

THE UNIVERSITY OF HONG KONG

# Bulletin

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Pollution

The background image is a composite of industrial and traditional elements. In the upper half, a large industrial factory with several tall smokestacks is visible, with thick plumes of smoke rising into the air. The scene is bathed in a warm, orange-gold light, suggesting a sunrise or sunset. In the foreground, the dark silhouette of a traditional Chinese architectural structure, possibly a gate or a pavilion with ornate roof decorations, is prominent on the left side. Several power lines stretch across the middle of the image. The word 'Pollution' is written in a large, semi-transparent font across the lower middle section of the image, partially overlapping the factory and the foreground elements.



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**2003 Hong Kong Eco-Business Awards**  
香港環保企業獎

**Gold Award (Best Environmental Reporting)**  
金獎 (最佳環保報告)

## Genome Research Centre Opens

The opening of the \$120 million Genome Research Centre (GRC) in March was marked by a star-studded symposium and the unveiling of two major research projects.

With genomics experts from Canada, France, Mainland China, the UK and US there to mark the occasion, the Vice-Chancellor Professor Lap-Chee Tsui was on hand to welcome them.

But among many platforms, one centrepiece of the GRC's capabilities is a machine in the shape of \$2.5 million beige metal box, measuring no more than a metre in width, depth and height.

This DNA sequencer helps speed-up genomics research because it will allow 20 plates – each with 96 samples – to be used each day by scientists identifying the essence of life.

Manager William Mak said: "What we provide is high throughput

platforms. This means faster, more accurate and less expensive research.

"This DNA sequencer will help us decipher much faster the sequences of genes."



DNA sequencer.

## Hong Kong Land's Generosity



A student presentation.

Photography: S. Song

Dozens of architecture students crowded into the splendour of Hong Kong Land's boardroom in March to say a big thankyou for the property giant's generosity to the University.

Running since 2001, the International Student Exchange Programme has helped students study abroad and Hong Kong Land Chief Executive Nicholas Sallnow-Smith saw a series of student presentations.

## Chinese Academy of Sciences Appointments

Two more University Professors have been elected to the prestigious Chinese Academy of Sciences, which is the highest scientific honour in China.

Professor Anthony Yeh, Dean of the Graduate School and Professor in the Centre of Urban Planning and Environmental Management, was



Anthony Yeh

Allen Chwang

appointed to the Academy together with Professor Allen Chwang, the Sir Robert Ho Tung Chair of Mechanical Engineering.

Altogether eight scholars from the University are members of the Academy.

## Tons of Tomes

With the Communists seizing 'Peiping, Soochow, Hangchow and Tientsin' University Registrar Bernard 'Bunny' Mellor could not hide his despondency in May 1949.

The question was what was more depressing: the impending communist victory or the fact that the University's Books for China programme was grinding to a halt.

More than 50 years later the programme is still going strong with four tons of tomes ready to be dispatched to Mainland universities



this month (May).

Its war-torn origins, however, are revealed in the Registry's archives, which contain fascinating letters giving a taste of China as it was and a glimpse of the programme's colourful beginning.

Designed to rebuild China's educational infrastructure – shattered by the Japanese invasion – the programme brought with it books to restock its university libraries.

What becomes clear in the letters, however, is that a scheme to supply these surplus books from the West had walked into the middle of a civil war.

Stretching from 1948 until 1955 the letters include correspondence between the UK, Hong Kong and the Mainland.

Throughout, transportation is a recurrent theme with some universities considered too remote and others only reachable safely by air: an option that was out of the question.

In one instance the University only found out that a consignment had reached the National Central Library in 'Nanking' some 11 months after they had been dispatched.

One letter notes of Lanchow University in Gansu: "China Travel Service...seems very doubtful whether they could accept books consigned to a place so far away."

But transportation and war were not the only problems.

The sound of bucks being passed can almost be heard in several letters that make plain that Mainland university administrators were not prepared to accept Western books.

Instead they told the benefactors that books had to be sent through Beijing for clearance.

By 1955 this covert censorship had become formalized with the news that each book needed an individual import licence and if considered undesirable 'maybe proscribed'.

Under these circumstances the scheme would appear to have been largely mothballed.

It was only with the arrival of Priscilla Roberts, Lecturer in the Department of History, that the cobwebs were blown off.

She said: "A young academic from the Mainland came to visit here and he mentioned that he was teaching US history but they were chronically short of resources.

"At the same time my department head

mentioned that someone had left behind a collection of journals, which they had hoped could go to the PRC.

"It just snowballed from there."

Since its resurrection in 1986, Books for China programme has sent more than 20 tons of books to Mainland universities, with no sign of the tap being turned off.

Roberts said: "Northeastern University in Shenyang wanted to hold a reception about 18 months ago after they had received a consignment from us but unfortunately I could not go.

"But no doubt I will do this at some stage!"

## Honouring Our Supporters

The annual Honorary University Fellowships ceremony was a colourful event with five distinguished men – including a judge, a solicitor, a paediatrician and two businessmen – receiving awards.

The Hon. Mr Justice Patrick Chan Siu Oi, Permanent Judge of the Court of Final Appeal and an alumnus of the University, has rendered invaluable services to our Faculty of Law. He is also a member of our Council and has been actively involved in the review of our governance and management.



Mr Moses Cheng Mo Chi is a practising solicitor and also an alumnus of the University. He has distinguished himself as an active member of the Hong Kong community – as a former Legislative Councillor and as a member of the Education Commission. He is also a member of the University Court and Standing Committee of the HKU Convocation.

Mr Linus Cheung Wing Lam is Deputy Chairman of PCCW Ltd. Also an alumnus of the University, he has led a distinguished career in management. He is a former Managing Director of Cathay Pacific Airways and a member of the University Council and Finance Committee. He is also on the board of HKU School of Professional and Continuing Education (HKU SPACE) and Chairman of the SPACE Community College Advisory Board.



