



CLOCKWISE FROM LEFT: Medical building; press conference on May 11, 2003 announcing results from peptide work with Dr David Ho of Aaron Diamond AIDS Research Center; the coronavirus discovered by medical researchers; medical staff off to work.

DISEASE DETECTIVES

The university in a global battle against SARS



IN FEBRUARY, AN ELDERLY

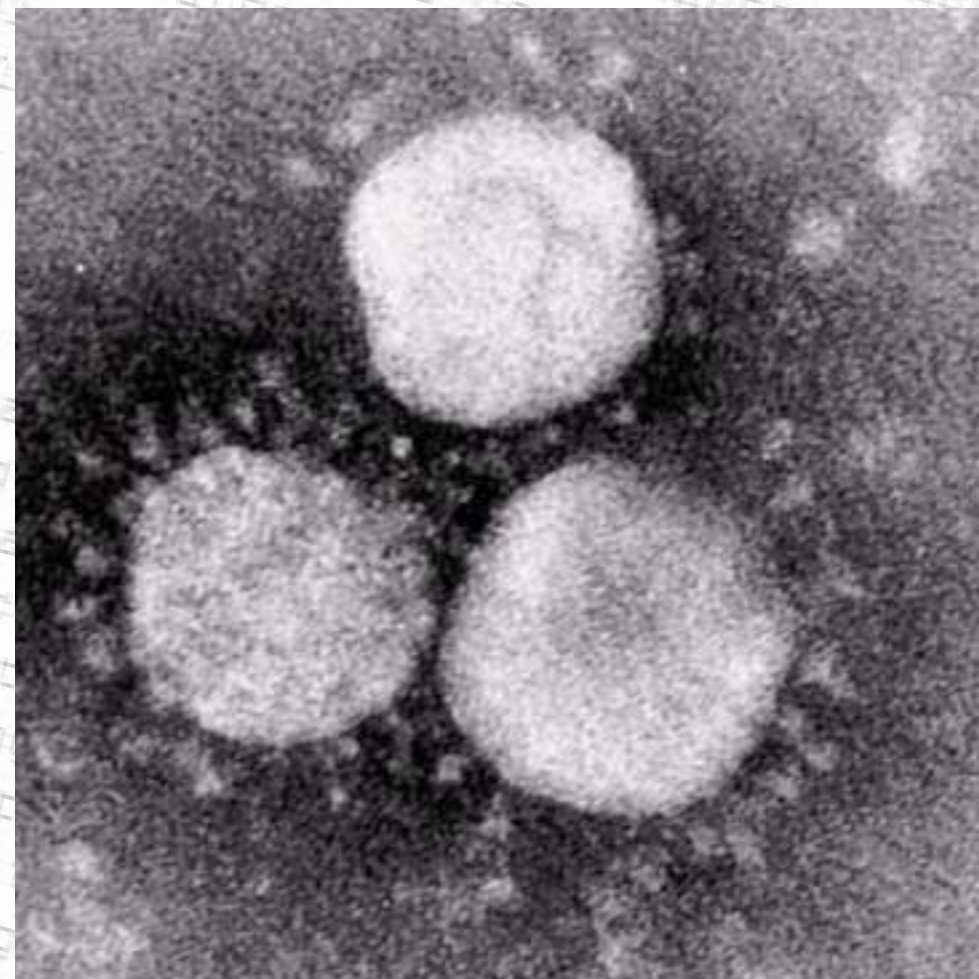
MEDICAL PROFESSOR VISITING

FROM MAINLAND CHINA CHECKED INTO

YAU MA TEI'S KWONG WAH

HOSPITAL WITH MYSTERIOUS

SYMPTOMS.



The patient, Liu Jianlun, exhibited a raging fever, warned he was highly infectious, and died shortly after, giving no further clues. Puzzled doctors turned to experts at Hong Kong University.

Dr Liu's symptoms were similar to avian flu, yet HKU scientists — some of the world's foremost researchers on the disease — were stumped. The deceased's tissue samples not only tested negative for bird influenza, they did not show traces of any well-known virus or bacteria, said Yuen Kwok-yung (MBBS '81, MD '98), Head of Microbiology at HKU's Faculty of Medicine and Chair of Infectious Diseases. Knowing that the deceased had come from Guangdong, an area experiencing a pneumonia outbreak, "I thought, oh no, here's trouble," said Professor Yuen.

