Impact 100

A study initiated by alumni and published in two phases celebrates HKU’s achievements of over a hundred years and examines the University’s role as she moves into the next century.

The first phase, featuring booklets in three tranches, will reach the university family through the channel of the Convocation Newsletter as well as the internet.

The first tranche here in Autumn 2012 starts with History and Medicine. The second and third tranches covering Infrastructure, Government, Law, and Business, Education and Arts & Culture will be released in 2013. A final chapter will incorporate an Overview, and an attempt to interpret Hong Kong and thereby HKU’s rapport with China, as well as explore the University’s future positioning and contribution in the international arena.

The second phase will be the production of a traditional volume or a case incorporating all the booklets.

This format and pace is designed to create an environment, through electronic response and a series of forums, to engage and interact with readers, allowing the findings and discussions to be incorporated in the final product.

Sapientia et Virtus has been the guiding light for HKU to make an impact on our city, which in return has nourished and inspired generations of alumni for the last one hundred years. The Editorial Board hopes that, in telling the HKU story, it will serve to register as an imprint of our past and prompt us to contemplate a measure of our future.

www.impact100.hku.hk

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Revisiting the Past: History

It is convenient to attribute the setting up of The University of Hong Kong to British colonial strategy. Historians reveal that the reality was more dramatic.

Frederick Lugard (Hon LLD 1916), the British Governor of Hong Kong between 1907 and 1912, first expressed the idea of a university of Hong Kong in 1908 in a speech at St Stephen’s College: "... I believe myself in the awakening of China and in the opportunities for reciprocal benefits which that awakening will give to us and I believe that we must either now take those opportunities or leave them to others to take," he said. The idea, however, was received with scepticism by the British Government in London. There was a general belief that the proposed university would only generate anti-Western sentiment and, in the end, that educated Chinese would challenge British rule.

The British Government did, with reluctance, approve the grant of land, but was unwilling to provide funds. It endowed a lone scholarship as a token. It is therefore understandable that donations from local British firms, if any, were trivial. The Hongkong and Shanghai Banking Corporation and Jardine Matheson donated nominal sums. The colonial British firms even showed their disapproval by way of absence from the Foundation Stone Laying Ceremony, as is evident from photos of the event. Only Butterfield & Swire went against the trend, by donating £40,000 to the endowment of the University.

Nevertheless, Governor Lugard and the Qing government seemed to share the same vision: that the new university would train technical personnel for practical purposes, and for the much-wanted modernisation of China. They also seemed to agree that the new university would not produce people with revolutionary ideas. And studying in Hong Kong was seen by the Qing government as a less expensive and safer alternative to sending students overseas. Lugard suggested that the English language be the medium of instruction. He thought the university would contribute to Britain's long-term influence in China. "It is my belief that the graduates of this University... will exert an influence which will be unmeasurable in the future, among the 400 millions of China's population," Lugard remarked in the Foundation Stone Laying Ceremony on March 16, 1910.
In the Governor's Appeal for Endowment Manual, Chang Jen-chun, former Viceroy of Guangdong and Guangxi, and governor-general of Jiangnan and Jiangxi, was listed as the Honorary Patron. Three other Qing officials were also listed as donors. Such acknowledgement was aimed at soliciting more donations from the local, wealthy Chinese.

Hormusjee Naorojee Mody, a prominent Parsi merchant and long time resident of Hong Kong, was the main patron of the University. He attended the Foundation Stone Laying ceremony on March 16, 1910 and delivered a speech. Sadly, he missed the official opening in 1912 as he passed away in 1911.

A receipt issued to Kye Tai Loong, a leading Nam Pak Hong firm in Hong Kong for the donation of $600 to the Hong Kong University endowment in 1909. Note that there is a clause stating that in the event the university failed to materialise, money donated would be refunded by producing this receipt.

The Statement of the Endowment Fund in 1910 shows that the Chinese, including Qing officials, local Chinese as well as Chinese overseas, were keen to patronise the University project, while foreign firms, British ones in particular, with the exception of Butterfield & Swire, were far from enthusiastic. It is interesting to note that Chang Jen-chun helped to donate a handsome sum to the fund and was one of the major patrons of the project.
In the end, then, the founding of HKU was largely made possible by donations from Hong Kong and China. Lugard was able to secure donations from local Chinese merchants. Among the donors were two Jewish and seven Parsi firms, represented by Hormusjee Naorojee Mody. Chang Jen-chun, the Viceroy of Guangdong and Guangxi, collected sizable donations from China. The Chinese community in Southeast Asia was also enthusiastic in supporting the idea of a university in Hong Kong.

The University of Hong Kong was formally established by ordinance on March 30, 1911, and opened on March 11, 1912. In 1912, the University admitted 77 students to the Faculty of Medicine, Engineering and Arts. This was in line with the basic idea of training technical personnel.

By 1912, China had undergone its own revolution, from the Manchurian Dynasty to a Republic. In its first 30 years, HKU faced major difficulties in terms of funding, student admissions and staff recruitment, even as there was substantial development of tertiary education in China during this period: by 1937, there were 47 universities and 35 efficiently run and well-equipped colleges on the Mainland. But in 1941, the Japanese occupation of Hong Kong put everything on hold, and some academics and students fled to Free China to participate in the anti-Japanese resistance. Nonetheless, archives reveal that HKU Senate meetings continued in the internment camps in Hong Kong, and examinations were conducted.

The War ended in 1945 and HKU resumed its activities on October 21, 1946. However, formal approval from Britain for the restoration was obtained only in 1948, and the following year, the Communist Party took over the government of China. During the following 30 years, amid the Cold War and the virtual segregation of Hong Kong from the Mainland, the initial purpose of establishing HKU “for China” appeared to be an unrealistic objective.