Professor Leung Nai Kong is a leading paediatrician and HKU alumnus. A former Chief Executive of Princess Margaret Hospital he is an Honorary Professor of our Faculty of Medicine. He has played an instrumental role in the founding of the University Medical Alumni Association and has been a member of the Association's Executive Committee since its formation in 1999.

Mr Lim Por Yen is a successful businessman and renowned philanthropist. He is founder of the Lai Sun Group and has been its Executive Director since 1959. His generosity has seen him donate more than \$600 million to charity. He has generously donated \$2 million to the HKU Foundation for Educational Development and Research and his gift of \$20 million was an enormous boost to the University's SARS Fund and the establishment of the Jao Tsung-I Petite Ecole.



Photography: P. Leung

## Honouring the Distinguished

An opera singer, a renowned philanthropist and a surgeon were among six people awarded honorary degrees at the Loke Yew Hall, in March.



Pak Suet Sin

**Ms Pak Suet Sin**, one of Cantonese opera's most enduring stars was conferred the degree of Doctor of Letters *honoris causa*. Her long and illustrious career has won her widespread applause. In 1990 she established the Yam-Pak Charitable Foundation to support research into Cantonese traditional dramatic art.



Michael Kadoorie

**The Hon. Michael Kadoorie**, Chairman of The Hongkong and Shanghai Hotels Ltd and CLP Holdings Ltd, was conferred the degree of Doctor of Laws *honoris causa*. As a trustee of the Kadoorie Charitable Foundation, Mr Kadoorie is a renowned philanthropist. The Foundation has generously funded agricultural projects and schools in Hong Kong. In 2000 the Kadoorie Biological Sciences Building was opened at the University in memory of Mr Kadoorie's father, Sir Lawrence.

**Professor Arnold George Dominic Maran** is Professor Emeritus of Otorhinolaryngology at the University of Edinburgh, and immediate past-president of the Royal College of Surgeons of Edinburgh. His distinguished service to the medical profession has won him international acclaim. He has taken an active part in both clinical and basic research. His sustained efforts to ensure a high standard of training and practice for Hong Kong is widely admired. He was conferred the degree of Doctor of Science *honoris causa*.



Arnold Maran

**Mr Darwin Chen** has enjoyed a distinguished career highlighted by services to the community. He is currently Chairman of the Arts Development Council. His achievements in this area have already earned him the conferment of an Honorary University Fellowship from the University and an Honorary Fellowship of the Academy of Performing Arts. He was conferred the degree of Doctor of Social Sciences *honoris causa*.



Darwin Chen

**Madam Qian Zhengying** is Chairwoman of the National Committee of the Chinese People's Political Consultative Conference and a member of the Chinese Academy of Engineering. She has been the mastermind behind many key water conservancy projects in China since 1944 and has provided professional advice on the construction of many massive dams and power plants which have greatly mitigated flood hazards along the Lower Yellow River. Madam Qian was conferred the degree of Doctor of Science *honoris causa*.



Qian Zhengying

**Mrs Mary Rodrigues** is an alumna of the University who has remained close to her alma mater. She has served the University as a member of both the Court and the Council. She has worked tirelessly for Convocation, retiring as its Chairperson in 2001 after serving for three consecutive terms. Mrs Rodrigues was conferred the degree of Doctor of Social Sciences *honoris causa*.



Mary Rodrigues

# Effects of Pollution on Health and Wealth

**F**or a pollution expert Tony Hedley, Professor: Chair of Community Medicine, spends an awful lot of time on the road, but his drive to clean up the region has seen his Department take pole position in a major new study.

The Department of Community Medicine has been chosen as one of the cornerstones of a new region-wide programme designed to set a benchmark for monitoring the health effects of pollution.

Public Health and Air Pollution in Asia (PAPA) is the brainchild of the Health Effects Institute (HEI), a collaborative body between the US government and the private sector.

Hedley said: "PAPA is a completely new approach: trying to establish studies across Asia based on the same method and the same controls.

"For instance, population analyses will be standardized and subject to rigorous scrutiny and we should be able to develop a series of comparable studies."

Hedley, who recently returned from a PAPA meeting in Bangkok, Thailand, has been elected to the oversight committee of the Asia-wide project.

The study covers India, Malaysia, Indonesia, Mainland China, the Philippines, Thailand and Hong Kong.

Hedley said: "The HEI is a well respected global authority and coordinator on environmental studies and I think this is a considerable gain to the department.

"To be able to successfully compete for resources and be involved in an organizational way with this project is something we are pleased with and proud of."

The Hong Kong study led by Wong Chit Ming, Associate

Professor in his Department in collaboration with Professor Malik Peiris in the Department of Microbiology is a time-related series focusing on morbidity and mortality but also designed to look at important interactions between influenza and air pollution.

This two-year study will use mortality, hospital admissions and environmental data over a seven-year period.

A three to four-year study headed by Lam Tai Hing, Professor: Chair of Community Medicine, also just accepted by HEI brings together multi-disciplinary groups from Guangdong, Hong Kong and Birmingham in the UK.

The project will follow people over this period and look at the subject's health in reaction to their exposure to pollution.

Hedley said: "The overall aim of PAPA is to improve the evidential base of the harm caused to health by air pollution in Asia and use this to drive policy on air pollution.

"Governments are not moving quickly enough to tackle this loss of lives, loss of productivity and general degradation of the environment."

Hedley believes that the Department of Community Medicine's reputation and record of comprehensive research into the associations between pollution and health problems attracted HEI.

The Americans were also impressed by the University's 2002 study of air quality 'intervention', which showed what health benefits you can achieve when you take action against pollutants.

But there will be no resting on their laurels.

Hedley said: "We have a meeting lined up in Boston in May and we are already preparing for this. We have a lot of work to do."

# Reducing the Environmental Impacts of Reclamation

The Department of Civil Engineering is developing a new reclamation technique, which has the promise of being cheaper, faster and more environmentally friendly than current methods.

Researchers aim to make land suitable for reclamation by sucking out air and water from soft marine clay below the seabed,

suitable for building on.