So began the university's continuing battle with a disease that would draw on its intellectual and physical resources and involve everyone from a world-famous AIDS researcher to animal experts and even the staff soccer team. It would put researchers - battle-hardened veterans from the 1997 fight against bird influenza - on a steep learning curve to identify a new disease that was decimating hundreds in Hong Kong, damaging economies throughout Asia, and



ABOVE: Officials observe a moment of silence at the Joint Symposium on Atypical Pneumonia on April 27, 2003. Front row, right to left: **Dr Leong Che-hung** (梁智鴻), Chairman of Hospital Authority; **Professor S K Lam** (林兆鑫), Dean of Faculty of Medicine; **Professor Lap-Chee Tsui** (徐立之), Vice-Chancellor.

denting financial markets around the world. There was crushing pressure to avert a global epidemic.

HKU researchers scored some quick triumphs: they became the first to identify the coronavirus as the causal agent of Severe Acute Respiratory Syndrome (SARS), as well as among the first to complete its genome

sequencing and develop a diagnostic test. These medical breakthroughs occurred within the space of three months - a particularly startling phenomenon considering the human immunodeficiency virus (HIV) wasn't even identified for well over two years.

There were also some encouraging first steps in the search for a cure and a vaccine, including collaboration with renowned AIDS scientist David Ho. Within two weeks, that effort had led to the creation of synthetic inhibitors with the potential to block the spread of the virus.

Yet much remains undone. The disease is still not contained, no cure has yet been discovered. It is possible, says Professor Yuen, that "SARS will be with us for a long time." The search for solutions is a battle that HKU is fully committing its energies to. "We are however blessed with modern medicine which gives us powerful tools," says Vice-Chancellor Lap-Chee Tsui. "Knowledge empowers us to win this battle."

Identifying a Killer

At first, the mystery virus perplexed HKU researchers. Trails of clues sometimes led in the wrong direction. One of the earliest hypotheses amongst the scientific community was that the culprit was the paramyxovirus, a common cause of childhood

The university did not keep their potentially lucrative discovery to themselves

diseases like measles and mumps. But Yuen and his colleagues were not convinced, since their test findings didn't point to that virus as a causal agent.

The virology team was led by Joseph Malik Peiris, an Oxford-trained Sri Lankan who in 1997 discovered that the bird flu virus had jumped species and infected humans. The team's first task was to try and isolate the cell-destroying agent and grow it. If they couldn't replicate it, they couldn't study it. But it wasn't easy. Viruses can only survive and grow in cell cultures, and this particular mystery virus would not grow in any of the standard cell lines used for culturing avian and influenza viruses. The team had to find cell cultures which would contain the correct receptors for the virus to

multiply — otherwise their race to find a cure would forever be stuck at the first hurdle.

Risking infection, two researchers — B J Zheng and Guan Yi — went up to Guangzhou in order to bring back specimens from SARS patients. But the research team was unable to grow the virus from these specimens.

Then medical technologist Chan Kwok-hung hit upon the idea of using embryonic monkey kidneys, which had been used to successfully cultivate the hepatitis A virus. Using virus samples from a patient - incidentally, the brother-in-law of Dr Liu, the Chinese professor who had died mysteriously - they were finally able to grow the viral agent.

SARS Timeline

The first five months of 2003 would provide an ordeal for Hong Kong. Here is a chronology of events during the SARS outbreak in Hong Kong, with highlights of Hong Kong University's contributions.

November 2002 to February 2003
Mystery in China
Outbreak of a respiratory illness strikes Guangdong, China, infecting over 300 and killing five. The illness spreads to household members and health care workers.

March 3
Canada Bound
A 78-year-old woman dies of SARS in Toronto after having visited Hong Kong in February.

March 27
Coronavirus Uncovered
Hong Kong University researchers led by Professor Malik Peiris report they believe SARS is caused by a coronavirus.