In 1952, the Committee on Higher Education in Hong Kong, chaired by John Keswick, took the major step of re-orienting HKU’s primary responsibility to the training of officers for the Hong Kong Government. This could be seen as a major milestone, representing a fundamental deviation from the original goal of producing personnel for China.

This was followed by the Jennings and Logan Report in 1953 that, among other things, recommended the enactment of a new University of Hong Kong Ordinance with the deletion of the clause “for China”. Thereafter, there was a substantial increase in the government’s annual appropriation for HKU, and at long last the University started to enjoy a healthy financial balance sheet.

Another milestone was the introduction of government grants and loans to university students in 1969. This significantly facilitated social mobility and played a major role in Hong Kong’s development in the decades that followed.

The University had repositioned itself again, as an institution serving the general population.

In 1972, Rayson Huang Li-sung 黃麗松 (BSc 1942; Hon DSc 1968), an HKU graduate and former Vice-Chancellor of Nanyang University, assumed the vice-chancellorship at HKU. He was the first Vice-Chancellor of Chinese ethnicity and remained at the helm for 14 years. This was the era when major development campaigns were launched by Murray MacLehose, then British Governor of Hong Kong, and education was included. It was also the time when major social unrest surfaced, which was echoed by student movements in which HKU took the lead.

The 1980s was an era of expansion of higher education in Hong Kong, from an enrolment ratio of only 2% of young people completing secondary school before 1980 to 18% in 1989. The number of public higher education institutions also increased from one to eight.

Wang Gungwu 王賡武 (Hon DLitt 2002), the HKU Vice-Chancellor during 1986-1995, came in at a time of both quantitative expansion and qualitative transformation. It was in those years that the Research Grants Council was established, together with related policies that imposed a research culture on local institutions. It was also the starting point for HKU’s transformation into one of Asia’s leading research institutions.

Wang Gungwu was instrumental in setting up The University of Hong Kong Foundation for Educational Development and Research, as a vehicle to establish an endowment for institutional advancement.
A photo taken in May 1912 at Government House with Sun Yat-sen (LMSCC 1892) (1st right, seated), being the guest of honour, sitting beside Claude Severn (Hon LLD 1920), the acting governor. Standing on the far left is Ho Kai, founder of the School of Medicine for the Chinese and a supporter of the Revolution. Also shown in the picture are Henry May (Hon LLD 1920) and Cecil Clementi (Hon LLD 1926) (both standing behind Sun), who both later became governors.
Minutes of a meeting of the University Senate held on February 23, 1942 at Stonehenge, Stanley Internment Camp. Hong Kong fell to the Japanese on Christmas day of 1941. Civilians of allied nationality were sent to Internment Camp at Stanley where they stayed throughout the Japanese occupation period. Members of the Senate at Internment Camp in Stanley convened a meeting on February 23 at Stonehenge to report on the then situation regarding the University campus, some of its staff members as well as approval of granting of war-time degrees.

Lindsay Ride (Hon LLD 1965), Dean of Medicine (1930-32; 1935-39) at the University was also serving as Commanding Officer of the Hong Kong Field Ambulance when the war broke out. He was taken prisoner shortly after the battle started and sent to Sham Shui Po Prisoner-of-war camp. However, in January 1942, he managed to escape from the camp and fled into Free China where he established the British Army Aid Group, assisting in escapes from Hong Kong, collecting intelligence, providing medical and humanitarian aid to refugees, etc. Lindsay Ride returned to Hong Kong after the war and was appointed Vice-Chancellor of the University where he served from 1949 to 1964.

Left: Clipping on the launch of the government grants and loans scheme from *The Standard* in 1965.

Below: A total number of 3,400 applications for financial assistance were received in 1969, which was the first year the government launched its student finance scheme. 1,650 applicants obtained financial assistance in the form of interest-free government loans and many of them had also been recommended for the award of a government grant.
Article on Chinese Language Movement in Undergrad Session 1971 No. 5 on September 16, 1971.
Lily Pond then (1950) and now (2012)
In this period, the composition of the academic faculty also began to change, from one of purely British origin to a mix of nationalities. In 2012, 56% of the academic staff was from outside Hong Kong, representing 34 countries.

A number of major reforms took place in the last years of the 20th century, under the vice-chancellorship of Cheng Yiu-chung 鄭耀宗 (BSc 1963). These included broadening the curriculum, developing campus technology, and decentralising university administration. He set up the mechanism for systematically organising fundraising efforts on the western model.

In 2000, a controversial incident concerning academic freedom led to Cheng’s resignation. Following those difficult days, Ian Davies (Hon DSc 2006) was appointed Vice-Chancellor for two years, during which several substantial activities were launched in celebration of HKU’s 90th Anniversary, and which had the effect of reigniting optimism.

Lap-Chee Tsui 徐立之, a leading geneticist, assumed the vice-chancellorship in 2002 and HKU started to move to a new level, joining the ranks of the world’s leading universities. One major breakthrough in the first decade of the 21st century has been the internationalisation of the student body at both the undergraduate and postgraduate levels. In 2012, of the 26,000 students on campus, around 5,000 were non-local students from 75 countries; they included undergraduate and postgraduate students. In addition, about 1,000 exchange students come to HKU every year.

In 2002, Victor Fung Kwok-king 馮國經 (Hon LLD 1997), the University Council Chairman, announced a new target for HKU: to be ranked among the top 25 universities in the world, a milestone that was reached in the next several years. Capacities in research and fundraising experienced quantum leaps, and HKU’s reputation soared worldwide.