The suction method to be tested by the Department is expected to make land suitable within only three to four months. It has already been tried in shallow waters in Japan and China, but the Department's researchers want to develop it for use in deep marine waters.

Vertical piles will be driven into the marine clay. A filter will be laid on top of the sea bottom and covered with rocks and sand to prevent clay escaping. All of this will be enclosed in a vacuum system, in which a pump at ground level will suck the water and air up from below the seabed. The main cost will be the electricity to keep the pumps going.

The project is led by Professor Lee Chack Fan, Professor: Chair of Geotechnical Engineering and has received \$3 million from the Research Grants Council's Central Allocation Vote. The Department will be working in collaboration with the Hong Kong University of Science and Technology.

Negotiations are underway to conduct field tests at the Shenzhen Western Crossing and Professor Lee said the project could have application outside of Hong Kong.

"In many parts of the world

they don't really need to reclaim land, but in Hong Kong and many coastal areas of China they do and they have to deal with this soft sediment," he said. "The innovative part of this project comes from the potential for off-shore application."



Project leader Professor Lee Chack Fan.

to make it firmer and more suitable as foundation for buildings.

Currently, the clay is either dredged and dumped elsewhere, which creates numerous environmental problems, or the water is squeezed out under the weight of several metres of rock and sand. The latter can take two years to make reclaimed land

# Fish Stocks in Crisis

Fish stocks have plummeted to some of the lowest in the world at the Hoi Ha Wan Marine Park, in Sai Kung, since its establishment in 1996.

Over-fishing has reduced stocks on the coral reef by half, according to Dr Andy Cornish of the Swire Institute of Marine Science, who has just completed a six-year study.

Although trawling, spearfishing and recreational fishing have been banned, commercial fishermen with a permit from the Agriculture, Fisheries and Conservation Department, continue to fish by hook and line, or with fish traps and gill nets.

The result is that large coral fish are on the verge of extinction in Hong Kong waters. A survey of two other coral areas reveals a similar story of over-fishing.

"We know from interviews with people who have been diving in Hong Kong for decades that large reef fish used to be found among these shallow coral communities.

"In fact, a decrease in the size of fish is one of the main indications of over-fishing. Even though the number of fishermen with permits has declined in the last eight years there are still 280 working in the Hoi Ha Wan area. Each can do unlimited amounts of fishing."

Even in the coral community of Tung Ping Chau Marine Park, where fishing has been banned since 2000, the fish stock has not recovered. Cornish thinks this is because the area is too small to support roaming fish like parrot-fish.

At Sharp Island, where there is no restriction on fishing, stocks have dropped by 80 per cent.

"Fish are probably the most over-exploited marine source in Hong Kong and much more needs to be done to conserve them," he said.

"I would like to see coral communities within the Marine Parks, and possibly some outside, made off-limits to fishing altogether, to protect the biodiversity and to allow juvenile fish to mature and reproduce before they are caught."

Cornish's proposals would benefit local fishermen in the long-term. "They have little to gain by continuing to fish among corals as there are so few large fish remaining," he said.



Fish trap.



Photography: A. Cornish

Juvenile snapper.

## Green Turns to Gold

The University has managed to turn green into gold thanks to its first environmental report which scooped the Gold Award in the 2003 Hong Kong Eco-Business Awards.

The University report not only won gold but also represented a landmark and vindication for the University's Environmental Goal and Policy, which was launched in 2001.



The winning team.

There to receive the award, launched by the Environmental Campaign Committee, from the Secretary for Environment, Transport and Works Dr the Hon. Sarah Liao was Professor Lee Chack Fan, Pro-Vice-Chancellor.

Also on hand were Henry Wai, Registrar, Professor Peter Hills, leader of the editorial team and team members Dr Marianne Tso, Mandy Lao, Allison Jones and Sheila Stimpson.

Professor Hills said: "We were very pleased and delighted to receive this, especially as this is the first report we have entered for competition.

"There are not many universities producing this kind of report in the world and we certainly can consider ourselves as taking a leading role with Asia Pacific."

Using the University's environmental knowledge, expertise and leadership the policy has sought to benefit both the campus environment and the wider community since 2001.

This focus has been on electricity conservation, food containers, transport, green office practices and biological safety which give some benchmarks of progress.

But the team producing the Environmental Report – *People, Places and Progress* – has sought to move this on a stage by encouraging consultation and discussion among the wider community.

Two areas were identified in the report for immediate development: a transparent management structure with visible support from senior University staff and the establishment of an environmental database.

The second environmental report, which is already being produced, will focus on sustainability.

Hills said: "The idea of sustainability is embodied in three elements: economics, social impact, and the environment. We hope that the second report will help make this transition to a broader focus."

This 2003 report, which is due out this month (May), includes a survey of interviews from campus users, and more detail on the

University's energy conservation programme.

In a sign of how fast things are moving electricity consumption has already been cut by 3 million kilowatt hours for just the months July to October 2003.

Hills, Director of the Centre of Urban Planning and Environmental Management, said: "The idea is that these annual reports will measure progress on our major objectives: so it is a kind of accounting system."

To this end the third report – scheduled for 2005 – will measure community impacts.

The Vice-Chancellor, Professor Lap-Chee Tsui said: "We are very pleased that, at our first attempt, we have produced such a good report. This shows our commitment to environmental protection."

## Fight Against Stomach Cancer Heats Up

You might struggle to hear the hushed voice of Benjamin Wong but his pioneering medical research has been coming across loud and clear on the global stage.

The modest Department of Medicine Associate Professor has grabbed headlines across the world thanks to a study, which showed that antibiotics can prevent stomach cancer.

Along with the Dean of the Faculty of Medicine Professor Lam Shiu Kum, Wong became the focus of international media attention but this 'flash in the pan' has taken 10 years in the making.

Since the 1980s scientists have known about a strong link between stomach cancer and gastric ulcers with the bacterial infection of the gut from *Helicobacter pylori*.

In 1994, Wong and Lam decided to focus on Fujian province where the combination of poor diet and hygiene meant that a high percentage of people were infected with the bug.