April 19
Results Published
University research (*Coronavirus as a possible cause of severe acute respiratory syndrome*) is published in the international medical journal, The Lancet.

February 21
SARS Lands in Hong Kong
Medical professor from Guangzhou, China travels to Hong Kong, stays in the Metropole Hotel in Kowloon, and infects others on the ninth floor.

March 31
Amoy Gardens Shut
Hong Kong Department of Health issues isolation order for residents of Amoy Gardens, Block E. University engineers would later discover the "chimney effect" that led to the rapid spread.

April 16
Genome Decoded
University becomes third group to complete genetic sequencing of SARS coronavirus, joining Canadian researchers and U.S. Centers for Disease Control and Prevention.

May 11
Collaboration
World-renowned AIDS researcher David Ho, with university scientists, announce promising experiments with peptides that may block the SARS coronavirus from propagating.

THE LANCET



ABOVE: Dr Frederick Leung (梁志清) and his team of scientists mapped out the genetic sequence of the coronavirus.

The team went into overdrive, staying late and arriving early, seven days a week, sometimes working until sunrise.

The next step was to prove what the researchers had in their test tubes was actually the virus causing SARS. This was accomplished by comparing blood samples of currently sick patients with those of Dr Liu's brother-in-law and another victim. In the victims' blood, they looked for antibodies - the body's reaction to an invader - that showed how the immune system was activated to fight disease. Since different afflictions produced different antibodies, the researchers knew that if the antibodies in all blood samples were the same, it would indicate a single disease.

When all eight samples tested similar, the team knew they were one step closer to real answers. That was when "the real excitement began," Professor Peiris said. The scientists now knew they had the virus that caused the disease. But exactly what was it?

Pathologist John Nicholls took the infected cells, sliced them up and examined them under a powerful electron microscope. What he saw resembled the tell-tale spiky crown

of a member of the coronavirus family - but he wasn't sure. After all, scientists knew the coronavirus to be a relatively weak virus, the cause of common colds. It was only after Leo Poon, another member of the team, began isolating genetic fragments and running genetic sequencing tests that the team was certain that it was the coronavirus. Evidently, this variant was a new member of the family. "It's not every day you find a new virus," Professor Peiris told the South China Morning Post.

The team's findings were later backed up by the United States Centers for Disease Control and Prevention (CDC) and the World Health Organisation (WHO). Not only did HKU's discovery bring the medical community closer to pinpointing the cause of the disease, but the identification of the coronavirus was done "in record time," said David Heymann, WHO's Executive Director of Communicable Diseases. HKU did not keep its potentially lucrative find to itself, choosing instead to donate

the virus to interested laboratories worldwide to facilitate research.

Cracking the Genetic Code

It wasn't enough just to know the enemy. The scientists had to be able to find it in the bloodstream of a victim. They developed the first significant weapon against SARS by creating an eight-hour diagnostic test for the virus. But it came amid mounting fears as the disease claimed more victims. On the same day HKU announced its diagnostic test, Hong Kong officials closed schools for nine days and quarantined more than 1,000 people who'd had close contacts with infected people.

It was clear that that the HKU doctors needed to develop better tests and start work on a vaccine. To do that, they had to crack the genetic code. Vice-Chancellor Tsui, a genome expert, called in the animal experts: Frederick Leung, Dean of the Faculty of Science and Associate Professor in the Department of Zoology, and his

Fifteen Hours

In the life of a SARS scare

Andy Chan thought he was already on the SARS battlefield.

As assistant professor of environ-

mental engineering, he was studying building structural flaws that could have contributed to the Amoy Gardens outbreak. But he was also warden of student residence Wei Lun Hall, and the epidemic hit home when a resident came down with SARS-like symptoms.

Chan's account of the April 17 scare follows.

10 pm Student from Wei Lun Hall runs a fever, goes to Queen Mary hospital.

12 noon Chan gets a call from the student, who has been identified as a possible SARS case: The student was also worried about his girlfriend. The hospital was demanding she get checked too. The doctor himself called to say the student would be held at the hospital.

Midnight to 2 am Entire floor is cordoned off. Students start extensive cleaning. Chan puts up a hall notice telling all tutors to inform their corresponding floors.

