

VOLUME 7 · NUMBER 2 · April 6, 2006

BULLETIN

THE UNIVERSITY OF HONG KONG

IMMORTALITY— Hope Springs Eternal?





Editor
The Registrar

Editorial Board
Sheila Stimpson, Dora Yue

Writers
Kathy Griffin, Allison Jones

Photographer
Richard Jones, sinopix photo agency

Graphic Designer
trinity & co.

Printer
HeterMedia Services Limited

Items for Publication
Items for publication in *The University of Hong Kong Bulletin* or suggestions for subjects which might be included should be addressed to the editorial board, Knowles Building, telephone number: 2859 2229, fax number: 2559 9459 or e-mail: bulletin@hku.hk.

Items should include the author's name and University contact details. If you have any comments or suggestions to make regarding the content or format of *The University of Hong Kong Bulletin*, please direct them to the editor for consideration by the editorial board.

Printed on recycled paper.

NEWS ROUND-UP

- 1 ♦ **The Return of Chris Patten**
- 2 ♦ **In the Arms of a Goddess**
- 3 ♦ **Human Rights Generosity**
- 4 ♦ **Liver Pioneers Win Top Prize**



DEVELOPMENT

- 5 ♦ **University's Vision for Modernity**



COVER STORY

- 6 ♦ **Unlocking the Secrets of Ageing**



TEACHING AND LEARNING

- 8 ♦ **Conservation Experience**
- 9 ♦ **Mentors Teach Outside the Classroom**



RESEARCH

- 10 ♦ **Language Study Is a Family Affair**
- 11 ♦ **Learning to Understand Autism**
- 12 ♦ **Probing the Brains of Men who Abuse**
- 13 ♦ **Professor Retires to the Hot Seat**



PEOPLE

- 14 ♦ **A Perfect Match**
- 16 ♦ **Leading Astronomer Returns Home**
- 18 ♦ **There Is Room at the Top**
- 20 ♦ **Demand Increases for Humanities**



BATTLE AGAINST BIRD FLU

- 22 ♦ **Research into H5N1 Virus Continues Apace**
- 24 ♦ **Molecules that Protect**



EXCELLENCE IN TEACHING AND RESEARCH, 2004-05

- 26 ♦ **What Makes a Good Teacher**
- 28 ♦ **Outstanding Research Student Supervisor Award**
- 30 ♦ **Outstanding Young Researcher Award**
- 34 ♦ **Outstanding Researcher Award**
- 37 ♦ **Special Research Achievement Award**



The Return of Chris Patten

The University took great pleasure in welcoming back Hong Kong's last Governor, the Rt Hon. Chris Patten, who returned to the territory to promote his latest book *Not Quite the Diplomat*.

Speaking to an audience of students and staff in a packed Loke Yew Hall, Lord Patten said that he cared passionately about universities, higher education and investment in research and development.

"The position of Chancellor of Oxford University," he said, "gives me the opportunity to act as an advocate for higher education and in that capacity to recognize how much we share, and how much it is opportunities as well as problems which make national frontiers porous. I think that is particularly true in the pursuit of knowledge and learning."

In speaking of the rise of China and Asia he declared that world is changing dramatically and that the Western world needs to recognize that change.

"What do I mean by that? What I mean is the extraordinary rise of Asia and of China and India. We need a sense of history in order to appreciate the extent to which what is happening is a turn of the wheel.

"You all know that Donald Rumsfeld has a certain way with words. And I notice a few months ago he said he hoped that he would be able to encourage China to join the civilized world. It sort of makes you wonder about education!"

"I mention that because it's important for all of us to remember that from about 1500 to 1820 India and China represented fifty per cent of

the world's GDP, and for 18 out of the last 20 centuries China has been the largest economy in the world and it will be the largest economy again in this century."

He said he expected China and India to become 'mightily important' economic and political forces. "There isn't a single global problem, there isn't a single global opportunity, which we can successfully tackle without the involvement of China and India."

He went on to describe universities as the most important pillars of free societies. "People talk about the importance of universities in relation to the knowledge-based economy," he said. "But universities are principally repositories of the values of a free society. And what you do here, the way you stand up for those ideas and the way you develop those ideas, is going to play, in my judgment, an important role in creating this century."

He spoke openly about his admiration for Hong Kong describing it as one of the freest cities in Asia and added: "If you want to learn about responsible free-market economics I guess you can read Adam Smith or you can buy a plane ticket and come to Hong Kong. And I wish that some of those who are so hostile to free trade – both the rich who think that they should protect their own markets and some who come from poorer countries and think that free trade is a threat to their own impoverishment – could spend a little time here and see what a community with absolutely no resources whatsoever can achieve through energy and vigour and its own creativity."



In the Arms of a Goddess

The Hindu goddess of knowledge and the arts, Sarasvati, has extended her blessings into the Department of Music.

A painting of the four-armed goddess by Balinese artist, Subrata from Batuan, was presented to the Department by the Mayor and Raja of Gianyar, A A Gde Agung Bharata, in appreciation of the Department's efforts to promote the performance and enjoyment of gamelan music.

The Raja watched the University Gamelan perform in Bali in 2004. Students have been travelling to the Indonesian island for six years to study its music and culture under the auspices of the Department of Music and Associate Professor Manolete Mora, who has also conducted research there.

Dr Mora said the experience was a transformational one for students because they stayed in Balinese homes and experienced the importance of art and music in creating a sense of community.

"Many of the students have a genuine interest in music, but they have been dissuaded from pursuing it by parents and

teachers. They feel vindicated to go to a place where music is not seen as marginal. This is why the gesture of the painting is so important," he said.

The painting hangs in Hung Hing Ying Building outside the Department's offices. The goddess holds several items in her arms, including a string instrument associated with learning and a higher form of enlightenment.

Along with the painting, the Raja has promised to offer assistance with future field trips by providing accommodation for students in Bali. He also supported a performance by the University Gamelan in Hong Kong in November at the Cultural Centre and sent four Balinese dancers and musicians to the event. Dr Mora said the painting symbolised these new connections with Bali.

"This gift says what gifts are all about: to establish bonds between people. In places like Bali and other parts of Southeast Asia, gift giving is not meant to ingratiate yourself, it is tantamount to giving a part of yourself. This is why gifts are treated with profound respect. You can't take it for granted or give it away, you have to treasure it," he said.



Human Rights Generosity

A record number of entrants were admitted to the Master of Laws in Human Rights programme this year thanks largely to the generosity of one man.

The Faculty of Law accepted 35 students for this unique course, six of whom were given the opportunity to join by Dr Helmut Sohmen.

The chairman and president of World-Wide Shipping Group has agreed to donate \$1.2 million a year, over the next five years towards the education of ten students, annually, from across Asia.

Suzannah Linton, Associate Professor and Programme Director, said she was delighted with Dr Sohmen's support. "The personal generosity of one man is supporting six students this year and we are genuinely and deeply grateful to Dr Sohmen," she said.

Launched in 1999, to promote human rights in the region, the course has continued to go from strength to strength. "Our vision has been to equip our students with the means and methods to go out and make a difference in the promotion and protection of human rights across the world, but especially in Asia. We work to give our students knowledge, skills and the capacity to think creatively and outside the box.

The programme routinely attracts students from as far afield as Mongolia and Fiji. "They come from Indonesia, Nepal, Mainland China, Thailand, UK, the Philippines, South Korea, New Zealand and Australia and they also benefit from the tremendous wisdom and experience of the Sir Y.K. Pao Professor of Public Law, for which we also have Dr Sohmen to thank" said Linton.

"Not just that, we will also be having two visiting academics a year contributing to the programme. Such generosity is rare, particularly in relation to human rights programmes."

Linton joined the University in August last year after some 12 years of working on the front line of human rights protection in countries like Bosnia, Croatia, Yugoslavia, East Timor, Indonesia and Cambodia.

"I can assure you that investment in building human capacity and expertise through scholarships and support of a programme such as this is investing in a better future for the countries that our students come from, and for the international society as a whole.

"Whether they go back home to work or remain in Hong Kong, our students will take with them a thorough understanding of this specialized area of international law known as human rights.

"It doesn't matter if our graduating students work in NGOs, foreign ministries, national human rights commissions, inter-governmental agencies; it doesn't matter if they are lawyers, prosecutors or judges."

The goal of the programme she said was to ensure that what students learn here will inspire and empower them and those around them as well as entrench respect for people in the places they work.

"Many have already become, or will become, leaders in their fields. One of the sure ways for human rights to enter the mainstream and enter policies of state is through enlightened leaders with a progressive approach towards the human person and his or her role in society.

"After seven years, we can say with confidence that many of our graduates are indeed making a difference. It should be clear that part of our vision also involves making The University of Hong Kong the home of one of the world's finest human rights programmes," she added.



Liver Pioneers Win Top Prize

A pioneering team of liver transplant surgeons beat 800 entrants to win one of the Mainland's top scientific awards.

The prize marks the first time Hong Kong scientists have won first-class honours in the State Scientific Technological Progress Award.

Sun Chieh Yeh Chair of Hepatobiliary Surgery Professor Fan Sheung Tat and his Department of Surgery team – Chair of Hepatobiliary Surgery Professors Lo Chung Mau, Honorary Professor Liu Chi Leung and Honorary Clinical Assistant Professor Chan See Ching – have gained a global reputation for their unique adult-to-adult right lobe liver transplant, first conducted at Queen Mary Hospital a decade ago.

Since then the team has refined the procedure to increase the survival rates. To date more than 230 operations have been conducted with a success rate of over 95%, making it the highest in the world.

Conventional liver grafts from a live donor use the smaller left lobe which is unsuitable for most adults. Our team's technique of using right lobe grafts has proved a life-safer in Asian countries with low organ donations.

Professor Lo Chung Mau said: "The technique has been adopted all over the world including USA, European countries such as Germany, France, Spain, Italy.

"But the largest impact has perhaps been in Asia where the organ donation rate is very low. Japan and Korea, for example, have the highest need for this operation."

Despite reporting the technique at various international conferences and in many medical journals the transplant team has never received a formal award for its work.

"We feel most honoured and excited by this award. This is a prestigious national award that formally recognizes the impact of this innovative operation which we first introduced in 1996," said Lo.



Professor Lo Chung Mau (left) Professor Fan Sheung Tat (right).

University's Vision for Modernity

The University's vision for a modern campus, encompassing more space and a more sustainable environment, moved one step closer with the unveiling of the Centennial Campus Development Plan last month.

The Centennial Campus Development Plan incorporates ideas for the development of the Western Expansion, unveiled in the 2000 Millennium Master Plan and highlighted in last edition of *The Bulletin* (Vol. 7, No.1) as well as a vision for rejuvenating the Main Campus and Sassoon Road University area.

The implementation of the new four-year curriculum and the University's aim for further internationalization will mean that student numbers could increase by 40 – 50% in the next 5 – 10 years, with a commitment to increase the number of academic staff by 200.

The Centennial Campus will provide the University with about 42,000 square metres of much needed extra space although the Main Campus could benefit from a total provision of about an extra 100,000 square metres in the next 10 – 20 years.

It is envisioned that the campus will stretch in an elongated corridor from the Dental Hospital in Sai Ying Pun, through the Main Campus and Sports Centre of Pokfulam Road down to the Medical Campus in Sassoon Road and on to Sandy Bay. It will provide MTR access to the new West Island Line that will be completed in 2012.

Four architectural consortia have been invited to present their vision for a campus that will meet the demands of this expanding staff and student population.

The consortia – each comprising a local and international architectural firm – were asked to generate ideas that embraced our four planning principles:

- A Learning Community that supports intellectual curiosity, social well-being and the spiritual life of all its residents and visitors
- The Environment and Heritage that is so cherished by the University and we seek to promote a sustainable community that respects this history, culture and natural setting
- A Unified Campus that will enrich the whole community

- An Open and Respected Process through which we will invite all those who have an interest in the University's future to share their views with us.

Professor John Malpas, the Pro-Vice-Chancellor responsible for this project stressed that the concepts provided by the four architectural consortia are designed only to generate ideas and promote dialogue on the future campus development.