Using more than 1,600 patients, the University team was able to focus on two groups: one was given a placebo treatment and the other was given medicine to kill the bacteria.

Wong said: "Overall the reduction in cancer with active treatment is 37 per cent.

"Although this is not statistically significant the *Journal of the American Medical Association (JAMA)* said it represents a dramatic reduction in the field of cancer."

Of the 988 patients without stomach lesions at the outset, none on the treatment got stomach cancer, compared with six in the placebo group, after the seven-year-long study.

The remaining 642 patients already had pre-cancerous lesions and among this group seven of those who received treatment developed cancer against five who did not receive treatment.

Wong believes that these mixed results – published in January – reflect in part the diluting effect of combining two groups for the study: those with and without lesions.

He said: "We are still following up with these patients and maybe the reason for not having a significant statistical difference is because it was not long enough."

One of the abiding memories for Wong, however, will be reception they received from the patients.

He said: "The local people welcomed us because they realized they had this killer in their midst and we actually picked up between 10 and 15 cases of stomach cancer and close to 100 ulcers.

"It was often hard work in fairly primitive conditions – we would have to take our own electricity generator and equipment to these remote villages.

"This kind of reaction and experience really makes it worthwhile."

This research project comes in the wake of another Wong survey, which revealed that Aspirin may be able to reduce the risk of certain types of stomach cancer by 22 per cent.

Published in the *Journal of the National Cancer Institute*, the University study was based on a comprehensive analysis of epidemiological studies published worldwide.

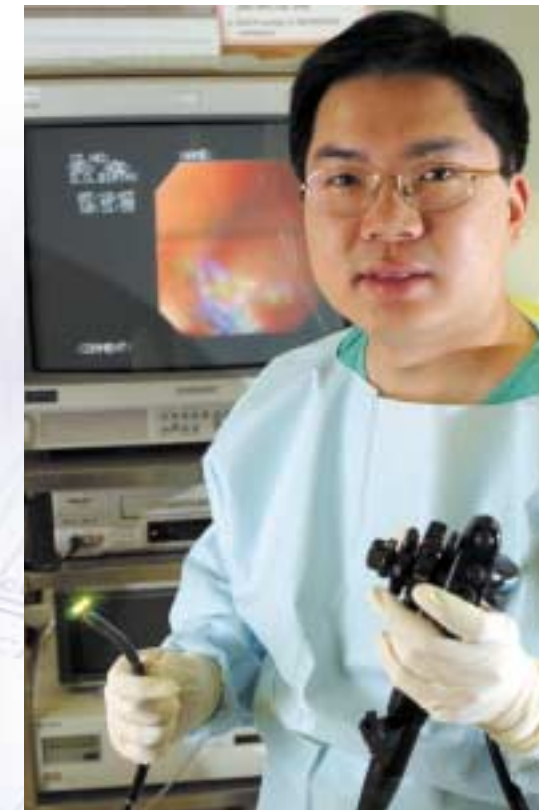
Wong's team compared 2,831 patients with stomach cancer and 21,514 people without cancer from

nine published studies.

He is now looking to combine the Fujian study with the aspirin research.

Wong said: "We would like to see whether the group that does not benefit from the first trial in Fujian does benefit from an aspirin trial, and the new study is already underway in Shandong province.

"The Fujian study is probably the only study of its kind and it will remain a unique one."



## Restoring Oral Health

'Dry mouth' is a problem most of us wash away with a glass of water. But for some patients, it can mean lifelong problems with eating and speaking. These are quality-of-life issues, according to Professor Anne McMillan of the Faculty of Dentistry, who has been investigating how to improve a dry mouth and give patients a better life.

A dry mouth occurs when the salivary glands stop working. Saliva is necessary to chew, swallow, speak and hold dentures in place, and lack of it also leads to tooth decay.

"Most of us don't realize how important saliva is until it's not there. If the mouth is very dry, your tongue sticks to different parts of the mouth. Eating is difficult because you need saliva to start the digestion process," said Professor McMillan, who specializes in oral rehabilitation.

Patients lose the ability to produce saliva either as a side effect of treatment for other conditions, or as a problem on its own. Nasopharyngeal carcinoma patients have been especially susceptible. The cancer is located deep under the brain and traditionally has been bombarded with large blocks of radiation. This destroys the cancer cells, but also the salivary glands, leaving patients with a dry mouth for the rest of their lives.

Not much can be done to help them, other than trying to keep the mouth moist with water, which is not very effective without saliva.

So Professor McMillan and her team have been working with clinical oncologists at Queen Mary Hospital to prevent the damage in the first place.

The oncologists have devised a treatment that delivers pencils of radiation from different angles, thereby causing less damage to other tissues. The treatment started in 2000 and Professor McMillan has been tracking patients' progress. The preliminary findings show a marked improvement in saliva levels and quality-of-life over traditional radiotherapy, especially six to 12 months after treatment, she said.

"We're discovering that the recovery of saliva is good enough to sustain pretty good oral health. In terms of quality-of-life, they aren't having the problems with speaking and swallowing and chewing," she said. "What matters in the end is how the patients feel."

Quality-of-life is also a consideration for patients who suffer a dry mouth as a result of a medical condition, Sjögren's syndrome. This affects mainly middle-aged or older women and involves the drying up of the salivary and lacrimal glands – responsible for keeping the mouth and eyes moist. It is associated with rheumatoid arthritis and lupus.

Professor McMillan and her team are working with the division of rheumatology at Queen Mary Hospital on a controlled clinical trial of a new drug to treat the oral effects of the syndrome. (Drug treatment for a dry mouth requires some saliva to be present to be effective, which is not the case after traditional radiotherapy for nasopharyngeal cancer.) The drug, Cevimeline, can improve a dry mouth and has much less serious side effects than previous drugs. The trial is looking at the effectiveness of Cevimeline for Sjögren's syndrome patients and its impact on quality-of-life.