It turned out that all but four students on the floor had close contact with the student. Earlier in the week, there was a hightable graduation dinner and almost everyone had gone out, so this more than justified our quarantine.

5 am to 9 am Chan contacts four students, who were away from Wei Lun at the time, and orders them to return immediately. Two initially refused, but relented after Chan talks with their parents.

9 am The Estates Office arrives for extensive cleaning of the whole residence hall. Through this, the harried Chan is kept busy on the phone, in constant touch with the University Health Service, the suspected student's family, fellow wardens, and reporters.

Noon The Queen Mary doctor called and said he no longer thought the student had SARS. As a precaution they were going to keep him hospitalised. Chan is kept busy handling calls, writing memos to other wardens and taking the temperature of everyone on the floor.

NOTE: Chan responded to the case according to a protocol that had been developed for such emergencies by the HKU Task Force on SARS, headed by Dr Kitty Chan, Director of the University Health Service.



I immediately called the SARS hotline and Dr [Kitty] Chan to tell them about the case. Then we gathered everyone - about 30 students - on the floor and told them what was going on. We tried to identify those who might have had particularly close contact with the student. I must say, the students remained calm. Worried, but calm.

5 am The University Health Service team arrives. Everyone is given a checkup. UHS tries to determine who had the most contact with the student.

We gave everyone on the floor N95 facemasks. We arranged for the four students with no close contact with the student to move to other floors. We also arranged for the possibly infected student's girlfriend to move into his room, after sealing off a toilet and shower just for her.

We canceled an inter-floor soccer competition, and arranged to bring in breakfast, lunch and dinner. Some tutors and I went out and got some additional noodles and bananas.

A New Mission for Dr David Ho

David Ho (何大一), of the Aaron Diamond AIDS Research Center in New York, is widely credited with pioneering a "cocktail" therapy for the treatment of AIDS. He has set himself a new challenge:

working with HKU to design a drug that would block the spread of SARS. His own description of the work, from a May 11, 2003 press conference at Hong Kong University:



"Since three weeks ago, my colleagues, including Dr Zhang [Linqi], have been working hard on two specific

areas. One is to make vaccines with the team here [HKU] ... but we also decided to focus on one treatment, to see if we could specifically design something that would block the SARS virus. This comes about because of our experience with the HIV virus ... Due to the good work of Richard Kao and Leo Poon - they have been slaving away in the lab day and night to test inhibitors on the SARS virus (this not on animals, but the very first test on tissue culture) to see if peptides block the ability of the SARS virus to get inside the cell - we are pleased with the result. Several peptides actually protected the cells from the SARS virus; the concept is validated. There is obviously lots more work ahead, but it's a nice first step. From here there will have to be many more experiments. Hopefully, we can push this forward to testing on animals some time."

Several peptides actually protected the cells from the SARS virus

team of ten students. They were particularly suited for the job, having mapped a number of pig and chicken viruses, including the foot and mouth virus, and developed vaccine against them.

Dr Leung's team confronted a formidable task. They started with only a 182-unit sequence of base pairs, the building blocks of DNA and foundation of all living things. Most coronaviruses have 30,000 base pairs. Their challenge was like putting together a massive jigsaw puzzle - with the clock ticking away.

The first step was "landing" onto the genome. In general, scientists first find genes that match other known viral sequences from other species. However, the first 182 base pair showed that this virus was so new and only had about a 5% match with all known sequences. It was a "maddening process," said Dr Leung, as "you just didn't know what piece fits with what."

As Dr Leung and his team laboured, the situation in Hong Kong and beyond grew increasingly grim. By April 2, SARS had infected 2,200 people in 17 countries, with 78 fatalities. Hong Kong officials closed schools for another two weeks as local cases topped 700. The WHO issued a travel warning advising people to avoid Hong Kong and southern China. Swiss authorities barred Hong Kong traders from attending a well-known jewelry exhibition.

Dr Leung and the genetic-sequencing team realised that this coronavirus displayed only the barest similarities with other viruses in its class. It was something no one had ever seen before. The team went into overdrive, arriving early and staying late, seven days a week, sometimes toiling till sunrise.