LD Asia/Capita Percy Thomas have proposed a network of buildings, for the western expansion, stretching like 'green fingers' from the contours of the hillside and sweeping northwards to engage with the city. At the centre of the enlarged campus they see a new functional gateway that will serve as a landmark which will provide balance to the campus as whole.

Dennis Lau and Ng Chun Man Architects and Engineers (HK) Ltd/Skidmore Owings and Merrill's vision rediscovers the 'remarkable history and geography of the site', creating natural parkland and reconnecting the University with the surrounding community. Their design is organized around a commons courtyard with faculty towers arranged on a raised podium.

Wong and Ouyang (HK) Ltd/Sasaki Associates, Inc. have suggested a Master Plan founded on sustainable principles, the heritage of the current campus buildings and the judicious use of resources. They have suggested a car-free campus, three gateways to provide a strong community connection, academic courtyards and the utilization of rooftop solar panels.

Leigh and Orange Ltd/Ayers/Saint/Gross Architects and Planners offer a plan for a university walk that connects the east and west areas of the campus, a new learning commons that acts as a physical gateway between the two and sustainable strategies for energy efficiency.

Funding of up to \$1.2 billion for the development of the Centennial Campus alone is expected from the Government through the University Grants Committee, and the University is seeking donations of a further \$1.3 billion to cover the remaining costs.

For more information on the concepts please visit the University website at www.hku.hk/centcampus.



Unlocking the Secrets of Ageing



The fantasy may have always been beyond reach but scientists believe they are now closer than ever to unlocking the secrets of ageing.

Recent studies have suggested that ageing can be regulated under certain environmental conditions, such as extreme calorie restriction or through genetic manipulation.

And biochemists at the University are hoping that by studying the connection between two age-controlling genes they can uncover the mystery of what makes us grow old.

Associate Professor Zhou Zhongjun, of the Department of Biochemistry, said he and his team are collaborating with scientists from the University of Washington to uncover the connection between SIR2 and Lamin A.

The SIR2 gene is an important factor in metabolism and is known to be involved in the normal ageing process. Scientists have been aware, for several years, that adding an extra copy of SIR2 can promote longevity in yeast, worms and fruit flies. But, a counterproductive experiment by scientists at the University of Southern California, last year, in which SIR2 was deleted completely, resulted in the longest lifespan ever recorded in any

organism — up to six times the normal lifespan of yeast, worms and fruit flies.

The Lamin A gene, on the other hand, is known to cause devastating effects on cellular structure and function in children with Hutchinson-Gilford Progeria Syndrome, a condition characterized by accelerated ageing.

Zhou and his team are testing Sirt1, the human homologue of yeast ageing genes SIR2 to discover its role in regulating other genes. He said: “The ageing process is very complex but there is a link between the factors that cause it. We are trying to understand the link between SIR2 and Lamin A. We’re trying to discover the connection between these two pathways to see if it leads to an abnormal or accelerated ageing process.

“At the moment, because we are still in the process of trying to understand the link we can’t draw any conclusions. We are investigating how mutations in Lamin A affect the Sirt1-mediated ageing process and whether there are common downstream targets that regulate the normal and abnormal ageing processes.”

He said the ultimate goal of the research was to understand how normal people age. “We do that by studying how people age abnormally because the models for normal ageing are not very good. If we can find out what causes accelerated ageing then we will have a clearer idea of what happens in the normal ageing process.”



Conservation Experience

Four students have been given the opportunity to learn firsthand about Mainland China's conservation programmes thanks to the generous support of Hong Kong's Ocean Park Conservation Foundation.

The Foundation, which last year provided scholarships for our students to join conservation programmes in Cambodia, funded a ten-day trip to the mainland for four students from our Department of Ecology and Biodiversity.

Two helped monitor the finless porpoise and baiji (a freshwater dolphin found only in China's Yangtze River) in Poyang Lake, Jiangxi Province while another two conducted a baseline survey of the Mabian Dafengding Nature Reserve, in Sichuan.

Dr Cynthia Yau Sin Ting, Assistant Professor of the Department of Ecology and Biodiversity, said the purpose of the scholarships was to allow students to experience the life and culture of different countries.

"It gives them the chance to learn about the conservation projects that are ongoing in these countries and experience the life and culture of societies beyond their own, so that when they return to Hong Kong they can share their experiences with their classmates, friends and the local media. It's a way of raising public awareness of these issues."

Environmental Life Science undergraduate, Tracy Pang Chui Yi and Milla Fok, an MPhil student in the Department, both worked alongside researchers from the Wuhan Baiji Dolphinarium in monitoring the baiji and finless porpoise populations in the Yangtze River.

The porpoise, which had a population of about 2,700 before 1991, is now thought to be little over a thousand in number.

Pang said: "Both of us were so delighted to have the opportunity to take part in the internship programme. We joined Dr Wang Kexiong, of the Wuhan Baiji Dolphinarium, to monitor the abundance and movement of the finless porpoise and baiji in the outlets and adjacent waters of Poyang Lake.

"We also took a five-day boat trip in Jiangxi where we observed over 200 Yangtze finless porpoises and learned the methods and skills needed in surveying cetaceans population. We tried zig-zag survey and fixed-point survey for visual survey, also the use acoustic data loggers for acoustic survey."

The students were also made aware of the effects of economic development on the local communities and wildlife in Jiangxi.

"Although we all know that cetaceans and other wildlife like fish are seriously affected by dredging it's hard to say the industry should be banned when you consider the life of the local citizens.

"The skills we gained will be useful in promoting cetacean conservation work. We can now explain what and what conservationists in mainland China are doing to try to save the cetaceans," she added.

"And although neither of us is working on cetaceans right now, the enthusiasm for conservation work we gained from this trip will help us in our future conservation work here in Hong Kong."

Second-year MPhil student, Fion Cheung Ka Wing, helped conduct a baseline survey in the Mabian Dafengding Nature Reserve with researchers and postgraduate students from Sichuan University.

She said: "Since we were interested in bird-watching, we followed an ornithologist to conduct bird surveys every day in different parts of the Reserve.

"The extent of his knowledge was amazing and through our conversations, we learned about what kind of birds are to be found in Sichuan, the ability to distinguish between different subspecies and how to identify birds which are morphologically similar. We also learned about the interesting distribution patterns of birds."

She and fellow student Tony Hung Tun Hei gained better knowledge of how the Reserve is managed, the problems that it is facing and the possible ways to improve the situation.

"I have heard for a long time that the natural environment of Sichuan, just like that in other western provinces in China, is being destroyed by the building of dams and hydropower stations.

"This trip gave me the chance to see what's happening with my own eyes and to speak with the local people to find out how they feel about it.

"Before I went I had no idea that coal mining has become another serious environmental problem in Sichuan. When we did the survey, we could hear booming all the time which frightened off many of the birds.

"Sichuan province is renowned for its high biodiversity and I think it will be at risk if large-scale development continues in the future," she added.

Mentors Teach Outside the Classroom

The University's Mentorship Programme will celebrate its 10th anniversary in the next academic year, having given thousands of students the opportunity to observe and learn directly from Hong Kong's leading lights.

The programme pairs second-year undergraduates with lawyers, doctors, politicians, businessmen, journalists and others in the community. Over a year, they are expected to develop a relationship in which students gain new perspectives and skills and mentors gain insights from a younger generation.

More than 550 friends and alumni of the University are volunteer mentors, including one of Hong Kong's most prominent political figures, Martin Lee Chu-ming.

"I was asked to join this programme and I thought it was a good idea. I think university undergraduates would like some experience and exposure to leaders of their community and to follow them around," he said.

Mr Lee joined the programme five years ago and has taken his 'mentees' to watch him during trials and Legislative Council sessions and on hill walks, where they can have long, uninterrupted talks. His goal is to gain their confidence and make their time together worthwhile, even when his mentees are not law students.

"I can show them that success in life has to be fought for. You can't expect to be successful without putting your heart and soul into whatever career you choose for yourself," he said.

His mentee in 2004-05, law student Natasha Khan, found her time with Mr Lee exciting and enlightening.

"A really good aspect of the programme is that you can be with a successful, prominent member of society in this candid environment. Mr Lee made me feel really at ease and he was caring and wanted me to learn from him.

"I've talked to other students and all of them have said they benefited a lot. Your mentor is a parent figure but not a parent,

so there's no rebel dynamic. You can just learn from them more readily and accept their opinion," she said.

Mentors, for their part, have the satisfaction of helping young people and learning about their concerns and opinions. Businessman Peter Wong Man-kong joined the programme in its first year precisely for that reason.

"It was coming up to the change-over [of sovereignty] and I felt the younger generation had a lot of questions and worries. I wanted to know how they felt about the change-over and if there was anything I could do to alleviate their doubts," he said.

His first mentee was Agnes Wan Ho-ying, now a lawyer. He took her on family outings and business trips over the border.

"The programme provided a platform for me to meet someone like Mr Wong and open my eyes to Mainland China. I was able to go there and learn more about the economy, society and cultural development," she said.

Mr Wong is still mentoring today and his newest recruit is Stephanie Yung, a second-year medicine student, who said it was often difficult for students to meet up with other people in society. "Students usually communicate with other students.

This programme gives us the opportunity to widen our horizons and step out into society," she said.

And at the end, hopefully emerge with a more mature outlook on the world. Natasha Khan hopes to work in the human rights field one day and gained professional and personal insights from having Mr Lee as her mentor.

"Mr Lee has spent most of his life pushing for human rights and universal suffrage in Hong Kong and I asked him about it. He said as long as he doesn't give up, things will be okay. That was really inspiring to me. There are lots of challenges in human rights and you won't always have instant results. But if you don't give up, you won't lose," she said.



Peter Wong Man-kong with mentees.

Language Study Is a Family Affair

When Stephen Matthews and Virginia Yip started a family, they produced more than a child. A baby in the house provided the perfect starting point for these linguists to research the development of bilingualism in children.

Timmy, now aged 12, was followed by sisters Sophie, 9, and Alicia, 5. Together with four offspring of other academics, they have been extensively videotaped interacting with Chinese- and English-speaking researchers and had their utterances transcribed and analysed for insights into how children become bilingual.

The result is the world's largest video-linked database on the subject, which has been posted on the website of the Language Data Exchange System of Carnegie Mellon University in the United States. Matthews and Yip are also writing a book, *The Bilingual Child: Early Development and Language Contact*, to be published by Cambridge University Press.

Their study is the first to pair English and Chinese, as most other research has paired two European languages. The children all had a native English-speaking parent and a native Cantonese-speaking parent.

Matthews, Associate Professor and Head of the Department of Linguistics, and Yip, a professor of linguistics at The Chinese University of Hong Kong, found children learned the languages at different paces and there was a lot of interaction between each language.

The children tended to master Cantonese first, reflecting the extended family structures in Hong Kong where they have frequent contact with their Cantonese-speaking relatives. But just because one language was dominant did not rule out the development of bilingualism.

"One subject, Janet, was very fluent in Cantonese from age two and a half, but only produced odd words in English. Suddenly at age three, her English exploded into full sentences," Matthews said.

"It's all latent, it's all there," said Yip. "I'm sure she already understood a lot of English before she started speaking it. We call this a long silent period. It happens in second-language acquisition by adults, too."

Matthews and Yip also found the grammar of one language influenced the other. Some subjects in the study would use Cantonese grammar in English, for example, asking a question with the form 'this is what' not 'what is this'. Or the other way around, using English grammar in Cantonese and saying 'give her chocolate' rather than the correct form, 'give chocolate her'.

"You don't see these structures in monolingual children at that age," Matthews said.

Changes at home had an influence on language usage. When English-speaking relatives were visiting, children tended to speak more English. Some children also had a natural preference for speaking one language, or would object when their parents switched to their non-native language.

Yip said they hoped their findings could provide guidance for parents who want to raise bilingual children. Their main advice was to have a lot of family support, accept that it may take a little longer to master two languages so there will be some delays in speaking, and provide a good balance of input from both languages. Even monolingual parents could encourage bilingualism by providing their children with a social network that connects them to children who speak other languages, she said.