This period has also seen another major change, which may have underpinned some of the controversies that followed, and that was the publication and implementation of the Niland Report1 in 2003, recommending an overhauling of university governance.

In 2010, HKU laid the foundation stone for its Centennial Campus, exactly 100 years after the first stone was laid for the Main Building in 1910.

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1 Consultancy report compiled by John Niland, former Vice-Chairman of University of New South Wales, at the invitation of the Council.
Generations of students remember Loke Yew Hall (formerly called Great Hall) as an examination hall.
Celebrating Human Life: Medical Care and Services

Beyond the Colonial Legacy

Hong Kong enjoys one of the most outstanding medical systems in Asia and around the world. The quality of life in the vibrant city is blessed by its medical system, whose statistics are the envy of many countries: among the lowest maternity or infant mortality rates; among the highest life expectancies for both men and women. Yet Hong Kong spends only 4% of her GDP on health care.

Many people take for granted the humanistic culture that accompanies this technical expertise. They know very little about the remarkable research that underlies the advancements in clinical services. This chapter attempts to delineate the path that has brought Hong Kong’s medicine to its current enviable state, and to explore the factors – in which HKU and her alumni have played a major role – in this evolution.

It was only after World War II that there was a shift to local graduates. The medical profession was the first to realise “localization”. Now many of Hong Kong’s medical professionals enjoy an international reputation, a demonstration of how firmly these western practices have taken root in the local profession.

Hong Kong enjoys one of the most outstanding medical systems in the world.

HKU’s medical graduates exemplify professionalism in the true sense of the term. Serving patients whole-heartedly has always been a core value. This concern for patients’ well being has prompted research, advancement and innovation. The profession often faces ethical and moral challenges, but resolute self-renewal has continuously reinforced its self-confidence and allowed obstacles to be overcome.
The first thing on my mind is the education of the young. We need to invest our heart and soul into enriching what we teach and how we teach. For many years, education in Medicine has been limited by accessibility to information. The 3-3-4 change of an additional year in university education affords the rare possibility of offering a broadened education on a rich array of subjects in the Humanities. I have always believed that it is difficult for a young mind to understand and relieve human suffering in the healers’ own mind. An inter- and trans-disciplinary approach to teaching and scholarship will greatly broaden and enrich the moulding of characters, an understanding of suffering and empathy, as well as moral and legal responsibility to individuals and the community. Teaching has never been so exciting. The hope is that students will understand themselves, patients, and the community better, and become better human beings. Better human beings become better healers.

I feel we are put in real time, on the spot, in the evolution of the Chinese people and their health care. Not only are we connected to the West and the East, we can embrace both the historical and what is yet to come. The Faculty of Medicine is unique in housing both the western medicine medical school and the School of Chinese Medicine. The goal of Integrated Medicine is very appealing. This is a long and not an easy process. But there should not be Western Medicine, or Eastern (Chinese) Medicine. There should just be one Medicine – good Medicine. And a journey of a thousand miles starts with the first step. So here we go.”

Lee Sum-ping 李心平 (MBBS 1970, MD 1982; current Dean of Medicine)
Building on a tradition of excellence and service, the Faculty of Medicine continues to produce leaders and role models for the medical profession who deliver patient care with tact, sympathy and understanding, and also strive to advance the frontiers of medical knowledge through their cutting-edge research. 

Rosie Young Tse-tse 楊紫芝 (MBBS 1953, MD 1959, Hon DSc 1995; Dean of Medicine 1983-1984)

At the time of the University’s founding in 1911, Hong Kong had a population of around 450,000, of which nearly 250,000 resided in the city of Victoria. The main threats to the health of the population were communicable diseases such as tuberculosis, smallpox and malaria, and nutritional deficiencies such as beri-beri. The focus of the government’s efforts at that time was to decrease the scourge of infectious diseases.

The Hong Kong College of Medicine had been established in 1887, marking the first time western medicine landed in Hong Kong. In 1897, Tung Wah Hospital appointed the first Chinese resident with western training in medicine. The establishment of HKU and its Medical Faculty added to the influence of western medicine here. Soon, local graduates were being appointed as medical officers in the government – among the first local residents recruited to the civil service. In 1928, there were six Chinese medical officers in the government’s Medical Department.

By 1941, there were 330 practitioners on the Medical Register who were authorized to grant death certificates. Of these, 219 were local graduates of HKU. They worked in both the public and private sectors.

Medical advancement was interrupted for more than three years by the Japanese occupation that began in 1941. However, during the war, HKU academics and students continued with their contributions in Free China, under very difficult conditions.

After the war, the population grew rapidly. The influx of returning residents and refugees created severe challenges for the medical system. In 1952, Yeo Kok-cheang 楊國章 (MBBS 1926; MD 1931) became the first local graduate to be appointed Director of Medical and Health Services. In the 1960s, concerted and focused efforts, improved nutrition and living conditions, and advancement in treatment all contributed to the significant decline in tuberculosis notifications. These efforts started the transformation of Hong Kong’s health-care system from that of an underdeveloped sub-tropical byway to one that befits a modern urban centre.

During the two decades after the war, local graduates became the backbone of the medical and health services, with local graduates assuming several leadership positions. However, the limited number of local graduates faced serious challenges vis-à-vis the rapid growth in population and people’s elevated aspirations.