Another collaborative effort is examining quality-of-life issues for stroke patients. Although they do not suffer dry mouth, they still have difficulty speaking, chewing and maintaining oral health. Professor McMillan is working with the rehabilitation unit at Tung Wah Hospital to devise methods to improve these problems, such as adjusting the shape of toothbrush handles so they are easier to hold. The impact on the quality-of-life of patients and their families are being studied both in the hospital and at home.

"One of the issues medics and dentists are always grappling with is perceptions of health. Our perceptions are often not the same as the patients'," Professor McMillan said, in explaining the need to look at patients' quality-of-life.

She cited an earlier outreach project by the Faculty in which the elderly were offered free dental care for simple procedures, but not denture fitting or repair. The Faculty staff thought the project went well, but the patients were not satisfied because their main concern was with dentures. "Obviously if you don't satisfy the needs of the patient, you aren't going to have a successful outcome," she added.

## Pathologist and Engineer Use their Heads

Reconstructing the faces of crime victims from a skull is one of the great art forms of criminal investigation but forensic pathologist Philip Beh decided it was time to turn this into a science by using his head: literally.

The Associate Professor of the Department of Pathology subjected his own head to a CT Scan to test out his theory on how to create a standard model for recreating the true identity of someone from measurement of their skull.

Until now detectives have had to rely on the instinct of sculptors who build on a standard but limited set of indicators drawn up from 20 to 30 soft tissue points on the face used to gauge the skin and muscle thickness.

Beh said: "This gives a rough guide as to how big the muscles are but it's limited to those points and you have to rely on the artistic skill of the sculptor.

"But if you can use CT scan data you can use a few thousand points and then using a computer you can make it cheaper, faster and more reliable."

With the help of Dr Ian Gibson, Associate Professor from the Department of Mechanical Engineering, Beh has been trying to develop a model for Chinese racial faces and will be using 40 male and 40 female patients.

But before going down this avenue Beh has to get the green light from a hospital, as well as assess the results from his own experiment with a CT scan.

Once Beh had undergone the scan, Gibson was able to create a model of his skull and a model of his face to show that the system works.

Now they want to develop the informal project with funding.

The initial idea began to germinate in Beh's mind in 2000 when he met some American researchers from General Electric (GE) at a conference held at an FBI facility.

It was not, however, until early last year that Beh and Gibson began to do their preparatory work.

When Beh then met up with the Americans in Turkey, in 2003 they decided to link their complementary projects together.

Eventually Beh hopes to feed his data into GE's software and computer system to provide a comprehensive model for different racial groups.

He said: "We want to be able to test the prototype and be one of the first centres in the world to use this kind of technology. My aim is to turn an art into a science and help law enforcement agencies in the process."



Philip Beh and his heads.



## Help for Old Age Buildings

The age-old problem of what to do about Hong Kong's dangerous old age buildings could become a thing of the past thanks to an ingenious scheme from the Faculty of Architecture.

Professor Chau Kwong Wing, Dean of the Faculty of Architecture and Professor: Chair of Real Estate and Construction and his team want to help set up an independent watchdog that will grade the territory's tall buildings with a carrot and stick scheme designed to improve safety.

They believe their Building Performance Assessment Scheme will also help break the political impasse over what to do about badly maintained and unsafe buildings in Hong Kong.

Professor Chau said: "It will give owner's the impetus and motivation to improve buildings by giving an independent assessment, which will act as a benchmark for future improvements.

"This will not cost the owners anything – at least initially – and will give the property market, owners and occupiers information about the safety and maintenance of their buildings."

This move comes the wake of the government's latest consolation exercise, which is designed to spark debate over how to tackle this catalogue of neglect that often has fatal consequences.

Falling masonry, signs and illegal structures have all claimed lives across the territory.

But determining who is responsible for picking up the tab and tackling these serious issues is clouded by the fact that many of these buildings have no incorporated owners.

Without this framework, many owners argue that they are unable to foot the bill individually and so far the government has refused to enact laws that compel them to act.

Professor Chau said: "The government has proposed a scheme where people voluntarily inspect their own buildings and come up with a grading system.

"The problem with this is that only the owners of good buildings will agree to this.

"Our scheme, however, would look at just a core set of issues, be

funded independently and fit the government's purpose."

Chau believes that the University in partnership with other bodies should set up an independent standards and monitoring body to mount this exercise.

This will be funded through private donations from developers, estate agents, contractors and finance institutions, as well as through public donations and research grants.

This will be no selfless act because the University will give these parties a clear benchmark by which to judge properties, as well as act as an incentive to improve these buildings.

Chau said: "Owners who disagree with our grading can either appoint a consultant to do their own survey or, if improvements have been made, can be reassessed."

A pilot project undertaken by the Buildings Department estimated that assessing a building would cost \$20,000, which would mean a total bill of more than \$800 million.

But Chau believes this overestimates the cost.

He said: "The beauty of our scheme is that it strips down the grading system to just a few key aspects and this would save a considerable amount of money.

"This would provide valuable information to us for academic research and the wider community, act as a benchmark for raising standards and save the government money.

"It is a win-win-win situation."



## Investigating the Skeleton

University scientists and surgeons are leading a \$50 million project to investigate control of the development and growth of the skeleton and genetic links to degenerative skeletal disorders, such as lower back pain.

Researchers believe certain genes may make some people more susceptible to back pain than others, particularly as they age.

Millions of people around the world suffer from skeletal disorders which cause long-term pain and physical disability, problems which have become more prevalent with longer life spans. A major proportion of these problems, such as degeneration of the discs in the spine, affect the lower back and can cause pain.

"By the time you get to 60 years old, about 90 per cent of the people will have disc degeneration (DDD)," said Professor Kathy Cheah, Professor: Chair of Biochemistry and Head of the Department of Biochemistry. Professor Cheah is leading the multi-institution research project together with Professor Keith Luk, Professor: Chair of Orthopaedic Surgery.

