's trading company but it closed a year later. Lacking any commercial skills, he had difficulty finding other jobs. He eked out the family's livelihood by selling insurance and later mutual fund.

Lap-Chee went to four different primary schools run by Church groups, three of which schools are now not in existence. The fourth was the True Light School, a girls' school but also happened to admit boys at that time.

Lap-Chee has two brothers, one of whom is a doctor in Hong Kong, and the other a Systems Analyst in Canada; and his sister is a Social Worker in Canada.

His secondary schooling was at the Perth Street Government Middle School, now the Ho Man Tin Government Secondary School. There he did well in his biology exams, and in 1969, because he enjoyed drawing, applied to and was accepted by the Chinese University of Hong Kong to read Biology on a Yale-in-China Scholarship, at the New Asia College.



Prof Tsui was presented with the prestigious AJS McFadzean Oration Medal in 2003 by Prof R Yu

Lap-Chee was a diligent student but he was also a sportsman, enjoying all the ball games available to him, table-tennis, volley ball, basketball and football.

Later, in Canada he learned down-hill skiing; in Hong Kong he enjoys hiking for his exercise.

In 1972 Lap-Chee Tsui graduated B.Sc. A further two years at the Chinese University studying Molecular Biology under the supervision of Dr. K.K.Mak lead to a M.Phil (Biology).

In1974 Prof Chien Ho from Pittsburgh, USA, a visiting academic to the Chinese University, found him a scholarship to study in Pittsburgh. This was a wonderful opportunity which he happily accepted. It was hard going at first in America because of his limited skill to converse in daily English, although he could read, write and speak technically.

Five years later he had a Ph.D. in Biological Sciences, and was proficient in English.

The next year was spent at Oak Ridge National Laboratory in the Biology Division.

He married in 1977. Of their two children, one is now a pharmacist in London Ontario and the other a graduate student at Loughborough University in England studying Sports Mechanics.

His wife became a Bank Officer with the Royal Bank of Canada.

In 1981 Lap-Chee Tsui was appointed a Post-Doctoral Fellow to the Department of Genetics of the Hospital for Sick Children at Toronto. He was to spend the next twenty years of his career in that city, being joined there by his father in 1983 and mother in 1987.

In 1984 when he was Assistant Professor in the Department of Medical Genetics, he met Professor Yuet-Wai Kan who had come to Toronto to accept the Gairdner Foundation International Prize for his work in Medical Genetics (See Synapse August 2004), a prize that Professor Tsui was to win in 1990.

Winners of The Gairdner Prize have often gone on to receive Nobel Prizes.

He rose through the ranks until by 2002 he was Geneticist-in-Chief and Head of the Genetics and Genomic Biology Program of the Research Institute at The Hospital for Sick Children. He was also the holder of the H.E. Sellers Chair in Cystic Fibrosis and University Professor at the University of Toronto.



#### PROFILE DOCTOR

In 1985 Professor Tsui and his team started publishing a series of articles on the identification of the locality of an alteration on chromosome 7 associated with cystic fibrosis, a disease which affected 1:3000 Canadian children.

International recognition greeted the publication in 1989 by Professor Tsui and his team of three articles in 'Science' reporting, 'The identification of the cystic fibrosis gene...'

From 1989 to 2005 he received a large amount of funding from various sources for his research regarding cystic fibrosis, and also for the continuing and significant contributions to the study of the human genome, and identification of additional disease genes.

Many awards came his way. A number of the awards were shared with his co-researchers but Prof Tsui is proud particularly of the individual awards such as the Order of Canada, O.C. awarded in 1991.

The one that gives him the greatest pleasure is The Cresson Medal, of the Franklin Institute, Philadelphia presented in 1992.

The (Benjamin) Franklin Institute was established in Philadelphia in 1824. It has bestowed the Elliott Cresson Medal since 1848 on scientists of only the highest calibre such as Peter and Marie Curie, Wilhelm Roentgen in 1896, Ernest Rutherford in 1906, Alexander Graham Bell in 1912.

He has been given honourary degrees by many prestigious Universities. A number of these awards and honours are displayed on the wall of Professor Tsui's office.

The original research carried out in his department gave rise to seven patents, the financial benefits of which he passed to the Hospital for Sick Children. One invention not patented was a 100-base-pair molecular weight marker for DNA analysis, now still used worldwide.

By 2002 increasing seniority meant that he was spending more and more time on administration as one of the three academic chiefs at the Hospital for Sick Children, the others being the Pediatrician-in-Chief and of Surgent-in-Chief. Less of his time was at the workbench experiencing the excitement of working with raw data, making new discoveries. More often he was being called upon to analyse and comment on the work of other researchers.

At the same time his contacts with Hong Kong were growing. He was a member, and later the Chair, of the Biology and Medicine Panel of the Research Grants Council of Hong Kong.

So, when he was offered the Vice-Chancellorship of The University of Hong Kong he was delighted to accept.

It was with some embarrassment therefore that, in 2002, he accepted the Killam Prize from the Council for Canadian Arts. This award is given annually to distinguished scientists in Canada.

In his acceptance speech he had to admit that after twenty-two years in Canada he was just about to depart for Hong Kong, but insisted that he would continue to contribute to Canada's interests by acting as a bridge between the two. Indeed, he is still a Professor Emeritus at the University of Toronto.

After six years in Hong Kong Professor Tsui enjoys and is stimulated by his work. He does find it very different from running a research laboratory, where if a line of research looks like a dead end the project is dropped and a new direction taken. At a university with ambitious plans for the future the decision -making process involves disparate interests and often prolonged discussion to make sure that the final decision is the correct one.

One of the major projects at the university is the introduction of the four year curriculum, to be fully implemented by 2012, which will allow students to choose between course modalities, also allowing them the option to study for two majors rather than just one.

More teachers will need to be recruited and the curriculum reformed to reflect a 'broad and deep' learning experience with an international perspective that is required to compete in the global economy. The Centennial Campus project being built on Pokfulam Road is designed to supply the extra space required for integrated learning courses and for the increase in student numbers by at least a third.

More honours have come to Professor Tsui since his return to Hong Kong. In 2005 he was given Honorary Fellowship to the Hong Kong College of Physicians, and the following year he was made a Justice of the Peace (J.P.).

Non-academic appointments include memberships of the Judicial Officers Recommendation Commission; the Council on Sustainable Development; and the Executive Committee of the Commission on Strategic Development of the Hong Kong SAR Government.

Hong Kong has benefited over the years from the arrival of talented people from the Mainland. Some have stayed in Hong Kong, others have moved on elsewhere. Happily, Professor Tsui has returned to Hong Kong to repay the benefits his education here made possible for him.

Professor Tsui's important contributions to science and his continuing contributions to the academic life of Hong Kong are things for which he might justifiably feel proud. But when asked to comment he modestly said that everyone can make a useful contribution to society, in whatever way is most appropriate to their skills, be they scientist or street sweeper.



Prof Tsui delivered the AJS McFadzean Oration in 2003, entitled "Genomics and disease"