In the 1970s, Hong Kong’s economy took off and society became more affluent. This coincided with the growth of manufacturing industries, which led to a dramatic increase in traumatic injuries. At the same time, the population was already beginning to age, and while communicable diseases had largely been brought under control, there was an increase in degenerative diseases. Cancer and cardiovascular disease became the leading causes of death. There was a new demand for personal curative medical care. All these were met with quantum progress in medical services, which was part of Governor Murray MacLehose’s (served 1971 to 1982) grand plans to expand government services.

The escalating demand for modern medical
services led to the establishment of the British colony’s second medical school, at the Chinese University of Hong Kong in 1981. Gerald Hugh Choa Wing-ip 蔡永業 (MBBS 1946; MD 1960) was the founding dean, and many HKU graduates participated in the founding of the new school.

Another dimension of HKU graduates’ contribution to the medical service has been in the realm of hospitals. Many HKU graduates serve and lead both public and private hospitals. Even in the early years when medical services were limited, Li Shu-fan 李樹芬 (LMSCC 1908; Hon LLD 1961) and Li Shu-pui 李樹培 (MBBS 1928), with great foresight, established the Hong Kong Sanatorium Hospital (1922), which has developed into one of Hong Kong’s leading private hospitals.

Another major milestone in the development of medical services in Hong Kong was the establishment of the Hospital Authority (HA). In 1991, the newly established HA took over the administration of 38 public hospitals from the civil service with Yeoh Eng-kiong 楊永強 (MBBS 1971) serving as its first chief executive. The new HA was designed to modernize hospital management and bring in a new corporate culture of efficiency and accountability, and the public hospitals almost immediately commanded respect from the community. HKU graduates played a leadership role in this metamorphosis of the hospital system, both as clinicians and administrators.

The remarkable enhancement of the services in the public hospitals, however, raised new issues such as the public-private interplay in medical services, and the overall financial strategies for the system. Those became the primary concern of York Chow Yat-ngok 周一嶽 (MBBS 1971) when he later succeeded Yeoh to be the Secretary of Health, Welfare and Food.
The most significant episode in Hong Kong’s medical history in the past century was the battle against the SARS (Severe Acute Respiratory Syndrome) epidemic. Starting in early March 2003, and over a period of three months, 1,755 people in Hong Kong were infected, leading to 299 deaths. HKU academics and graduates fought at the forefront of the battle. When SARS spread across continents, the discovery by the research team at HKU of the coronavirus as the cause of the disease proved a breakthrough in the worldwide campaign against the epidemic. This research achievement illustrated the yield of HKU’s visionary investment in basic science and technology, including molecular biology, and the enormous capacity of Lap-Chee Tsui, then newly appointed Vice-Chancellor of HKU, in engaging international partners. The high level of professionalism and the rigorous sanitary controls gained HKU academics and their counterparts at Queen Mary Hospital a global reputation. The SARS disaster also led to the development of a holistic system of infection control in Hong Kong.

HKU has also developed a reputation in other medical and paramedical services such as dentistry, nursing and pharmacology. It is championing the integration of western medicine with the essence of Chinese traditional medicine. HKU is also bringing new dimensions to developments in medical services and research in China. Nurtured by both western and Chinese cultures, it is on the way to breaking new ground for the benefit of humankind.
The discovery of the coronavirus by the research team at HKU proved a breakthrough in the worldwide campaign against the epidemic.
The Faculty had only 21 students and a staff of 14 when it opened in 1911. Despite its limited resources, the Faculty produced around 16 graduates per year in the inter-war years, with many students from outside Hong Kong, especially South East Asia. Even in those early days, the Faculty and its graduates were "universally agreed" to be of a high standard, according to the Report of the University (1937) Committee.

During the 1960s, many new preclinical (biochemistry, microbiology, pharmacology) and clinical departments (orthopaedics, paediatrics) were established. In the 1970s, the teaching of psychiatry and general practice were introduced. As the Faculty developed further to meet new challenges, more departments were established in the 1980s and 1990s; e.g., anaesthesiology (1988), diagnostic radiology (1988), and clinical oncology (1991).

HKU medical graduates remember their education not only as technical training to be medical practitioners, but also as an immersion in the tradition of being good doctors in the true sense of the profession. Over the years, many promising graduates have given up high-income opportunities in the private sector to spend a good part of their career undertaking work and research in public hospitals. Many have become renowned academics, whose example has influenced their successors and students. Many graduates in private practice have brought professionalism to the larger part of the medical services. Since the turn of the century, there has been a rapid growth in the number of prominent researchers of high reputation, their names too numerous to be included in one small chapter.

However, societal development has also posed challenges to traditional medical teaching methods. In 1998, under the deanship of Chow Shew-ping 周肇平 (MBBS 1968; MS 1988), the Faculty of Medicine at HKU became the first Asian institution to introduce problem-based learning for its entire curriculum. The new method is aimed at turning students into active learners, problem-solvers and critical thinkers. Most importantly, the new approach places students in the real-life role of a medical doctor at the very beginning of the curriculum, with emphasis on early development of clinical skills and interpersonal skills, as well as the importance of life-long learning.

Preparing Committed Professionals

With similar aims, the Institute of Medical and Health Sciences Education was established at HKU in 2000. The introduction of a structured component of medical ethics and the establishment of the Medical Ethics and Humanities Unit proved pioneering in strengthening education and research in the affective domain and human dimensions. The unfortunate but few cases of ethical misconduct have proved the importance and timeliness of this orientation.

Meanwhile, postgraduate studies have dramatically expanded since the mid-1990s and HKU has become one of the leading hubs of medical science research in Asia. The postgraduate programmes have attracted students from around the world, who go on to utilize their skills back home and in other parts of the world after graduation. Many such graduates have become prominent leaders in medicine.