The more typical Hong Kong family, where both parents are native Cantonese speakers but also speak English, is next in their sights. Matthews and Yip plan to study families where one parent chooses to speak English to the child, to track how bilingualism develops in such circumstances.



Learning to Understand Autism

Scientists have discovered that the brains of Chinese children with autism have grey matter differences compared to children without the disorder.

Drs Grainne McAlonan and Chua Siew Eng, Assistant Professors of the Department of Psychiatry, have become the first to use Magnetic Resonance Imaging (MRI) to map grey and white matter differences across the whole brain in Chinese children with autism.

What they discovered, in examining the brain anatomy of high-functioning Chinese children with classical autism, was abnormalities in connectivity in the parts of the brain governing social interaction.

Autism is a neurodevelopmental disorder which affects an individual's ability to interact socially and communicate properly with others. It is often marked by repetitive behaviour and restricted interests.

Although highly genetic it remains one of the least understood disorders of brain development and, as Dr McAlonan explained, "We do not know exactly what causes it, nor do we know exactly how the brain changes in autism."

"Hence research into all aspects of autism is vital to better understand this condition and assist those who suffer from it."

Working alongside scientists from Cambridge University's Brain Mapping Unit the team was able to use MRI to look in detail at changes in brain structure in Chinese children with autism.

"There have been other studies done in western populations using MRI. However no-one has looked at the relationship between brain structures affected by autism as we have done."

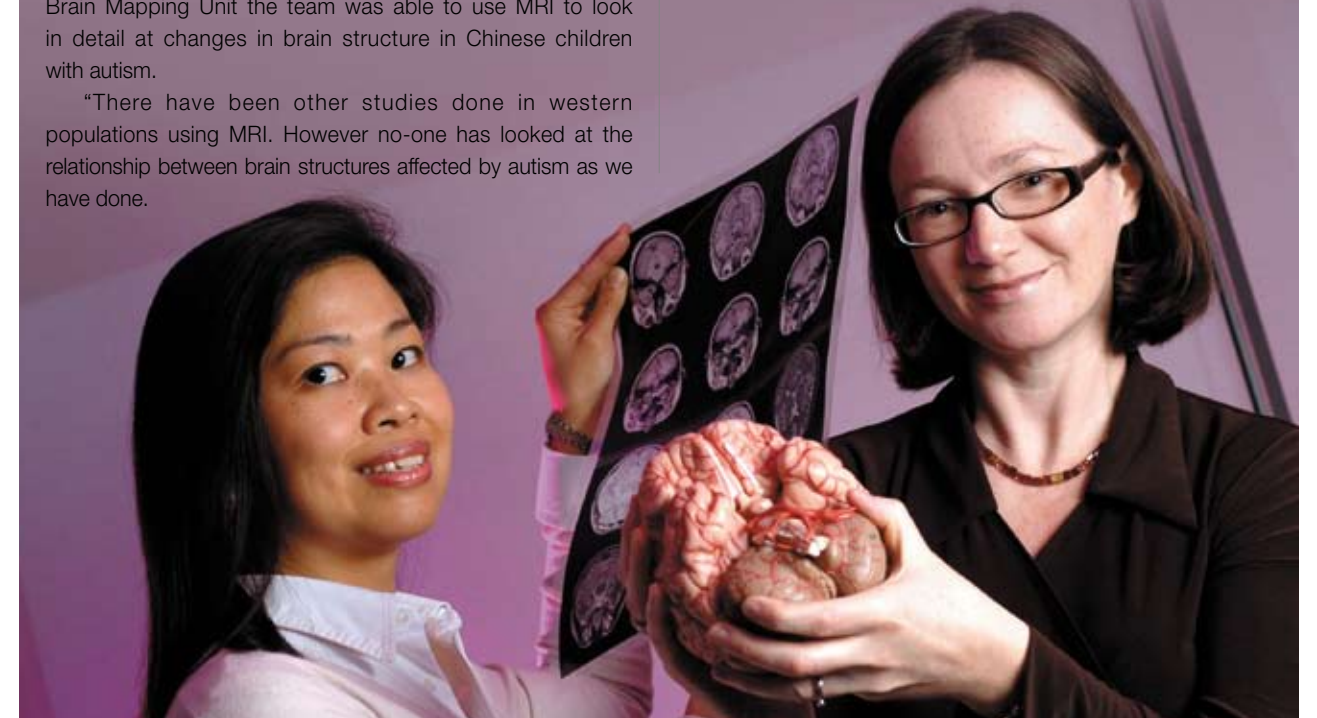
"When brain regions are connected together they grow together – therefore you expect their volumes to be positively correlated. In autism we found that the volumes of brain regions involved in 'social' behaviour were not correlated to the same extent as in control children without the disorder."

The researchers interpreted this as evidence for 'disconnectivity' across brain regions controlling social behaviour in autism. "We believe this starts very early in life and may explain why people with autism have such difficulty in a range of social interactions," said Dr McAlonan.

She explained that although people with autism experience difficulties in social spheres they may also have very striking strengths or talents.

"How the brain develops to cause this uneven pattern of ability is a great puzzle and therefore very challenging from a scientific perspective. As a parent I can only imagine how difficult it must be to have a child who struggles to interact socially, who may not smile or greet one and whose potential may not be recognised because our world demands that we interact socially in almost every walk of life."

The research should increase understanding of the condition, and help in developing new management approaches for children with the disorder.



Probing the Brains of Men who Abuse

Men who physically abuse their families have subtle differences in their brains when it comes to impulse control and cognitive function, preliminary research in the Neuropsychology Laboratory has found.

In one of the first studies of its kind, admitted domestic batterers have been asked to perform cognitive and emotion-related tasks while their brain activity is scanned using functional magnetic resonance imaging (fMRI). More than 20 people have participated so far, including a control group.

"The batterers in our study seem to have weaker impulse control and a greater sensitivity towards aggressive stimuli," said Dr Tatia Lee, Associate Professor and Director of the Neuropsychology Laboratory in the Department of Psychology. She has been leading the research conducted by her PhD candidate, Miss Siu-Ching Chan.

The volunteers performed two tests. The first one looked at how their brains filtered out distractions. The subjects were given a list of colour words printed in a different colour of ink (eg, the word 'green' in orange ink), then asked to read the word.

"You expect to see activity in certain areas of the brain when you perform this kind of cognitive regulation exercise, but there wasn't a strong signal from the batterers. They could still perform the test correctly, but they didn't have brain activity where you expect it to be. Maybe it's happening elsewhere in their brain or maybe it's not as active as it should be," Lee said.

In the second test

they were asked to compare aggressive and neutral words. The batterers showed a bias towards more aggressive language, she said.

"This is preliminary data, but if we venture further speculation, we could say that batterers are more drawn to emotionality and less able to cognitively regulate their behaviour. This is not a theory, it's speculation, but it may explain the phenomena of domestic violence," Lee said.

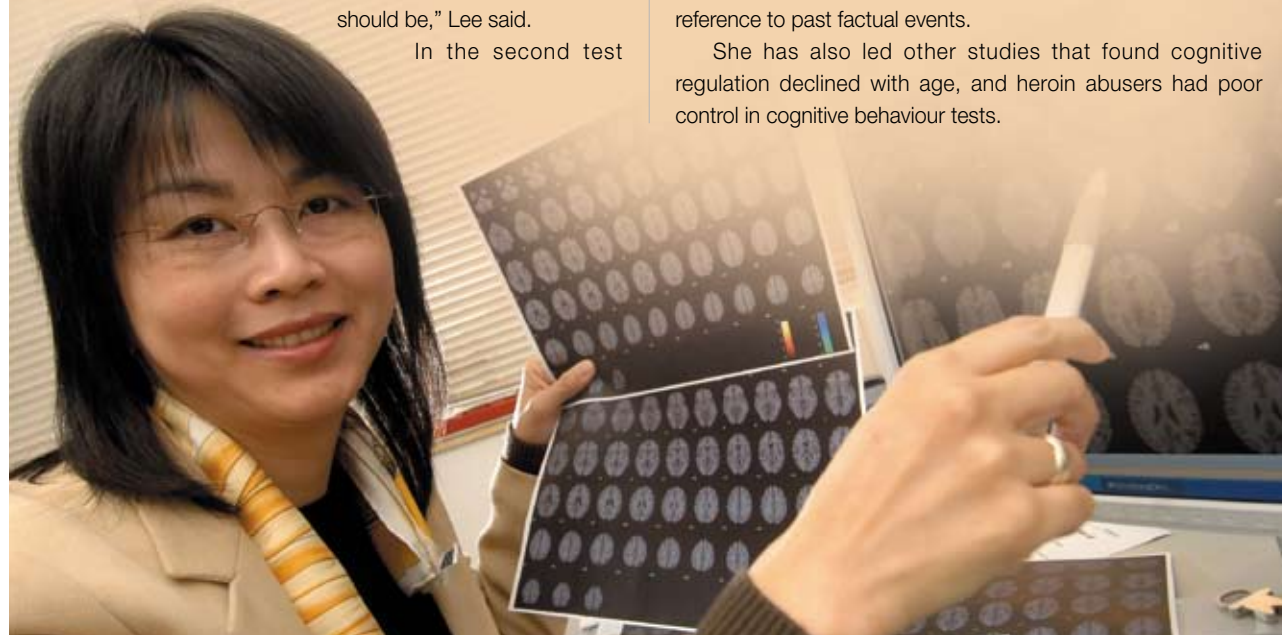
While further research was needed, the findings could ultimately have implications in treating perpetrators of domestic violence in terms of upgrading cognitive control and downgrading emotional responses, she said.

The on-going project, which was reported on the BBC programme, *The Science of Aggression*, is an extension of earlier work that Lee and her colleagues have done on cognitive and affective regulation of behaviour including impulse control, deception and emotion recognition.

"In parallel to our other work, we'd noticed an increase in reported cases of domestic violence so we decided to investigate the underlying neural mechanisms of that," she said.

Lee has also overseen research that shows women and men tap into different areas of their brain in response to emotional stimuli. Women in her study responded through the 'feeling' area of the brain, whereas men used the 'recall' area of the brain, evaluating their current emotional experiences with reference to past factual events.

She has also led other studies that found cognitive regulation declined with age, and heroin abusers had poor control in cognitive behaviour tests.



Professor Retires to the Hot Seat

Yash Ghai, formerly Sir Y.K. Pao Professor of Public Law, is retiring, but not to a life of peaceful contemplation and research. On his plate are some of the world's most troubled countries where his work is far from done.

Professor Ghai was named the United Nations (UN) Secretary-General's special representative for human rights in Cambodia in November, a post he will likely stay in for three years. He also was brought in last summer to advise on Iraq's new constitution, with an understanding that his input could soon be required again.

Those appointments followed years advising on constitutional issues in the South Pacific, Papua New Guinea, Nepal, his homeland Kenya and, of course, Hong Kong. And all along, this modest, approachable man has kept up with his academic duties.

"I like to think of myself first and foremost as a scholar and teacher. There's an interaction between my academic and political work. My experience means I can talk to students about practical issues and it benefits my research," he said.

"I'm trying not to take on a lot of new commitments now. I would like to give a fair amount of my time to research, but it was hard to say no to the appointment in Cambodia."

Professor Ghai is an ideal diplomat in this troubled country, with his scholarly demeanour and his devotion to the law.

However, despite a desire to establish a good working relationship with the government, he has been compelled to speak out publicly against the repressive policies of Prime Minister Hun Sen's regime.

"I was surprised when I took on this job how much people there look to the UN's representative to speak up for

their rights. Yet it is quite important that I do so. Local groups have been sidelined and people cannot put the pressure on government that you would expect in a civil society. They don't have any other outlet to air their grievances," he said.

Human rights and its close cousin, the development of democracy, have been at the core of Professor Ghai's work over the years. He took unpaid leave from the University from 2000 to early 2004 to lead Kenya in drafting a new constitution, in a highly transparent, participatory process. Although the exercise ended in futility – the Kenyan president objected to having his powers trimmed and so amended the draft – the electorate rejected that draft, giving hope that their preferences will win out in the end.