One of the objectives of the programme, which is funded under the University Grants Committee's Areas of Excellence grants, is to identify genes which predispose to disc degeneration. Finnish scientists had previously identified genetic changes, called TRP2 and TRP3 in short, in two genes (COL9A2 and COL9A3 respectively) that were linked to disc degeneration. Previous studies by the HKU team had found that the prevalence of these genetic changes in Hong Kong Chinese was very different than for the Finns, with the TRP2 being present in 20 per cent of the Southern Chinese population and the TRP3 was absent. But the genetic changes in the COL9 genes do not account for the full range predisposition to DDD. Rather DDD is a complex disease in which many genetic changes each contribute in part to increased risk and severity of degeneration.

"Not everyone with TRP2 will get this degeneration, but it increases the risk and severity of it happening. People with TRP2 are 2.4 times more likely to have this degeneration and it's more

severe," Professor Cheah said. Because many as yet unidentified genetic changes contribute to DDD, the challenge is to find the genes involved and assess their relative contribution to risk of developing disease. They will also look to find the genetic causes of premature disc degeneration which arises among young people, a problem that is inherited. The researchers will carry out magnetic resonance imaging (MRI) on the spines of 2,000 people and will use genomic technology and statistical genetics methodology to identify mutations in genes that are associated with predisposition to disc degeneration.

Professor Cheah said their findings could be useful in developing a living artificial disc, although treatment is not a direct goal of the project. Currently, treatment involves surgery, physiotherapy or pain relief and rest. In Hong Kong, degenerative low back disorders are the second most frequent reason for visits to physicians and the third most common reason for surgical procedures. In 2000 about \$200 million was paid out in workers' compensation for these disorders.

Another major objective for the project is to investigate how skeletons develop and are maintained. Irregularities can lead to dwarfism, malformed bones and other problems. The team

will alter genes in mice to try and understand how the growth of the skeleton is regulated. Professor Cheah said they had already patented a mouse model showing abnormalities in skeletal growth which could result because the skeletal cells have made proteins that were not properly 'folded'.

A better understanding of skeletal growth could be useful in devising treatments for cartilage replacement, injuries, osteoarthritis and other conditions, she added.

The project will run for about five years. It marks a significant collaborative effort with other institutions as it involves scientists from the Hong Kong University of Science and Technology and Hong Kong Polytechnic University, as well as our University. Professor John Leong, our former Professor: Chair of Orthopaedic Surgery and currently President of the Open University, is also acting as collaborator on the project.



# Forty Years On

At the recent annual Long Service Awards presentation ceremony for Terms of Service II and III staff, four members of staff were honoured for 40 years' service with the University. *The Bulletin* caught up with them at work and has documented their fascinating lives.

**C**hung Yun Fat is looking forward to visiting his extended family in the US and Mainland China when he takes his final bow at the University Museum and Art Gallery.

The Museum Assistant I has been with the gallery since he joined the University in 1963 and well remembers its more humble beginnings.

Chung said: "Before it was very small. We only had two rooms but now it is so big. Throughout my career we always seemed to have been moving to bigger premises."

The father-of-three did not come to Hong Kong until the age of 16, following in the footsteps of his mother who had left him behind some eight years earlier.

When asked who brought him up Chung replied: "No-one! I am very independent and I lived alone, started secondary school and then made my own way here."

This spirit of self-sufficiency came to the fore when his wife died young, leaving him to bring up their three children.

They do not seem to have suffered because Chung proudly lists their achievements: two masters and one bachelor of science.

Chung said: "I am very poor! I had to borrow money for their postgraduate courses from friends and I have only just paid them off."

"But I have finished my duties and will retire this June. After that it will be my children's turn to support me!"

His children might be relieved to hear then that his spirit of independence has its limits.

When asked about his future plans Chung said: "Their thinking is more advanced than mine so I will seek their advice before making any decisions."

**K**o Choo Hing came to work at the University straight from primary school: but do not be alarmed there is no child labour involved.

He explained: "We were very poor so I went to school late. My parents rented a single room of 70 – 80 metres and we all had to crowd in: my parents and three children."

"My father had to support us working as a gardener for a wealthy family in Kowloon Tong."

"When I got my first wage packet – \$120 salary and \$80 allowance – I almost earned as much as him."

A Works Supervisor II at the Estates Office, Ko came to the University after deciding to follow a friend's advice to apply here.

Now with four children of his own, Ko realizes that it is time to put down new roots of his own.

His number one target is to travel round China once he finally hangs up his trowel and spade.

But that does not mean the 57-year-old will not miss the University.

Ko said: "I will miss a lot: the people; the environment and just watching the changes."



**W**ith his father already working in the Estates Office you could say that it was predestined that Lee Wui Yuen ended up working for the University.

More than 40 years later the Works Supervisor I has spent nearly his entire working life at the Department of Mechanical Engineering.

By strange co-incidence Lee spent a short spell at the Department of Geography in 1962 before being replaced by fellow long service award recipient Wong Ting Bor.

After spending a five-year apprenticeship with his current Department, Lee went on to help countless generations of students set up their projects and hone their inventions.

In his highly skilled and technical field, Lee has noticed the changes. He said: "There has been a big change with the equipment: a lot of changes in fact."

"But it's my duty to adapt to new technology and it helps keep me on my toes."

Since Lee will not retire for another three years, the father-of-two has plenty of time to still plan out his retirement.

He smiled: "Why plan now. I have plenty of time and lots of ideas."

In the meantime it is business as usual.

**W**orks Supervisor I Wong Ting Bor knows how long he has been in the Department of Geography just by looking at the Professors: he can remember them as undergraduates.

Now with 40 years' service under his belt, Wong joined the University in 1963 – only three years after arriving from Mainland China in search of a new job and a new life.

First a messenger, the then teenager was given the chance to become a laboratory assistant in the map unit after just eight months and began to learn the art and science of map drawing.

With the Cartographic Unit ever since, Wong has seen colleagues come and go as computers made their work ever quicker but that does not mean a lighter workload.

He said: "It is hard work but I enjoy it, not least because I need to learn so much about computers. Once it was all hand drawing and slow but now I can rely on computers."