Parallel to the growth in postgraduate education is the advancement in professional standards, by way of continuing medical education. The Hong Kong Academy of Medicine was established in 1993, and HKU graduates have been instrumental in the establishment and development of the Academy and its different specialist colleges. Even before the establishment of the Academy, HKU’s Faculty...
The Medical Faculty ably fulfills its mission of teaching, research and patient care of the highest standard, under sound leadership, with innovative and talented staff. The formal incorporation of humanities and professionalism into the curriculum is timely. Graduates significantly contribute to improvements in postgraduate training, professional development and community health care. Some of their skills and research are internationally recognized. Despite suboptimal public support for research and health care, staff and graduates continue to make vital contributions to medical progress, medical and health services, and community welfare.

David Todd (MBBS 1952, MD 1958, Hon DSc 1992)
of Medicine organised relevant courses and professional examinations for the specialist qualification of the Royal Colleges of the UK.

The Medical Council, which is guided by Hong Kong law, plays an instrumental role in the upkeep of professional conduct, which is crucial in maintaining the welfare and trust of patients. The consecutive chairs of the Medical Council, many of whom were HKU graduates, have been highly respected medical professionals.

Since the 1990s, the Medical Faculty has been enriched by the creation of disciplines in Nursing (1995), Chinese Medicine (2002) and Pharmacy (2009). The Faculty of Dentistry (1982), and the Division of Speech and Hearing Sciences (established in 1988 in the Faculty of Education), are further milestones related to medicine.

The Faculty of Dentistry was established on the latest UK model, and emerged as a leading institution in Asia right from the beginning. Local and foreign candidates came to be trained for advanced dental expertise and professional leadership. Postgraduate students in Dentistry have come from many parts of China, South East Asia, South Asia and the Middle East, and many have become prominent leaders in dentistry in their respective systems. The Faculty is also conscientious about renewing and upgrading its expertise, which has allowed it to become the leading place for tooth implants and bone regeneration in the region, for example.

The division of Speech and Hearing Sciences quickly assumed leadership in research and practice in communications disorders, particularly in the Chinese languages. It is the exclusive centre for research in Cantonese.
1960s | Medical Breakthroughs

Many groundbreaking clinical treatments and surgeries were born at the Faculty during the 1960s. The first open-heart surgery in Hong Kong was performed in 1964, and the first kidney transplant was undertaken in 1969.

1970s | Gastrointestinal research | Pharmacology

The Department of Pharmacy was recognised to be the key laboratory in the world studying the pathogenic mechanism of cigarette smoking in association with gastrointestinal ulcers and cancers.

1970s | Orthopaedic Surgery

The first microsurgical thumb replant in Hong Kong was carried out.

1980s | Leaders in liver cancer surgery and liver transplantation | Surgery

Refinement in surgical techniques for liver cancer resection reduced the hospital mortality rate from 28% in 1989 to 0% in 1996. Additionally, the five-year survival rate was improved from 15% to 49%. In 1996, the department pioneered the liver donor right lobe liver transplantation technique which has helped to overcome the problems of organ shortage and graft size limitation, benefiting more patients with terminal liver diseases. In 2005, the Liver Transplant Team was conferred a first-class award at the State Scientific and Technology Progress Awards.

1980s | Preventing severe thalassaemias | Medicine and Obstetrics & Gynaecology

In 1982, the departments were the first in Hong Kong to perform pre-natal diagnosis for thalassaemia and inherited blood disorders using DNA technology. It is now possible to carry out pre-natal screen using a non-invasive approach.

1980s | Cutting-edge technology in cervical screening and diagnosis (The HKU Cervical Cytology Screening Laboratory was established in 1992) | Pathology

The department engaged in intensive research on cutting-edge technology in cervical cancer screening, including the latest model of the automated cervical cytology screening imager and human papilloma virus molecular testing.

1990s | Promoting clean air for better health | Community Medicine

The department was the first in Asia to publish time series studies of air pollution and mortality and is now the leading centre for a multi-city study in Asia. Locally, the department was the first to report the health benefits of an air pollution legislative intervention and restricting sulphur content in fuel to 0.5% in improving respiratory health in children and reducing mortality due to cardiopulmonary diseases.

1990s | Research on the epididymis | Physiology

Studies demonstrated that epididymis is an active epithelium that absorbs sodium and water and secretes potassium and hydrogen ions. Later studies showing that it was possible to pharmacologically manipulate sperm maturation and storage prompted the World Health Organization to adopt this approach as a potential method for male contraception.

1990s | Human and avian influenza research (research on H5N1 started in 1997 when the “bird flu” incident happened) | Paediatrics and Adolescent Medicine

The department has delineated the influenza disease burden in children in Hong Kong, and showed influenza to be an important cause of febrile convulsion.
In 1894, when a plague epidemic ravaged the colony, the responsible microbe was identified with the help of outside experts. In the 2003 SARS epidemic, scientists from HKU were the first to identify the culprit virus, and within a very short period of time. This is testimony of the significant progress that Hong Kong has made in terms of medical research over the past century.

In the early years, the Faculty was basically a teaching institution. Research was not totally neglected, but was minimal. In the post-war years, and especially since the late 1960s, the development of specialties became the impetus for more research work. Initially, research was concentrated in the clinical domain with the aim of solving or improving the treatment of common diseases. More substantial basic research started in the late 1980s. Since the turn of the century, the Medical Faculty has joined the top ranks in such fields as genome and stem cell research.