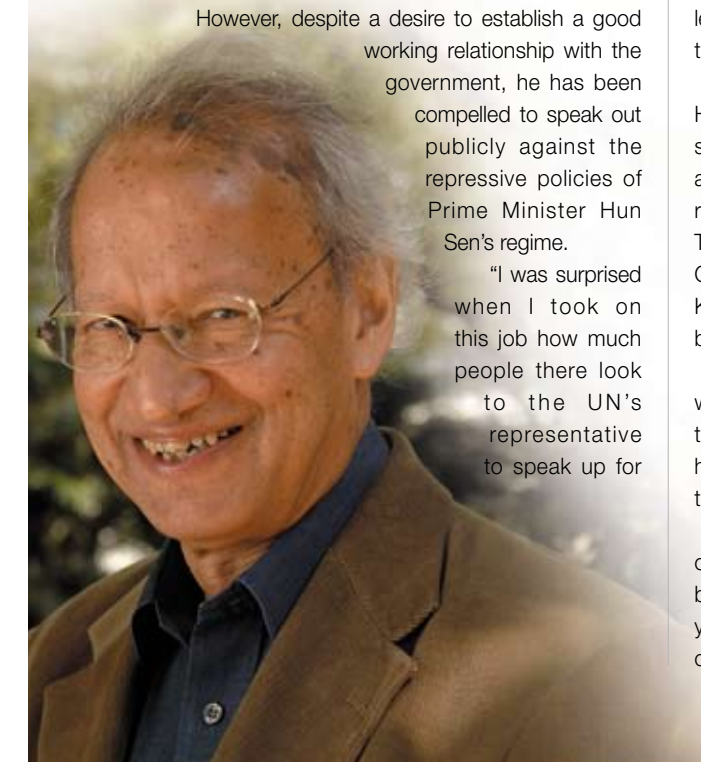
Hong Kong has also offered Professor Ghai the opportunity to participate in matters of utmost legal importance. He came here in 1989 from the University of Warwick, interested in studying the change of sovereignty. During the 1990s he was an advisor to the Mainland government, wrote the definitive textbook on the Basic Law, entitled *Hong Kong's New Constitutional Order*, and sat on a committee investigating the compatibility of Hong Kong laws with the Basic Law. As time went on, however, he and Mainland officials found themselves at odds on a number of issues.

"I was unable to give the advice they wanted so I was asked less and less to give advice. I've really not had much to do with them in recent years," he said.

Nonetheless, he has kept a close watch on developments. He believes there has been a high level of continuity in the law since the 1997 handover – with the exceptions of the Bill of Rights and the Public Order Ordinance – but the lack of democracy had resulted in people turning to the courts to solve political problems. This put the courts in a difficult position, particularly when the Chinese government had a strong view on an issue. "If Hong Kong becomes more democratic, then some of the pressure will be taken off," Professor Ghai predicted.

Professor Ghai will return to Kenya later this year with his wife, former Law Faculty member Jill Cottrell, after completing a third edition of *Hong Kong's New Constitutional Order*. Despite his other commitments, he hopes to devote a fair amount of time to research.

"I have been working on ethnic conflict for years, how laws or constitutions can help or aggravate ethnic tensions. There has been more progress in the last 25 years than the previous 200 years. This is the big age of constitution-making and it has been critical in trying to resolve internal conflicts," he said.



A Perfect Match

Immunologist Brian Hawkins has long been linked with bone marrow matching, an association that has had a serendipitous beginning and end for him. In 1991 when he was wondering how to encourage local people to become marrow donors, a little boy showed up on his doorstep and galvanised thousands to sign up. And last year, as he began preparations to retire from the University and his work on bone marrow appeals, the Red Cross stepped in to provide a stable home for his cause.

Hawkins will retire from the University in May after 24 years and his success with the Marrow Match Foundation, now called the Hong Kong Bone Marrow Donor Registry, is his crowning achievement. Hundreds of lives have been saved because of his untiring, voluntary efforts.

"I'm very pleased that the Red Cross is taking over. It shouldn't be necessary for something as important as this to be funded solely by donations of \$200 from this person or \$500 from that person. It should have the backing of a large organisation behind it," he said.

For years, however, bone marrow donations relied on the dedication and energy of Hawkins and his helpers.

Hawkins arrived in 1982 to set up a tissue-typing laboratory for kidney transplants, a programme that was soon running successfully thanks in large part to Hong Kong people's willingness to donate kidneys to family members. By the end of the decade facilities had been developed for bone marrow transplants, but the donor situation was far more complicated.

An exact match is needed, unlike kidney transplants, and often cannot be found within the family. For people stricken with such diseases as Leukaemia, a transplant from a stranger is often their main hope of survival. Yet there was poor acceptance and understanding about bone marrow donations in the community, a situation aggravated by the fact that bone marrow sounds like spinal cord in Cantonese.

"It occurred to me that what we needed in Hong Kong was a register of Chinese tissue types. The difficulty is there are thousands and thousands of different tissue types and you need thousands on your registry for it to be useful for individual patients," he said.

Then in 1991 Gordon Wu showed up, a sweet-faced two-year-old in desperate need of a donor. The family came from Canada, where most of the donors were Caucasians and therefore not compatible, genetically, with Chinese recipients. His father contacted movie actor and director John Sham for help, who together with Hawkins and the newly formed Marrow Match Foundation organised a bone marrow drive at the Convention Centre.

Hawkins was overwhelmed by the response. In two days some 10,000 people signed up in the hope their bone marrow matched Gordon's. Many others gave money. Gordon became the first 'index' patient to focus public attention on bone marrow donation.

"Gordon did not find a donor. As life sometimes turns out, his disease went into spontaneous remission and he didn't need a transplant. This is extremely rare. He came to visit us a couple of years ago and he's strong and healthy," Hawkins said.

Hawkins' work since then has been to carry forward the goodwill generated by Gordon's case. Since 1991 well over 250 people have received bone marrow donations arranged by the registry, including more than 40 abroad. The registry now has more than 45,000 names on its list, which was handed over to the Red Cross after potential donors were contacted by the Foundation.

That does not mean everyone who needs bone marrow finds a donor. Some people will not find a donor in the region and some of those will have to deal with the heartbreak that they cannot afford to look further afield for a match. In the US, which has the world's largest registry, it costs a minimum \$200,000 to get bone marrow.

"I really feel for people who know there is the possibility of going outside to find a marrow match but can't do it because their financial situation won't permit it. One of the good things in Hong Kong is that there is a system available that will allow them to get treatment irrespective of their financial circumstances," he said.

Hawkins had his name on the donor list until 10 years ago when he had a health problem and has great respect for those who have donated. They often have to overcome objections from parents and grandparents and endure some pain and a general anaesthetic when donating their bone marrow.

"When people donate bone marrow it demonstrates their generosity and humanity, they are doing something for their fellow man. If I had bone marrow that could be of use to anyone, I would certainly donate it," he said.

From May, however, potential donors will have to contact Hawkins in Malaysia where he will retire. He hopes to maintain some connection with tissue typing and bone marrow drives if his help is needed. In the meantime he looks forward to a future that will make it easier for patients to find matches.

"Currently about 50 per cent of Hong Kong patients find a donor. I hope in five years to see 75 per cent or more finding donors because China is expanding its registry," Hawkins said. "Even more encouraging, within a decade the need for donors could be less as a number of therapies are coming on the market that could negate the need for transplants," he added.



Leading Astronomer Returns Home

One of the world's leading astronomers has returned to his native Hong Kong to take up the position of the first appointed Dean of Science.

Professor Sun Kwok, former Director and Distinguished Research Fellow of the Institute of Astronomy and Astrophysics at the Academia Sinica, Taiwan and Faculty Professor in the Department of Physics and Astronomy at the University of Calgary, Canada, is a world-class researcher in the field of stellar evolution and astrochemistry.

Born and brought up in Hong Kong, he left 38 years ago to pursue further education and a career in North America. In the first months of his new job he has been learning the ropes and planning for the future of the Faculty.

"Both in terms of research and teaching we would like to engage more broadly with China, the Asia Pacific region and with the world," he explained.

"Our staff members have already been actively trying to increase the number of international students because we want to have a wider exchange programme with foreign universities.

"And we have just undertaken a new initiative that will introduce an undergraduate research programme that will allow our students to spend time overseas while allowing foreign students to spend time doing laboratory work in our Faculty.

"This is part of the effort to increase the participation of undergraduates in research. The Science Faculty has quite a few research programmes active in many areas and this has been ongoing. We want to emphasise this as part of the education process – not just have students attending lectures or participating in teaching laboratory work but, to make their education more hands on."

This, he said, relates to his own experience of teaching for more than 20 years at Canadian universities.

"We always had a very strong component of research participation and when we go on to the four-year programme here the amount of time that students spend in the experiential part of the curriculum will increase.

"Through this method we try to introduce them as early as possible to the real world. It's very easy to read books and take exams and confine oneself to a theoretical basis of knowledge but when the students graduate and go into industry, for example, they face a very different environment.

"So by taking advantage of the summer months and of the upper years – the third and the fourth years – they can engage in lab or field-work research. This exposes them to a way of solving

real problems, which serves as a good bridge between academic study and work in real life."

The approach will also help better identify students more suited towards an academic research career.

The programme ties in with the Faculty's other goals for the undergraduate curriculum as it moves from a three to four-year degree programme. It will help broaden students' exposure to new areas of science with the introduction in 2007 of three new blocks: quantitative reasoning; the physical world; and life and living, which will promote interdisciplinary learning and research.

"I very much believe that many of our world problems today are of a multi-disciplinary nature. As an astronomer I have a background mainly in physics and mathematics but in recent years I have expanded into areas relating to chemistry, biology, earth sciences and geology.

"So we are constantly learning and this is what the new frontier of sciences is like. Most of our problems, like the environment or global warming, are multi-disciplinary problems and cannot be solved by someone with training in one narrow area."

In terms of research he sees the world growing increasingly competitive, not just in terms of big players like the United States and Europe, but also in terms of increased competition from emerging countries, like Korea, Japan, Taiwan and China.

"It's never-ending. The world is extremely competitive. Everyone is trying to improve and science is, by definition, an international endeavour. I mean there are no boundaries, if we all study nature there is only one nature.

"At HKU we have to compete with the best, we hope increasingly to be a world player. But research is getting expensive. Fifty years ago you could do a lot of work in your lab with a test tube or a microscope. Today, many major problems require so large a facility that even a very rich country has to collaborate. So internationalization of research is a world trend and we hope to be part of this process.

"Obviously I am happy to be here and I welcome this opportunity to be part of the growth of this university. I hope I can say that in five years' time we will have made The University of Hong Kong a better place for our students, a place that the community can be proud of and that our name is increasingly recognized as a significant player in the world community.

"I should add that I am very grateful to have very competent and dedicated staff. It would be impossible to function without them."



There Is Room at the Top

The University's mission of establishing itself as one of the world's top academic institutions has moved one step closer with the appointment of award winning architect, Professor Ralph Lerner, FAIA.

Lerner, former Dean of Princeton University School of Architecture, began his Deanship here last month by announcing that he has very high expectations for the Faculty.

"Any new deanship is six months of listening very carefully to find out what the history, customs and traditions of the place are, and to try and build on those to take the school to a higher level," he explained. "And I'm happy to say everyone agrees that needs to be done."

As George Dutton '27 Professor at Princeton, he brings a wealth of knowledge, both as educator and practicing architect, to his aim of making the Faculty a leader in the region and pre-eminent internationally.

His is a two-fold vision; in regional terms, he hopes to reposition the Faculty as the leader in East Asia while at the same time ensuring that it takes a rightful place as one of the top faculties of architecture internationally.

"I would say there are ten to 12 top schools internationally and it seems to me that not only is this Faculty poised to go in that direction but it's time that a school in East Asia joined that grouping.

"In any academic discipline there is a discourse and we need the people and programmes to join that discourse. The discourse in architecture runs, at one end, from the technological through the artistic to the cultural, so there are many things that need to be done from that point of view.

"The trick is to enter into that discourse and at the same time create a profoundly strong programme focused on the education of architecture."

He considers the one unique element that makes his vision even more challenging and interesting is the presence of a very strong Department of Real Estate and Construction at The University of Hong Kong.