Although Wong will not leave until 2005 – when he finally reaches 60 – he is already making plans to set up home away from the University.

With three grown up children and a holiday home in the Mainland, Wong believes it will be time to take it easy and see more of the world.

He said: "I want to tour around China, visit my house there and just generally enjoy myself."



## A Prescription for Chinese Medicine

Professor Tong Yao, the new Director of the School of Chinese Medicine, has just moved from Shanghai to Hong Kong, encountering not only a new job and city, but a new set of challenges.

Whereas traditional Chinese medicine is well-recognized by the Mainland government, in Hong Kong it has only recently started to be appreciated by the authorities.



"I didn't understand clearly what the status of Chinese medicine was before I came here, but I found it compares very differently with western medicine. Chinese medicine practitioners in Hong Kong cannot prescribe drugs while western medical doctors cannot prescribe herbal formulas. This is quite different from the situation on the Mainland," she said.

Nonetheless, she sees great potential for Chinese medicine here. Apart from growing support in official quarters, traditional Chinese medicine has an established presence in the community. And the blending of eastern and western traditions in Hong Kong

offers great potential for growth and research.

"Many people in Hong Kong believe in Chinese medicine – about 25 per cent of people see Chinese medicine practitioners for health problems – but a Chinese medicine practitioner cannot prescribe drugs, examine, x-ray or test the blood and there is no Chinese medicine hospital in Hong Kong," Professor Tong said.

"It is my dream to develop Chinese medicine here more quickly. I know it will be very difficult, but recently there have been good signs. HKU has a great plan to develop research into Chinese medicinal herbs and the Hong Kong government plans to establish specialist Chinese medicine clinics in public hospitals, so I think it is a good beginning."

Professor Tong believes the University has a special advantage in the field because of its well-regarded Faculty of Medicine. She sees opportunities to integrate Chinese and western medicine into the curriculum and research and bridge the divide between the two disciplines.

"HKU is a famous university, it is international and modern. Since Chinese medicine is just starting to develop in Hong Kong, I think the University can do much to help its development and even help it to spread abroad," she said.

Professor Tong was Vice-President of the Shanghai University of Traditional Chinese Medicine for five years before coming to Hong Kong and she is confident that she can help

the School of Chinese Medicine to develop. But she also feels there is much to learn and adapt to.

"The University started admitting undergraduate Chinese medicine students two years ago. I shall put much effort into developing a curriculum that will provide quality Chinese medicine training to students," she said.

"The University has established a plan for the development of traditional Chinese medicine. Many Professors in the University are interested in Chinese medicine, so I feel confident about the future development of the School," Professor Tong added.

## Physical Activity Increases Life Span

With an obesity epidemic to tackle you might think that Professor Bruce Abernethy's conviction that Hong Kong's sporting elite 'punches below its weight' would be a good thing.

But the new Director of the Institute of Human Performance (IHP) recognizes that he has his work cut out if he is to help Hong Kong shape up and also help realize a better elite performance on the world sport's stage.

He said: "We have an obesity epidemic sweeping the world and physical inactivity is the prime cause of that. In my previous role as Head of the School of Human Movement Studies at the University of Queensland my brief was to help students and the community alike understand the profound health, social and economic benefits of regular physical activity.

"This is very much the agenda I want to develop here as well."

With boxes still lining the floor and his office in Sassoon Road largely bare, Abernethy might be new to Hong Kong but he comes armed with an impressive curriculum vitae.

Eager to downplay the suggestion that his prime concern is pushing the boundaries of athletic excellence, Abernethy's academic and sporting life does, nevertheless, show why his native Australia is so successful.

Much of his own research work has concentrated on understanding skill learning and expert performance. Some of this research involves working with Australia's leading cricketers and athletes from different team sports at the Australian Institute of Sport in an attempt to unlock some of the secrets of expert performance.

Abernethy said: "One of the hallmarks of experts is that they appear to have 'all the time in the world' but the question is why? Is this capacity innate or acquired? Is it possible to design innovative ways to practice to accelerate the acquisition of expertise?"

"The lay view is that experts in ball sports are born with exceptional vision and have some innate giftedness not present in the general population but the evidence we uncovered runs contrary to that.

"To all intents and purposes the basic visual functions of experts are not noticeably different to the average population so that's not the cause of this advantage. Specific perceptual

skills, like pattern recognition and anticipation, do show a clear, reproducible advantage for experts, and this advantage appears to come about through the expert's learned use of different cues to those used by lesser skilled performers.

"For example, in cricket, by recognizing variations in the way a bowler is holding the ball or delivering it the batsman can reliably predict the trajectory and landing position of the ball well before it is even released by the bowler. This distinctly expert skill can be improved in others through the right type of practice (and lots of it)."

To this end Abernethy is very interested in the art and science of teaching people to learn the skills of anticipation and pattern recognition in an implicit or subconscious way.

This is important because much of the machinery for human movement is not conscious and so thinking about the mechanics of movement can actually impair learning the skill rather than improve it.

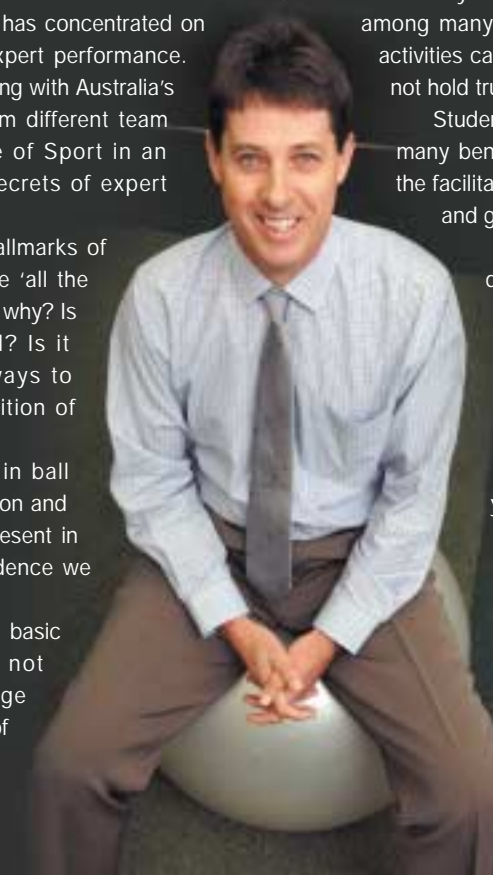
He said: "That's one of the advantages of coming to the IHP because we have people like Richard Masters and Jon Maxwell in the IHP who have interests and strengths in these areas."