Advancing Medical and Health Sciences Research

An outstanding example is the clinical research on liver transplants as a cure for the various liver diseases that are prevalent in southern China and South East Asia. The Faculty has achieved many important innovations and breakthroughs in this area. The research on emerging infectious diseases (including SARS, avian flu and swine flu) also demonstrates how an integration of clinical practice, clinical research and basic research can achieve significant results.

Integration is another aspect where HKU academics have taken the lead. They understand the importance of taking an integrative approach in medical and health sciences research and in fostering cross-specialization collaboration. Many who were trained in western medical science, for example, have begun to appreciate traditional Chinese medical theories and practices. Collaboration has brought results well beyond the Faculty’s boundaries. For example, medical
academics collaborate with engineering colleagues in areas such as orthopaedic support, vascular hydrodynamics and tissue mechanics.

The establishment of the School of Chinese Medicine was one notable achievement. As an essential auxiliary development, the establishment of the Centre on Behavioural Health, led by Cecilia Chan Lai-wan 陈丽云 (BSocSc 1978; MSocSc 1984; PhD 1991), has provided an unusual platform for holistic treatment based on human behaviour, with the integration of clinical medicine, psychological counselling, various therapies and Buddhist practices.

The integrated approach is also significant in other medicine-related disciplines, such as Speech and Hearing Sciences, which treats speech and hearing disorders using combined approaches from western and Chinese medical and psychological philosophies.

There have also been collaborations across geographical borders, with institutions, research laboratories and individuals in Mainland China and other parts of the world.

Research in the Medical Faculty has received enormous community support, which is reflected in the substantial donations from the private sector. At the time of writing, the Medical Faculty has established 35 Endowed Professorships through the generosity of donors in the short period of eight years. The Li Ka Shing Foundation in 2005 gave HK$1 billion as a single donation to the University, mainly for the support of medical education and research, the largest donation ever in Hong Kong. This historic gift was followed by the naming of the Faculty after Li Ka Shing, which aroused wide debate among the alumni. The debate marked a new era in HKU's fundraising endeavours, forcing the university to deal with the same controversies shared by other leading institutions around the world.

As of 2011, the University was hosting four State Key Laboratories (SKLs) at HKU, namely the SKLs for Brain and Cognitive Sciences, Emerging Infectious Diseases, Liver Research and Synthetic Chemistry. SKLs are regarded as key components of China's science and technology research system. They serve as the base for top-level basic research and applied basic research development, assembling and nurturing outstanding researchers, as well as scholarly exchanges for the country.

1 The Surgical Skills Centre of the Department of Surgery was opened on May 6, 2011. The centre was dedicated to surgical skills training in new surgical techniques such as laparoscopic operations and other minimally invasive procedures. Occupying a total area of 5,100m² with 10 training stations for laparoscopic and endoscopic skills training, the centre aims to provide better training for doctors, medical students and other medical personnel, as well as facilitating advanced research in sub-specialities of surgery.

2 The project entitled “Adult-to-adult Right Lobe Live Donor Liver Transplantation” carried out by the HKU liver transplant team won the first-class award in the 2005 State Scientific and Technological Progress Awards. The project was led by Fan Sheung-tat 范上達 (MBBS 1976; MS 1992; MD 1998; PhD 2002; DSc 2005). His team members were Lo Chung-mau 洛駿茂 (MBBS 1985; MS 1998), Liu Chi-leung 廖子良 (MBBS 1988; MS 1999; MD 2004) and Chan See-ching 陳詩正 (BDS 1985; MBBS 1995; MS 2005; PhD 2011) of the Department of Surgery. The team began to adopt the first right-lobe live-donor liver transplantation (LDLT) in 1996 and it was considered a world breakthrough.

3 Challenging clinical problems inspire the Medical Faculty in its research directions and make new discoveries. The medical team at the Faculty was among the first in the world to develop minimally invasive esophagectomy and initiate multimodality treatment strategies for esophageal cancer. The Faculty is also globally renowned for its innovative research on liver cancer, Hepatitis B and nasopharyngeal cancer.

4 There are currently four State Key Laboratories (SKLs) at HKU, namely the SKLs for Brain and Cognitive Sciences, Emerging Infectious Diseases, Liver Research and Synthetic Chemistry. SKLs are regarded as key components of China's science and technology research system. They serve as the base for top-level basic research and applied basic research development, assembling and nurturing outstanding researchers, as well as scholarly exchanges for the country.

5 First live births following Preimplantation Genetic Diagnosis (PGD) for alpha thalassaemia in Hong Kong.
Improving Public Health

HKU and its graduates have made significant contributions to the promotion of public health in Hong Kong.

The Family Planning Association of Hong Kong (FPAHK) was established in 1950 with Gordon King (Hon LLD 1973) as president and Daphne Chun Wai-chan as a founding member. The FPAHK has been instrumental in educating the public in birth control, sex education and planned parenthood. The association's slogan “Two is Enough” (一 個 嬌，兩 個 妙，三 個 吃 不 消，四 個 斷 擔 挑) gained popularity in the 1970s. The FPAHK introduced to Hong Kong state-of-the-art concepts, approaches and birth control technologies when they were still rather foreign to other parts of Asia. Its activities marked a milestone for medical academics playing advocates in community health.

HKU has been playing a significant role in the city’s anti-smoking campaign. Anthony Johnson Hedley, former Chair and Head of Community Medicine, has been an unflailing champion on that front, and Lam Tai-hing has succeeded him in carrying on the battle. Hedley also created an air pollution index (the Hedley Index), which has turned a new page in public health. The School of Public Health was established in 2004 and quickly became a leading institute with international significance.