"It has a different set of interests and folding these two separate concerns together can make a unique faculty. So the uniqueness is already here.

"But how do you make a unique Faculty of Architecture? Now if you don't have the proper magic wand to utilize what's already here you need to bring together a superb group of people as a teaching staff."

This, he said, will primarily involve bringing in new people although he does not expect to increase the size of the Faculty beyond the normal increases as part of the three-three-four initiative.

Lerner has won numerous international design commendations most notable among them are five Progressive Architecture (PA) Awards including a first for the Indira Gandhi National Centre for the Arts. In 2003 his plan for Lower Manhattan received a PA Design Citation and in 2004 his firm was part of a team of finalists in the NYC2012 Olympic Village Design Competition.

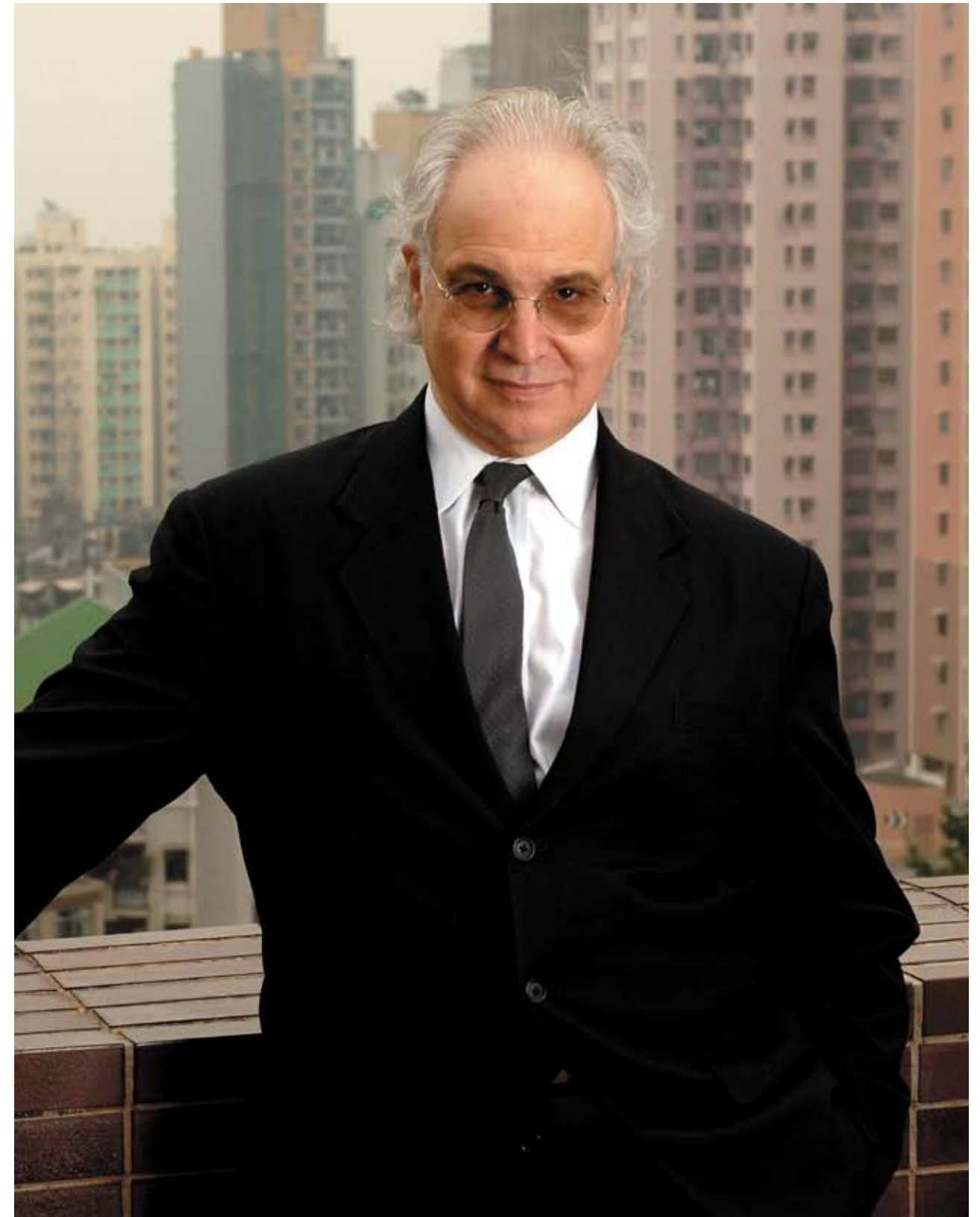
He said he chose to take the appointment because of the enthusiasm he encountered concerning the Faculty. "The level of interest in this Faculty, internationally, is tremendous. East Asia is where it's happening. The level of enthusiasm I met in the US and Europe whenever I talked about the Faculty of Architecture and its visions here was enormous."

Now he intends to focus on the quality of staff, students and programmes. "The ability of our programmes to be anticipatory of where the discipline is going is very important. It's through that anticipatory quality that we will become a leader.

"The current three-year system is a legacy of a system that is pretty-much coming to an end in most places and I see it as a healthy change to make consistent higher education world-wide. This produces a greater degree of transparency for students and it's an excellent opportunity for this Faculty to reassess its mission."

In terms of internationalisation he stresses that: "The culture of Architecture is international.

"I applaud the University's goal to continue to increase the number of overseas students because it signals a form of openness that is necessary for higher education to thrive, and I would say doubly-so for architecture. We all practise internationally now."



Demand Increases for Humanities

The Faculty of Arts' first appointed Dean sees the role of the humanities increasing as businesses demand flexible students who are able to think critically and adapt to an ever-changing workplace.

Professor Kam Louie, former Professor of Chinese at the Australian National University in Canberra, said: "Business people have told me that what they want is graduates who have an all-round education with a humanities element, and they will train them in the business concerned.

"It's clear that students need to be flexible enough to be trained. That's what humanities can offer and people in charge of businesses know that."

He also believes the Faculty – one of the University's oldest – is perfectly positioned to serve as a conduit in interpreting the cultures of both the east and the west.

"The reason I decided to come to HKU," he explained, "is because the University is well-placed to act as a gateway between China and the rest of the world. Even in Australia I saw myself as a facilitator for the interchange between Chinese and Western culture and I think that HKU is an ideal place to do that. I would like to establish the Arts Faculty as a world leader in this area."

His vision is to interpret Chinese culture to the west and vice versa. But, he stressed: "That vision does not interfere with the teaching and research that is ongoing in the Faculty at the moment. So even if you're studying medieval French you can still do that well and, at the same time, introduce it to a Chinese audience.

"I think it's exciting and also very important because, as you know, China is increasing in importance and Chinese culture is doing so as well. There's been a lot of talk about the 21st century being the Asian century. China is playing a very dominant role in that and so the vision for the Faculty is very significant, internationally, because Hong Kong, as everyone says, is ideally placed to play that role. And that's why I was so excited to have this opportunity."

Last year the Faculty drew up a research strategy that emphasized three priority areas. They were East and West Studies; Language and Communication; and 'The Urban'.

"And that's fine, but one of the priorities of the University is also China Studies and I've had many discussions with faculty members and I think every department in the Faculty has decided that the theme running through all three areas ought to be China.

"So even when we're talking about 'The Urban' we're talking about Shanghai and Hong Kong. Similarly, academics in American or European Studies might look at Sino-American Studies."

What makes this approach unique is the Western critical eye that the Faculty is able to impose on the study of China culture and vice versa.

As Louie said: "Many academics in China studies here have been educated abroad. So they have a Western critical eye. And that works both ways. This is very different to the approach taken by academics in China doing the same studies. In that sense, HKU has a unique edge and, I believe, we can achieve world ranking in this area."

Louie describes himself as 'Jack of all trades, master of none', hinting at the diversity of his educational background. He gained a BA in Pure Mathematics and Philosophy before a masters in Chinese History and a PhD in Chinese Philosophy. Equally he has taught in both Australia and China and, for many years, explained Chinese culture to a Western audience. His first two books explored Chinese philosophy and the political uses of philosophy before he developed an interest in Chinese literature and moved from there on to a consideration of gender in his book, *Theorising Chinese Masculinity*.

Now he sees the value of the humanities as only increasing in Hong Kong. "It's almost inevitable that when people's livelihoods increase they want a better quality of life. I don't think it will take long before Hong Kong reaches the stage where people will start to demand that.

"I've noticed that Hong Kong has changed a lot since 1997. There's a lot more confidence here now. There isn't that mad rush to make money and get out as there was before the handover, and when people decide that they'd rather stay here, then it makes sense that they will demand a better quality of life here. Once they start doing that then the humanities will become progressively more important."



Battle Against Bird Flu

Research into H5N1 Virus Continues Apace

Leading bird flu scientists have been awarded a \$4.6 million grant to continue their research into the lethal H5N1 virus.

Professor Malik Peiris, of the Department of Microbiology, who is the coordinator of the project and his team secured the grant via the Hong Kong Research Grants Council's Central Allocation Vote (CAV) programme. This will allow them to collaborate with experts from the Hong Kong University of Technology (HKUST) and City University of Hong Kong.

Peiris said: "A big part of the team is here at HKU and the work builds on the existing excellence in avian flu research that has been built up at HKU since the 1970s by Professor Ken Shortridge.

"Since bird flu hit Hong Kong in 1997 that work has expanded dramatically. Since then Dr Y. Guan, Dr L.L.M. Poon, Dr H.L. Chen, Professor K.Y. Yuen and myself have all been involved in studies on aspects of influenza and H5N1 disease."

Initially, research involved the surveillance and molecular evolution of avian influenza viruses, including the H5N1 virus. But more recently the team has started looking at the pathogenesis of human disease to uncover how the virus causes such a severe disease.

"The recent grant was awarded to build on previous research findings," said Peiris. "In 2002 a paper published in *The Lancet* compared the responses of human cells to H5N1 virus and to normal flu viruses to try and see the difference between them.

"We were excited to find that H5N1 viruses differ from the common human flu virus in the cellular pathways that they activate," he said.

These collaborative studies between the Department of Microbiology and the Department of Paediatrics and Adolescent Medicine (with Chair of Paediatrics Professor Lau and Associate Professor Dr Allan Lau Sik Yin) at the University have been further extended with publication last year in the online medical journal, *Respiratory Research*. Other publications are also in the pipeline.

Overall, these studies suggest that the virus causes the immune system's cytokines and chemokines to overreact, sometimes aggravating the disease process. This explains why H5N1 can kill healthy young children and adults, unlike the common human flu which causes problems mainly at the extremes of age.

"The CAV programme will take that research to a much deeper level," said Peiris. "We are now extending the existing

collaborations within HKU to involve Professor Nancy Ip and her team at HKUST and Professor Michael Yang at City University to unravel the mechanisms of the H5N1 disease causation in humans.

"As part of this study we are also looking at the genetics of the virus from Indonesia and Vietnam – that's the core principal investigator, Dr Guan's area – and, of course, we are also collaborating with scientists in Indonesia and Vietnam on these studies," he said.

Meanwhile, a more recent paper published in the *Proceedings of the National Academy of Sciences of the United States of America* by Dr Guan and an international team of 28 researchers from across the region and the United States, suggests that wider surveillance than previously thought may be required to control the outbreak of avian flu and prepare for a possible bird flu pandemic.

The researchers identified several different sub-lineages of the bird flu virus from normal migratory birds and poultry across Asia.

Associate Professor Dr Guan Yi said: "Since the initial outbreak of H5N1 from geese in southern China in 1996, the virus has expanded its range across Southeast Asia, periodically causing human disease but just how H5N1 has perpetuated across the region has remained unclear."