Abernethy also believes that the traditional perception among many Asian cultures that involvement in sports activities can impair your academic studies simply does not hold true.

Students, like people of all ages, should seek the many benefits of regular physical exercise, including the facilitatory effects of exercise on cognitive function and general mental well-being.

He said: "With nearly all major chronic diseases physical inactivity is a significant risk factor and regular exercise also has a central role to play not only in primary prevention of these diseases but also in their ongoing management. The increasing evidence base is that regular physical activity will add years to your life and life to your years."

Balancing the IHP's provision of teaching, research and service programmes so as to both increase participation in physical activity for everyone and promote excellence in performance in movement for the elite few is one of the key challenges to which the new Director says he is particularly looking forward.



## Women Entrepreneurs in the Making

Brought up in the middle of a family business, Priscilla Chu is perfectly placed to capitalize on some inside information when she assesses why women remain Hong Kong's hidden entrepreneurs in her new book.

*The Making of Women Entrepreneurs* is Chu's comparative study of men and women entrepreneurs in the territory and the secrets of entrepreneurship with 'Chinese characteristics'.

Management specialist Chu, who received her PhD and MSc from the University, has taken 20 local men and 20 local women and – in return for their anonymity – was given an insight into what makes them tick.

She said: "The motivation to write this book is both personal and academic. My family background has seen generations of entrepreneurs, but I am not one of them, so I thought, why?"

"The other reason is that we have had many books on male entrepreneurs – particularly in the West – but very few about women in Hong Kong."

Chu, an associate professor at the City University of Hong Kong, concentrated the study particularly on industrial entrepreneurs, because she believes that this is a segment of the economy that women have traditionally struggled in.

She found that one of the key motivating factors for women was to play supportive roles to their husbands, which often means that they take backseat roles while the men occupy the front office.

Chu said: "Gender quite obviously influences motivation and problem solving; women entrepreneurs tend to be less conscious of 'face' and will go around asking for assistance and guidance.

"The (company) strategy tends to be more like a life strategy than a business strategy. It is there to provide for the family rather than self achievement."

Chu also noticed a clear difference of approach when it came to the thorny issues of succession.

She said: "Females tend to be less hesitant than men on giving up power. Female entrepreneurs tend not to be so attached to it, whereas with men, even with their own children, they are reluctant to give up power."

In a territory with a reputation for entrepreneurship it would seem contradictory that so few women can be held up as role models but Chu believes there are many reasons for this.

She said: "If we are looking at succession, it is usually the sons who will succeed and inherit the business. The woman only gets the firm if she is an only child or their brothers would not take up the business.

"For women on their own, it is also generally very difficult to get support from the financial institutions.

"Moreover, I think that the better educated a woman is the less likely she is to go into entrepreneurship because it is such hard work and too risky. This is not an easy route for people with choice, as the opportunity cost is too high."

*The Making of Women Entrepreneurs* by Priscilla Chu Pue Ho, Hong Kong University Press.



## Self-made Woman Entrepreneur

PR tycoon Annie Bentley might shun the limelight in a high profile industry but the University Arts graduate is not afraid of taking risks when it comes to striking out in pursuit of new challenges.

Nothing if not versatile, Bentley started her career as an English teacher, moving on to editorial work for publishers in the area of English as a second language before heading up PR and advertising agency Bentley Porter Novelli but there is one consistent theme: getting the best out of yourself.

This entrepreneurial spirit saw her turn her back on a well paid salary job as a PR boss for a financial house in 1987 and set up her own PR company.

Bentley said: "When you work in-house the more successful you become, the bigger the budget becomes and the bigger the cost but you do not make or build anything, you simply serve the same in-house departments and the same faces.

"You are faced with an in-house structure and strict hierarchy.

"But if you set up your own firm you are able to be exposed to a greater number of companies and the challenge is far more fulfilling."

Reflecting on her own career path, however, Bentley acknowledges that she is more the exception that proves the rule rather than leading the vanguard of female entrepreneurs.

This situation, she believes, is as much generational as it is cultural. She still remembers the barriers erected to women when she graduated in English Literature and Chinese Translation in 1971.

Bentley said: "For people of my generation university education was reserved for boys so the girls who made it to university were the minority.

"Women have also been overlooked when it comes to running

the family firm because in Cantonese culture women should not be on public display. It would also suggest their husbands cannot support them.

"The other reason (that women entrepreneurs are so rare) is a simple one: women have to divide half their active time in their 30s to build a family."

After graduating, Bentley became frustrated as a teacher as she felt she was making very little impact on very few children. The Hong Kong-native moved to the UK and, after completing a second degree at Oxford, entered the world of publishing in London.

On returning to the then colony in 1981, Bentley decided to join Sun Hung Kai Securities – an integrated financial services house – and soon found herself promoted up the PR ladder at the firm.

But by 1987, she felt she had taken it far enough.

She then set up in that year her own agency known as 'Bentley DDB Needham', in partnership with DDB Needham, one of the leading advertising agencies within the Omnicom Group, the world's leading PR, advertising and communications group according to *Fortune 500*.

She said: "The growth has been organic rather than by referral. We have had to generate our own business and I have enjoyed this challenge."

Certainly her ambition to broaden her horizons has been amply rewarded and Bentley proudly lists a diverse client base that stretches from McDonalds to the Financial Times Index and onto Viagra.

All this has come despite the fact that Bentley chooses not to use the publicity treadmill to drum up business.

Bentley said: "I want people to be attracted to us because we are the outstanding professionals in our industry."