The Hong Kong Anti-Tuberculosis Association was established in 1948 with many HKU graduates, such as Chau Sek-nin 周錫年 (MBBS 1924; Hon LLD 1961), Tseung Fat-im 蔣法賢 (MBBS 1926; Hon LLD 1969) and Li Shu-fan among the core members. The Hong Kong Anti-Cancer Society was established in 1963 to provide better hospice care and raise public awareness about cancer prevention. Today, there are many specific health-related foundations that are playing the dual roles of advocacy and education.

The Hong Kong Medical Association, which includes members from both the private and public sectors, has for many years been led by HKU alumni. It has a long tradition of communicating medical knowledge to the populace through the

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2 FPAHK started as the Hong Kong Eugenics League in 1938. Successive professors of the Department of Obstetrics and Gynaecology have been taking a leadership position at FPAHK after Daphne Chun Wai-chan, e.g. Ma Chung Ho-kei 馬鍾可璣 (MBBS 1958), Grace Tang Wai-king 鄧惠瓊 (MBBS 1971; MD 2006), Ho Pak-chung 何柏松 (MBBS 1974; MD 1990).
The Medical Faculty has been a strong advocate of tobacco control. It partnered with the Hong Kong Council on Smoking and Health for the establishment of the first public sector smoking cessation clinic in 2002. It also currently runs two hotlines targeting youth and women smokers to provide one-on-one counselling to help them quit smoking. Its three decades of research on tobacco control has provided strong evidence for the government to formulate stringent tobacco control policy such as an increase in tobacco tax in 2009, resulting in more people quitting and many lives saved.

The Hedley Environmental Index (HEI) was originally established by the School of Public Health, HKU in 2008 with funding from the Fu Tak lam Foundation and ADM Capital Foundation and project management from Civic Exchange. The new version of the HEI is launched with the aim to enhance health risk communication and to inform and assist the public in the interpretation of pollution levels which exceed the WHO AQG, particularly in relation to bad health outcomes and economic costs.

The adverse effects of air pollution on health have been well established in different studies, yet the Hong Kong government has appeared to turn its back on this pressing problem by failing to update the Air Quality Objectives (AQO) for more than 25 years. To enhance public awareness, a group of medical students collected over 1,500 signatures from HKU alumni to petition the Legislative Council in December 2011. They also lobbied for an update of the current AQO.

Medical students have been organising the annual Health exhibition for 25 years. This Faculty-wide student initiative aims to raise public awareness and understanding of health and disease. Health talks and health checks are held in conjunction with the exhibition.
The Faculty of Medicine has played a pivotal role in the development of medical services, medical research and public health in Hong Kong. It started with the eradication of plagues with the help of western medicine, and a century’s effort has brought the Faculty to the forefront of western medicine, along with a prestigious position among its counterparts, particularly in Asia. Hong Kong's achievements are all the more remarkable because both physical and human resources in the medical area are so much smaller than those of countries and regions with a comparable reputation. If it were not for Hong Kong's academics and their sustained drive for excellence, such achievements would not have been possible.

Hong Kong owes much of its admirable level of health and quality of life to the medical profession, but these now face the challenges of the modern era. Given an ageing population, medical professionals have to face not only degenerative diseases but also ethical and philosophical dilemmas previously unknown. Within the medical profession itself, there are the increasing pressures of integration between the East and the West, between body and mind, and between research and practice.

Within HKU’s Medical Faculty, there are temptations for academics to turn to private practice, and there are marked crises of a brain drain in medical research. At the same time, the worldwide trend of emphasis on research threatens to deprive clinicians of deserved respect, and the emphasis on medical breakthroughs may draw researchers away from genuine concern for patients. Despite all this, medical professionals look to HKU’s Medical Faculty for new levels of professionalism, to transcend fashionable trends and advance the human dimension. Unfortunate incidents of misconduct have raised serious alarms about the soundness of the profession, but the establishment of the Centre of Humanities and Medicine (with the Faculty of Arts) and the Centre of Medical Ethics and Law (with the Faculty of Law), have allowed the Faculty to continue to advance on the humanistic front.

As a leading institution in Hong Kong, people expect HKU to extend its influence in order to benefit a larger part of the community. As a leading institution in a metropolitan urban centre, people expect HKU’s influence to radiate across geographic boundaries. As the University begins its second century of teaching and service to the community, people are keen to watch the new HKU-Shenzhen Hospital and ask: Will HKU be able to excel on the Chinese Mainland as it has in Hong Kong?
Medical Breakthroughs

1990s | Established the world's first Chinese bone marrow donor registry | Medicine
Bone marrow transplants can cure leukaemia and other blood diseases, but finding a match can be difficult. In previous decades, overseas donor banks often could not offer genetic matches for Hong Kong's Chinese population, so in 1991, the Hong Kong Marrow Match Foundation was established and a registry was set up for primarily Chinese donors. The registry linked up with other registries around the world, including China and Taiwan, offering patients a greater hope of finding a match.

2000s | Work on SARS | Microbiology
The department was the first to discover that SARS was due to a coronavirus carried in animal reservoirs. In addition, the department has been a pioneer in the research of the pathogenesis, clinical features, diagnostic tests, and treatment of SARS.

2000s | First discovery of H5N1 virus outbreak in migratory waterfowl by researchers at the Joint Influenza Research Centre of Shantou University and Hong Kong University (2005) | Microbiology

2000s | Eradication of helicobacter pylori decreases the chance of development of gastric cancer in subjects without precancerous lesions | Medicine

2000s | Defining the viral kinetics and molecular changes of the hepatitis B virus in chronic hepatitis B disease, including occult infection | Medicine
The Hepatology Team investigated the changes in the viral load, viral mutations, the closed covalently circular DNA and the hepatitis B surface antigen levels during the various stages of chronic hepatitis B infection, including the stage at which the virus becomes "occult".