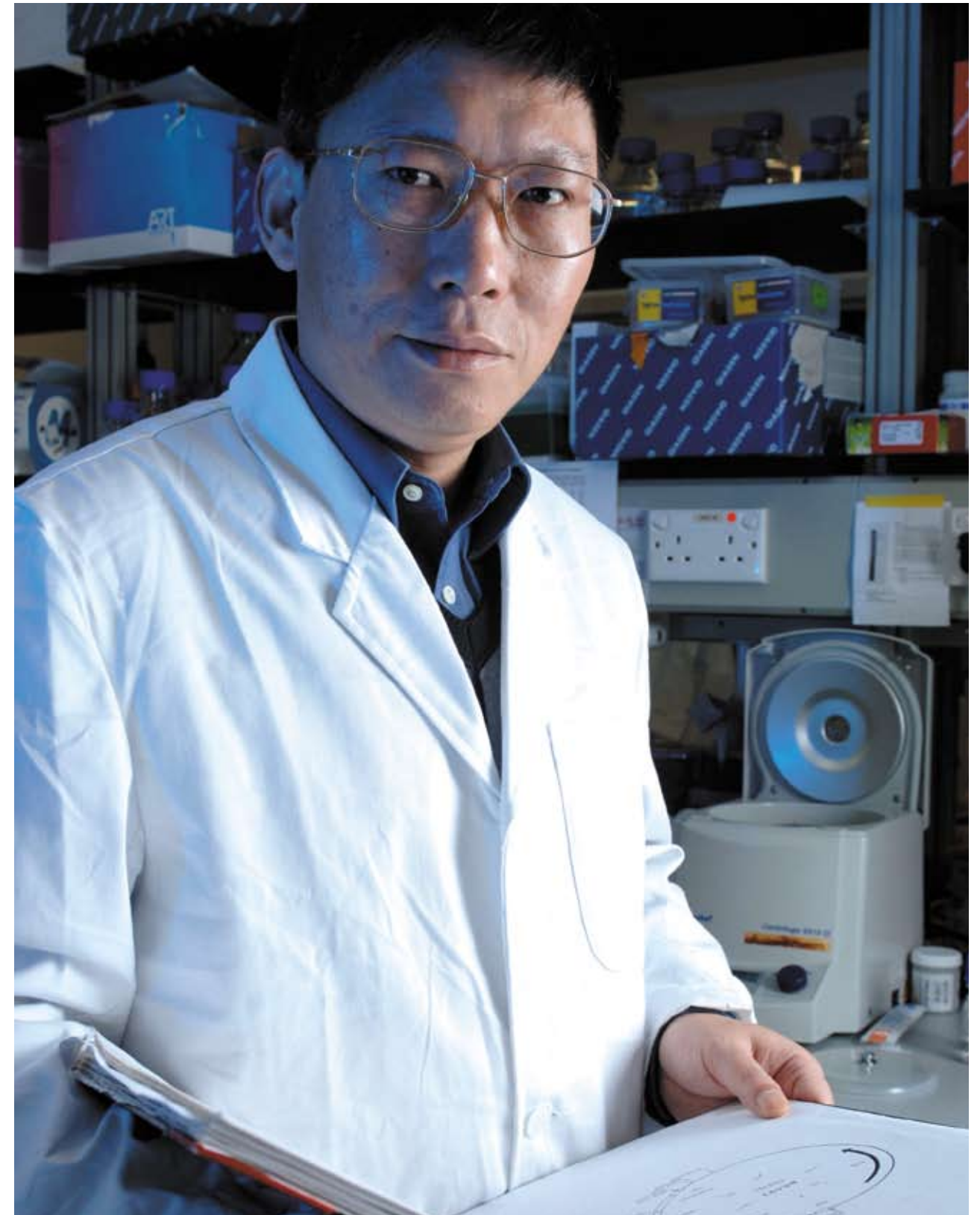
However, the research team frequently found H5N1 virus in migratory birds as well as in market poultry populations across Asia during their influenza surveillance.

"Genetic analysis showed that distinct branches of the virus have become established in different geographical regions. Although the findings show that H5N1 can be transmitted over long distances in migratory birds, the transport of infected poultry appears to be the main mechanism of H5N1 spread in Asia.

"More importantly, the majority of positive samples analysed in this study came from poultry that showed no sign of the disease. This may have important implications for the planning of future surveillance which will need to encompass healthy poultry as well."

Such genetic diversity may also have implications for the development of human vaccines for bird flu.

"The research suggests that surveillance of H5N1 should be broad-based in geographical terms to encompass a wide variety of genetic variants so that we can select appropriate vaccine candidates," he said.



Associate Professor Dr Guan Yi

Molecules that Protect

A team of medical researchers, that discovered the immune system molecule that protects some people against the Severe Acute Respiratory Syndrome (SARS), is now applying that knowledge to the battle against bird flu.

Steve Lin Chen Lung, Honorary Professor in the Department of Surgery and principal investigator, and his team discovered that the homozygous L-sign molecule increased protection against SARS by 30 per cent.

By binding to the coronavirus it degrades and effectively destroys the virus, reducing a patient's susceptibility to the disease.

Every individual carries two types of L-sign molecules, inherited from their parents. When the two molecules are the same length in the neck-region they are called homozygotes. L-sign molecules with different lengths in the neck region are called heterozygotes.

In comparing the blood and lung tissue of some 300 SARS patients with more than 800 people who were unaffected by the virus the team discovered that those with homozygous L-sign molecules were less susceptible to the coronavirus than those with the heterozygous molecule.

Amongst the 842 unaffected people studied 56.2 per cent of them carried the homozygous L-sign.

The team also found a significant difference in the genotype and homozygotes and heterozygous distribution of the L-sign neck region between those of Chinese and Caucasians of European descent.

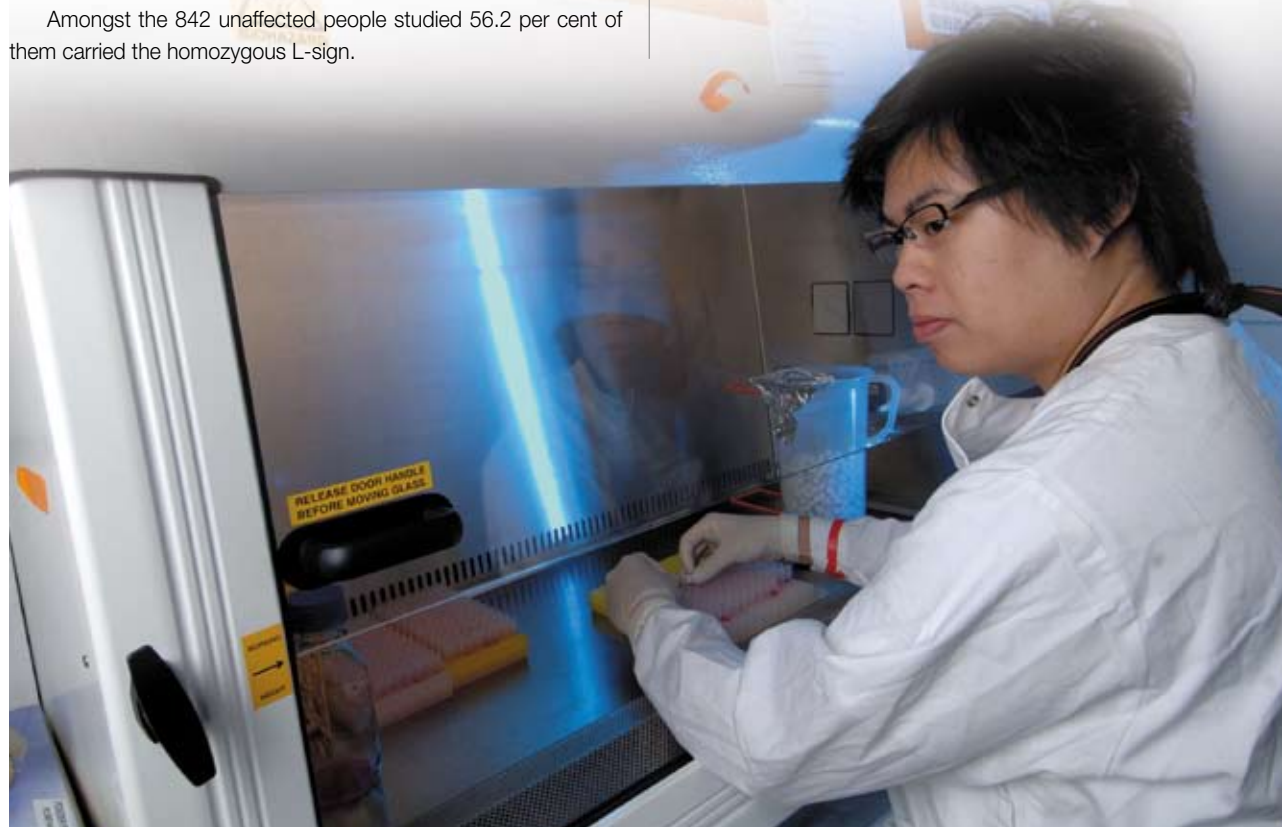
Lin said: "It would be interesting to find out whether this might result in different susceptibility to SARS or other infections amongst different ethnic groups."

The findings, published in the January issue of the leading international scientific journal *Nature Genetics*, are currently being employed to investigate the possible role of L-sign in avian flu infection.

"The results may also assist with treatment strategies against SARS infection," said Lin. "For example, strategies to enhance the protective role of L-sign may help prevent or treat infectious diseases caused by respiratory pathogens, HIV, hepatitis C, Ebola or tuberculosis.

"It may also be a factor to bear in mind for health workers in contact with patients with high-risk infectious diseases."

In 2003 SARS infected 1,755 people in Hong Kong and killed 299 of them.



Excellence in Teaching and Research, 2004-05

Outstanding achievement on the part of the University's teachers and researchers was recognized at the Award Presentation Ceremony for Excellence in Teaching and Research 2005, held on November 17, 2005. At the ceremony two University Teaching Fellowships were awarded and research awards were conferred on nine outstanding researchers. An exceptional Special Research Achievement Award was made to Professor Zhang Fu Chun of the Department of Physics.

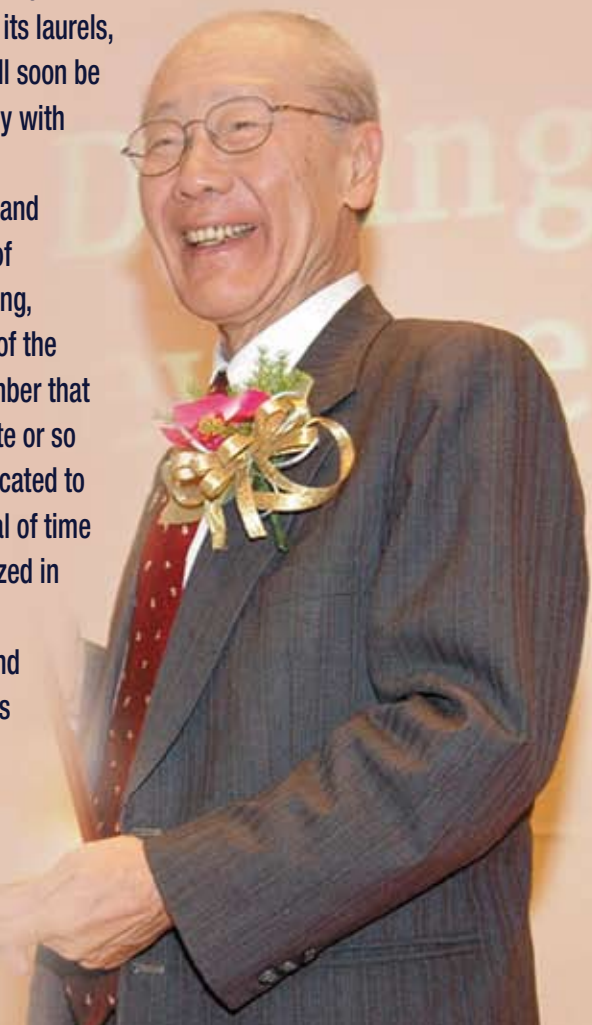
Speaking at this fifth annual ceremony, the Vice-Chancellor Professor Lap-Chee Tsui reminded his audience that outstanding achievement in both research and teaching lay at the heart of the University's reputation.

The Vice-Chancellor said that the University was determined to build on its existing achievements, and was making enormous efforts to sustain and improve its high standards in both teaching and research as it approached its centenary year. Nevertheless, he warned that there was no room for complacency. "Today's ceremony reminds us of the high standards of excellence we have already achieved. I won't quote the various encouraging statistics which we so often cite when we want to pat ourselves on the back, as you probably know them as well as I do. Besides, this University has never been content to rest on its laurels, and the important thing is that we continue to raise our standards. We will soon be 100 years old, and I am glad to say that we are approaching our centenary with undiminished vigour."

Professor Wang Gungwu, former Vice-Chancellor of the University and currently the Director of the East Asia Institute in the National University of Singapore was the Guest of Honour at the award ceremony. Professor Wang, who gave a concluding address at the ceremony, reminded his audience of the strenuous efforts made by each of the award winners. "We should remember that the citations we have heard read out today have compressed into a minute or so the achievements of many months, if not years, of painstaking effort dedicated to teaching or research. Today's award winners have all devoted a great deal of time and effort to their work, and it is right that their efforts should be recognized in this way by the University."

Further information about the recipients of the research awards and their areas of research can be obtained from the website or email address provided after each article.

Professor Wang Gungwu



What Makes a Good Teacher

Every year outstanding teachers are honoured by the University for excellence in their field. In the most recent round two medical scientists, Professor Annie Cheung Nga Yin and Dr Gabriel Leung received Teaching Fellowship Awards for their inspirational style and outstanding contributions to the pursuit of knowledge.

In coming to its decision the selection panel focused not only on excellent practice in the classrooms, but also on leadership roles over a wide range of teaching activities. Here our teachers and their students talk about what makes an excellent educator.

Dr Gabriel Leung, an Associate Professor in the Department of Community Medicine, was born in Hong Kong, attended boarding school in England, read medicine in Canada and completed graduate studies in America before returning to teach at the University. He was awarded a Faculty Teaching Medal in 2002 and elected Honorary Vice President of the Medical Society by students for 2001-02.

Of his most recent award he said: "To doctor is first and foremost to teach. As a medical teacher, I believe our single most important task is to prepare the next generation of doctors to the best of our abilities by inculcating in students a sense of eagerness to learn, integrating new scientific theories with innovative clinical models of care, and demonstrating the optimal balance between professionalism and humanism.

"In addition to the delivery of teaching, I am a firm believer in practice-based research generated from the act of teaching. To ensure continuous quality improvement in our teaching programmes, it's imperative that we solidly ground our course planning and teaching modes in research that is benchmarked against international best practice.

In terms of curriculum development and planning, I chair the Community-based Teaching Sub-Committee, and sit on the Faculty's Undergraduate Education Committee and the Working Group on Graduate Medical Education."

His student, Michael Ni added: "Dr Leung's innovative teaching programme has driven us, right from our first year, to tackle real clinical problems. He has challenged us to identify areas of knowledge deficit, find the evidence from the medical literature, appraise it, and finally apply it back to the patient's problem. Using this approach, he has equipped a new generation of doctors with an essential life skill that will better serve our future patients.

"Dr Leung's philosophy of instilling in students a sense of eagerness to learn and striking a balance between science and humanism has earned him respect among students and colleagues alike. His Master of Public Health students have won the top graduating prize for the last three consecutive years.

"He also chairs the Community-based Teaching Sub-Committee that coordinates the Medicine and Society theme. In this role, he can be seen as the guardian of the following qualities celebrated in the Chinese medical classic, *The Yellow Emperor's Canon on Internal Medicine*, which I interpret as:

Medical theory and skills can only be learned and sustained when subjects ranging from astronomy to geography to the humanities are taught and understood.

"I'd like to quote Dr Sun Yat Sen, who famously pronounced at this University that after he graduated, he saw that it was necessary to give up his profession of healing men to take up his part in curing the country.

"We are very fortunate that since Dr Leung's graduation, he has seen that it is his duty to inspire us to take up our part in curing society."



Professor Annie Cheung Nga Yin, a Reader in the Department of Pathology, specializes in histopathology, with her major interest in gynaecological pathology and cytology. She has won a string of local and international awards, but said winning the University's Teaching Fellowship Award had made her very happy.

"It's an honour because this is a prestigious award and it is recognition of what I have been doing all these years. It's confirmation of the effort I have put into teaching.

"My personal philosophy is that we teachers should be open-minded to suggestions and feedback from both students and colleagues. Everyone has their own idea and mine may not be the best. That's why it's important to be receptive to other people's opinions.

"I also believe we should be prepared in every aspect of our work. A few years ago I was lucky enough to be involved in one aspect of constructing the new curriculum in the Medical Faculty. The opportunity was important but good preparation was equally important. Because I had worked within the Faculty I understood what could be usefully included in the new curriculum. To make the curriculum run we needed to incorporate the views of those who supported it as well as those who did not.

"I believe that frank communication is vital in teaching because that is what helps students understand. Our new curriculum is good in that it is teaching the students and the teachers to be better communicators.

"Finally, I think you have to consider the issue of priority. Academics are facing a serious challenge in the reduction of resources and increased demands in research, teaching, clinical or community service and administration. Obviously there's a priority list and how far up that list you place teaching will be reflected in the way you do your job."

Her student, Jennifer Shum added: "Professor Cheung is an excellent teacher. Most teachers fall into one of two types. The first type is motherly and over-protective, supervising and inspecting every small detail to make sure you make no mistakes. The second type is lofty and makes you feel so stupid you are amazed that you ever got admitted to the department. However, she belongs to a very rare third type. She lets students find their own way, as she understands that true learning is achieved by making mistakes. You know what your study aims are, and if you ever run into problems, she is always there to provide guidance. It is not surprising that a significant portion of Professor Cheung's postgraduate students have been granted awards.

We students love Professor Cheung's lectures. Her notes are very well organized and easy to use. She believes firmly that universities should choose the best medical students, so as to produce the most competent and caring doctors.

However, what makes a good doctor? It's not necessarily academic achievement alone. In Professor Cheung's view personal qualities are also extremely important. She recognizes that there is so much more to being a doctor than just good grades.

Professor Cheung not only educates students, she also shares their concerns. She has been the Warden of Lady Ho Tung Hall for six years and her relationship with the hall-mates has been excellent. She is both a teacher and a friend; a teacher whom I will remember and miss many years after I have graduated."



Outstanding Research Student Supervisor Award

The Outstanding Research Student Supervisor Award is granted in recognition of supervisors of research postgraduate students whose guidance has been of particular help to their students in the pursuit of research excellence.

Professor Lai Kar Neng

Professor, Chair of Nephrology

Professor Lai Kar Neng's research interests focus on the pathophysiological mechanisms of selected diseases. He has made important new findings on the pathogenesis and treatment in IgA nephropathy, hepatitis-related nephritis, lupus nephritis, and peritoneal membrane dysfunction in peritoneal dialysis. Professor Lai is an international advisor to the Royal College of Physicians, London and the Royal Australasian College of Physicians. He has published over 400 full papers in international peer-reviewed journals and 30 book chapters.

He has also served on the editorial boards of different journals including *Kidney International*, the *American Journal of Kidney Diseases*, *Nephron* and *Nephrology*.

Professor Lai believes that research is fundamental in the practice of clinical medicine. Translational laboratory research is the foundation for the success of clinical medicine at the bedside. Research is the best way of training dedicated young students to realize their potential and to challenge the unknown.

knlai@hku.hk

<http://www.hku.hk/medicine/staff.htm>



Professor Bakr Rabie

Professor, Faculty of Dentistry

Professor Rabie's philosophy of research student supervision focuses on inspiring his students to challenge their limits. He believes firmly that if he can give students the confidence to go further than they ever dreamed they could, they will become

great research students. He does that by encouraging them to publish in the leading journal in their respective fields or to compete for the top national or international awards in their field. He believes that they gain from this experience whether or not they are successful, as the experience of setting their sights high gives them the confidence they need to go further in the future. This approach has worked very well in practice, as his graduate students have won several national and international awards. In turn, winning these awards has further boosted their self-confidence, and reassured them that they have what it takes to belong to the top 1% in their fields.

Another very important aspect in his philosophy of supervision is to create future top academicians out of his research students. His PhD graduates have gone on to become Professors, Associate Professors and Assistant Professors both here at the University and at other prestigious institutions, including Beijing Medical University, Shanghai Second Medical University, Sydney University and the University of British Columbia.

rabie@hkusua.hku.hk

<http://www.hku.hk/dental/english/index.html>



Outstanding Young Researcher Award

The Outstanding Young Researcher Award is given to researchers of promise who have attained excellence in their research performance within 10 years of receiving their PhD or equivalent.

Dr Xue Hong

Assistant Professor, Department of Law

Dr Xue started researching online legal issues ten years ago when the Internet was only just beginning to come into widespread use. Her series of papers published between 1996 and 1999 helped to lay the foundation of internet regulation in Mainland China. Her book *Intellectual Property in the Network Age*, published in 2000, has become a Chinese legal classic, and is highly regarded by both academics and practitioners. She has received many awards and honours for research and teaching, including the 'PRC State Council's Special Allowance', and was singled out by the China Law

Society as one of its 'Ten Young Distinguished Jurists'. Dr Xue's achievements have won her international respect, and she has just been elected to the Executive Committee of the International Association for Advancement of Teaching and Research of Intellectual Property. This is the most prestigious international organization for intellectual property law.

Dr Xue says that she owes an immense intellectual debt to her dear colleagues at the University, who have encouraged and inspired her in her work. Dr Xue believes that two qualities are essential for progress in research. The first is dedication. The second is confidence.

hongxue@hku.hk



Dr Thomas Ng Shiu Tong

Associate Professor, Department of Civil Engineering

Dr Ng is a qualified quantity surveyor and project manager, and his research has focused on using emerging management concepts, analytical approaches and computer and information technologies to improve the efficiency of construction processes. He has received numerous local and international awards for the many papers he has written in this important area of research.

Dr Ng takes the text of Proverbs 9:10 for his guide: 'The fear of the LORD is the beginning of wisdom, and the knowledge of the Holy One is understanding'. He wishes to thank God for all the wonderful things He has done for himself and his family. Dr Ng is also indebted to his family, who have never complained about the time he has devoted to his research.