2000s | World's first intervertebral disc transplantation | Orthopaedics and Traumatology
The conventional treatment for low back pain caused by degeneration of the intervertebral disc is excision of the disc and fusion of the spinal segment. After 10 years of laboratory and animal research by researchers from HKU and Beijing, the world's first transplantation of the intervertebral disc in a human was performed in 2000 and published in The Lancet in 2007. This innovative and groundbreaking approach has opened a new horizon for treatment of many spinal disorders without sacrificing spinal mobility.

2000s | A quadrivalent human papillomavirus vaccine against anogenital, vaginal and cervical disease | Obstetrics and Gynaecology
The study has shown vaccination against papillomavirus is highly effective in preventing precancerous cervical, vaginal and vulval lesions, and genital warts caused by this infection.

Genome instability and DNA repair defects have been discovered in the premature aging disease Hutchinson-Gilford progeria syndrome. These findings provide the first hint of a molecular mechanism for a group of human conditions caused by defects in the nuclear structural protein lamin A.

2000s | Autologous bone marrow stem cell transplantation for the treatment of chronic myocardial ischemia and heart failure | Medicine
In 2001, the Cardiology Division in the Department of Medicine initiated the world's first-in-human clinical study on the use of novel catheter-based intramyocardial transplantation of bone marrow stem cells for treatment of chronic myocardial ischemia in patients with severe coronary artery disease not amenable to conventional medical or surgical therapies. In 2006, our team also performed the first Prospective Randomized controlled Trial on the use of direct Endomyocardial implantation of bone marrow Cells for Treatment of severe Coronary Artery Diseases (PROTECT-CAD trial), and demonstrated that bone marrow cell injections were associated with improvement in functional status and cardiac function in patients with severe coronary artery diseases.

The department designed a self-assembling peptide nanofibre scaffold with permissive environment that not only allows axons to regenerate through the site of an acute injury, but also to knit the brain tissue together.

2000s | Tobacco control | Community Medicine
Research output in this area, publicity and evidence-based public health advocacy have provided important information and momentum for the public and the government and are instrumental in legislative changes to strengthen tobacco control measures.

2000s | Discoveries of the mechanisms of H1N1 pandemic emergence and the transmission of swine influenza virus through the airborne route | Microbiology
The altruistic contributions of individuals in each generation continue to uphold the torch of the humanistic nature of medicine, and upkeep professionalism at an admirable standard.

Chow Shew-ping 周肇平
(MBBS 1968, MS 1988; Dean of Medicine 1995-1998)

Medical Breakthroughs

2000s | Infectious disease epidemiology and control | Community Medicine
Since the 2001 SARS epidemic, the department has developed a focused research programme in infectious disease epidemiology and mathematical modeling with particular reference to SARS and influenza. The programme translates its findings into public health policy through active participation in the scientific advisory structure of the Centre for Health Protection.

The University of Hong Kong and Central South University have jointly established the world’s first China Brain Bank with comprehensive medical record and psychological profile of humankind.

2000s | Research on nasopharyngeal carcinoma | Clinical Oncology
Volumetric analysis of tumour extent, as well as the delineation of the dose-volume-tumour response relationship, have had a significant impact on therapeutic drug dose escalation studies of this condition. The department has also pioneered chemoradiotherapy regimes in the treatment of nasopharyngeal carcinoma.

2000s | Research on lupus nephritis | Medicine
The department established myophenolate mofetil as a new treatment paradigm for severe lupus nephritis, replacing the use of cyclophosphamide, which was fraught with many adverse effects.

2010s | Pioneering of oral arsenic trioxide for leukaemia treatment, a prescription drug with patents awarded by the United States of America and Japan (2010) | Medicine
The oral formulation of arsenic trioxide was pioneered by the Department of Medicine for the treatment of acute promyelocytic leukaemia. Through a series of well-conducted studies, oral arsenic trioxide has been shown to have excellent bioavailability and minimal cardiotoxicity, making it safe for patients to take the medication at home. It has shown spectacular activity in patients with newly diagnosed and relapsed acute promyelocytic leukaemia, and is effective in preventing relapses when used as maintenance therapy. As a result, oral arsenic trioxide has secured patents from United States of America and Japan, and is poised to become the standard formulation globally.

2010s | First combined heart and liver transplantation | Surgery
Through the concerted efforts of heart and liver experts, the team successfully performed Asia’s first combined heart-liver and sequential liver transplantation for two recipients, thus extending the frontier in organ transplantation and providing hope for patients with failure of more than one organ.

2010s | Novel therapeutic option for controlling influenza diseases caused by seasonal, pandemic H1N1 or avian H5N1 influenza virus (2011) | Paediatrics and Adolescent Medicine
It has shown that pamidronate can effectively control seasonal, zoonotic and pandemic influenza virus infections by boosting human gammadelta T-cell immunity which provides a novel strategy by targeting the host rather than the virus, thereby reducing the opportunity for the emergence of drug resistant viruses.

2010s | Pioneering the development of a new approach in the treatment of chronic hepatitis B with nucleotide analogues | Medicine
The Hepatology Team pioneered the first oral antiviral nucleoside analogue for the treatment of chronic hepatitis B, followed by several other similar agents, revolutionizing the treatment paradigm which is now effective in potent viral suppression, reversing liver fibrosis and reducing the development of liver cancer.
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