tstng@hkucc.hku.hk

<http://www.hku.hk/civil/staff/ngtst.html>



Dr Sun Hongzhe

Associate Professor, Department of Chemistry

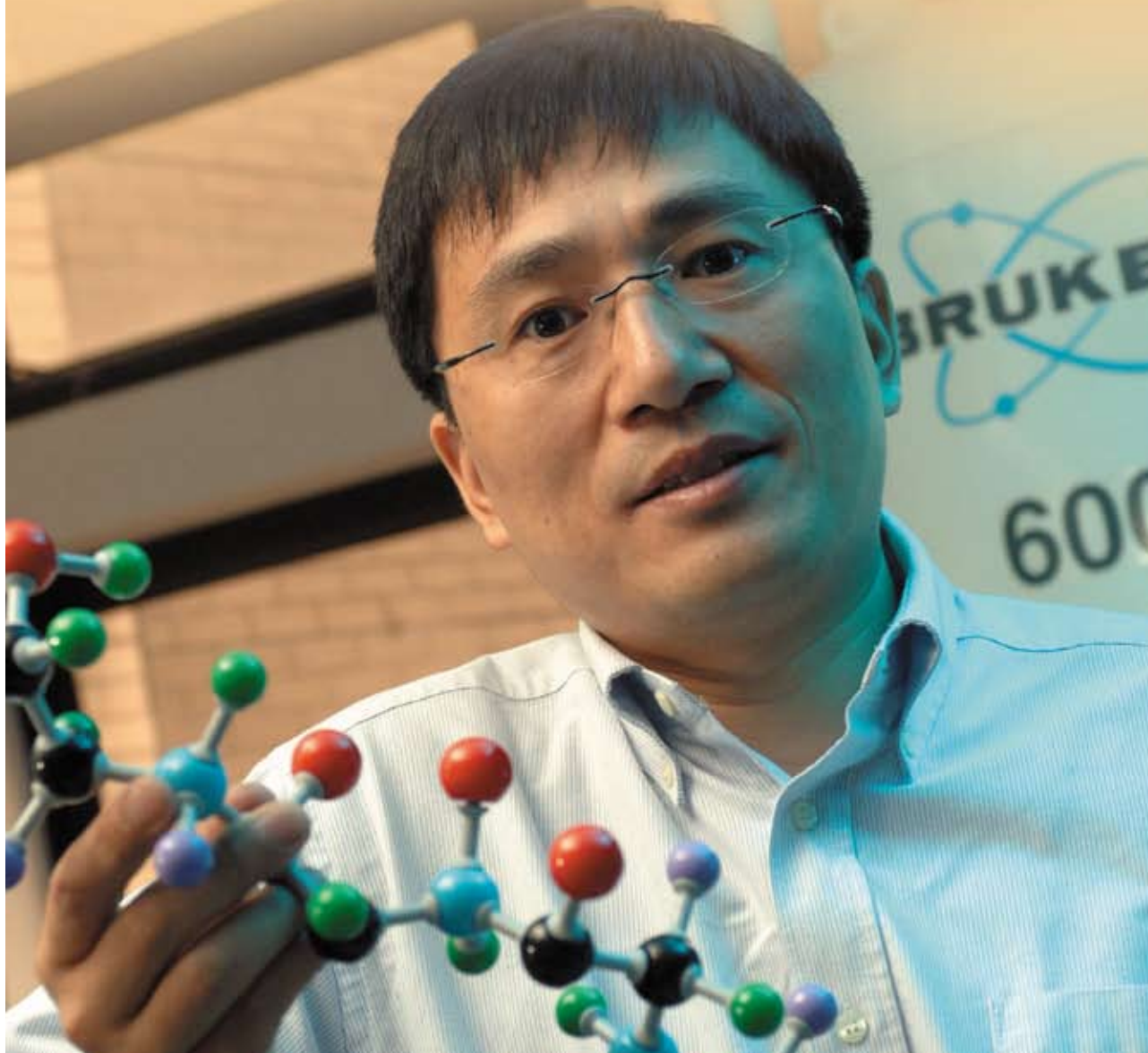
Dr Sun's research interests lie in the chemistry of metals in biology and medicine. He has discovered an unusual polymeric structure of bismuth antiulcer drug which helps to explain how this drug produces its effects. By using chemical biology approaches, he has characterized several important metallo-transport and storage proteins in microorganisms which provide a basis for mechanism-based drug design. In his recent work he has sought to elucidate the structural biology of metallo-proteins by NMR spectroscopy. He has lectured at the prestigious Gordon Conferences and the International Conference on

Biological Inorganic Chemistry, and has published over 50 papers in the leading chemical and biochemical journals. His work has also featured in cover illustrations in several important scientific journals.

Dr Sun believes in teamwork in modern science. His research group has very close ties with research groups both within and outside the University and also with the pharmaceutical industry. He appreciates the unfailing support which his colleagues, students and family have given him, and would therefore like to dedicate this award to them.

hsun@hku.hk

<http://chem.hku.hk/~chemhome/staff/hzsun/hzsun.htm>



Dr Yuen Man Fung

Associate Professor, Department of Medicine

Dr Yuen's primary research interest is chronic hepatitis B, a global disease affecting 400 million people in the world. He has been working in the team headed by the Professor Sir David Todd Chair in Medicine Professor Lai Ching Lung, who received an Outstanding Researcher Award in 2004, for more than ten years. His studies have focused on the natural history and molecular virology of hepatitis B, including virus genotypes, core promoter and precore mutations and treatment-induced viral mutations. He has also been researching the long-term efficacy of primary vaccination for hepatitis B, and treatment of the devastating complication of hepatitis B, the liver cancer. He has published more than 130 articles, and serves as an editorial member and reviewer of several important international

journals including the leading publications on gastroenterology. He is a member for two Asian hepatitis B advisory boards, vice-president of the Hong Kong Association for the Study of Liver Disease, and honorary consultant for several pharmaceutical companies on the development of drugs for hepatitis B infection.

Dr Yuen says that research on chronic hepatitis B has made the University an internationally-recognized research centre. He always conducts research in the hope of alleviating disease complications and patient suffering. Finally, following the example of his admired mentor, Professor Lai, Dr Yuen hopes to continue his pursuit in medical research at higher levels and to become a good supervisor for future researchers at the University.

mfyuen@hkucc.hku.hk



Outstanding Researcher Award

The Outstanding Researcher Award is conferred for exceptional research accomplishments of international merit.

Dr Billy Chow Kwok Chong

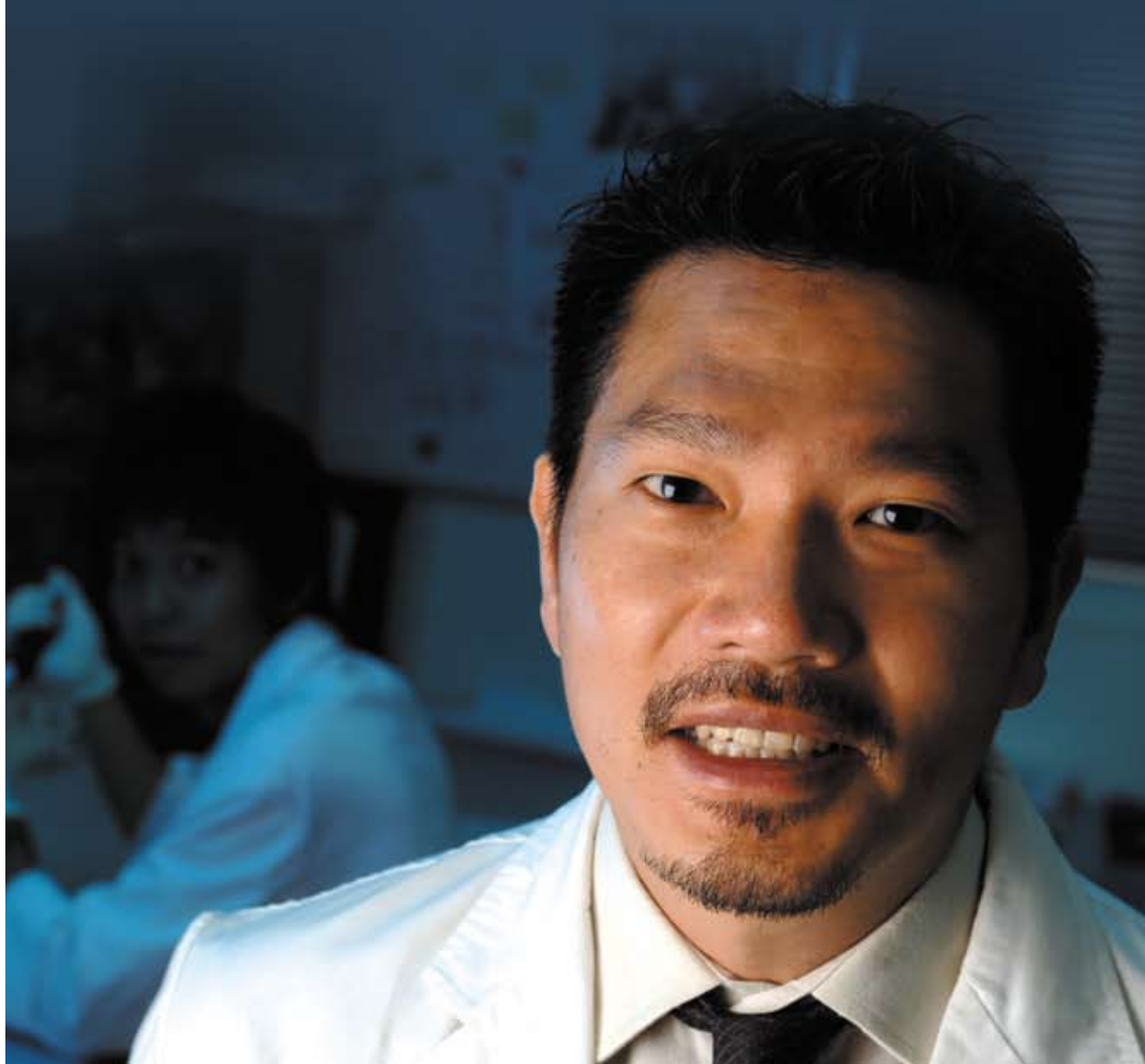
Associate Professor, Department of Zoology

Dr Chow is an internationally-recognized endocrinologist, with a distinguished publication and grant record. He has recently received the Grace Pickford Research Award, an honour bestowed by the International Federation of Comparative Endocrinology Societies, and has been made a Croucher Senior Research Fellow. His laboratory was the first in the world to substantiate the neuroactive functions of secretin in the central nervous system, and has recently demonstrated the pleiotropic activity of secretin in the pituitary, kidney, testis and liver.

Dr Chow believes that an outstanding researcher is someone who has the intuition to see the beauty of simplicity amongst the most complicated pathways and networks in biological and physical systems. He himself is not only a distinguished researcher but also an accomplished tango dancer, and represented Hong Kong in the Taiwan International Tango Festival 2005.

bkcc@hkusua.hku.hk

<http://www.hku.hk/zoology/staff/bc/bc.html>



Professor Lo Chung Mau

Professor: Chair of Hepatobiliary Surgery

Professor Lo's area of research is liver disease, and he has a special interest in liver cancer, liver transplantation for hepatitis B and living donor liver transplantation. All of these subjects are of particular importance to Hong Kong because of its high rate of hepatitis B infection, high incidence of liver cancer, and shortage of deceased organ donors. His team pioneered the application of living donor liver transplantation in adult patients by performing the world's first right lobe liver transplant in 1996. This breakthrough helped to resolve a crisis caused by a shortage of organs, and has had a major impact on the

development and practice of liver transplantation worldwide.

In 2004 Professor Lo received a Croucher Foundation Senior Medical Research Fellowship to support his research into the prevention of hepatitis B after liver transplantation. Although he finds lengthy hospital operations physically tiring, he continues to give as much time as he can to his research, and remains personally in good shape. In November 2005 he took part in the annual Trailwalker event, and completed the 100 kilometre Maclehoose Trail in the impressive time of 22 hours.

chungmlo@hkucc.hku.hk



Professor Irene Ng Oi Lin

Professor, Department of Pathology

Professor Ng's main research interest is liver cancer, a disease distressingly common both locally and internationally. She has been able to establish useful pathological and biological parameters for management of patients with this cancer. The long-term aim of her research is to understand why liver cancer develops and to elucidate its molecular mechanisms. Her laboratory has been involved in the identification and molecular characterization of a number of tumour suppressor genes and oncogenes. She has also been the chief pathologist of the liver transplant team at Queen Mary Hospital since its first successful liver transplantation in 1991. With over 300 publications and more than 200 peer-reviewed papers, she ranks among the

world's top 1% of researchers in the ISI list of the most cited scientists in clinical medicine. In recognition of the originality of her research, she was awarded the Croucher Senior Medical Fellowship 2005-06.

Professor Ng thinks that research – the exploration of the unknown – is a way of life. She remains fascinated by the mystery of medical science, and firmly believes in teamwork. She is most grateful to the University, her Department, her collaborators and her family.

iolng@hku.hk

<http://www.hku.hk/patho/staff/list/ing.html>



Special Research Achievement Award

Professor Zhang Fuchun

Professor, Chair of Physics

Professor Zhang's research interest is theoretical condensed matter physics, particularly complex systems with strong correlations. He has already gained an international reputation in this field. The mathematical model Professor Zhang proposed together with Professor T.M. Rice at ETH-Zurich for high transition temperature superconductivity has become one of the most widely used microscopic models in physics, and has already been immortalized as the 'Zhang-Rice singlet'. Professor Zhang has recently proposed a unified theory to link

a class of superconductors to an insulating state of matter, called Gossamer superconductivity due to its tiny superfluidity, which may have been realized in a class of layered organic superconductors.

Professor Zhang and his colleagues at the University have established the Centre of Theoretical and Computational Physics. This Centre has helped to raise the University's reputation in the specialized world of highly visible condensed matter theory.

fuchun@hkucc.hku.hk

<http://www.physics.hku.hk/~fczhang/>