It was a steep learning curve for Leung's weary students, who said the research helped them develop new techniques in genetic sequencing. They discovered how to get more Ribonucleic Acid, or RNA, from virus samples so they could do more tests with less material. They also found new ways to "launch" extracts of RNA from the virus, which helped fit the

WHO experts consulted university engineers on identifying 'at-risk' buildings in Hong Kong

first puzzle pieces together faster. Then on April 13, the news came that a team from the British Columbia Cancer agency had completed genetic mapping of the virus. Two days later, the United States Centers for Disease Control and Prevention (CDC) also announced they had mapped the genome. It was a blow to the Leung team, who felt they were close to cracking the code. "I just wanted to go home," said Carol Chan, one of the students. But Dr Leung reminded his team that there could be differences between the viruses in Hong Kong and Canada, and more than one sequence might be needed to get the virus under control. "Finish what we started," he told his team. On April 16, the HKU team finished mapping the virus and uploaded it into the Gene Bank at the National Center for Biotechnology Information in the United States. Later, both the Canadian and US groups edited their sequence to match the HKU sequences.

The Amoy Gardens Puzzle

While all this unfolded, members of the university's Faculty of Engineering were trying to find out how the virus spread so rapidly at Amoy Gardens - a Kowloon housing estate which saw over 300 SARS infections and resulted in more than 35 deaths. It fueled widespread fears that the virus was not containable. Were buildings in other densely populated areas of Hong Kong similarly vulnerable?

The HKU team included specialists in mechanical engineering, building services, fluid dynamics and air pollution. They sought to "provide numbers, not conjecture," said Joseph Lee, Dean of the Faculty of Engineering. But initially there was much conjecture about the Amoy Gardens outbreak. Two popular theories - virus-transporting urine from neighbouring construction sites, or germ-carrying

rats - did not explain why 70% of the infections were concentrated around Flats 7 and 8 in Block E. Had the virus been transmitted in the ways suggested, infections would have been more evenly distributed, Lee noted.

His group created computer simulations of conditions in the residents' homes. There were multiple variables to account for: windflow temperature and humidity differentials both inside and outside the block; with fans on or off, and windows open or closed. They examined the block floor by floor and surmised that the building's construction design, combined with weather conditions, contributed to the virus's spread.

One hypothesis was that the virus was ejected from a severely-contaminated bathroom through the exhaust fan into the re-entrant area of the building. With no proper ventilation to disperse it, the virus-laden air slowly rose within the lightwell through a "chimney effect" and entered other apartments through open windows. Natural wind-flow simulations

showed that such air clouds favoured the section around Flats 7 and 8.

On April 17, the government issued a report on the Amoy Gardens outbreak. Though the report concluded that a faulty sewage system was responsible for the outbreak, part of its findings concurred with the HKU team's research, particularly on the chimney effect.

WHO experts fully agreed with the findings and consulted the HKU team in their efforts to identify other "at-risk" buildings in Hong Kong. Dr Lee's team concluded that while similar incidents could happen in other buildings, chances of the same magnitude are reduced since the incident was a combination of unfavorable factors.

Taking Body Temperatures

Meanwhile, another HKU team was hard at work developing a device that could swiftly test body temperatures. Since there is as yet no quick, fool-proof diagnostic test to detect SARS, body temperature readings remain a chief symptom indicator. It was vital to establish a fast method to check the huge numbers of people moving in and out of Hong Kong.

"We have to find the cause."

- Professor Yuen Kwok-yung



Using technology originally developed for testing construction quality in the building industry, the team, which included C R Kumana, Chair of Clinical Pharmacology and Therapeutics in the Department of Medicine, Chan Lung-Sang of the Department of Earth Sciences, and Pro-Vice-Chancellor C F Lee, tried

to use infra-red technology to create a small device sensitive enough to pick up passers-by who were running above-normal temperatures.

At first, recalled Dr Chan, things were "frustrating." The team had high failure rates because camera snapshots of body-surface tempera-

ture differed from internal core temperatures that more traditional thermometers measure. To overcome the glitch they enlisted the help of the university staff soccer team. The researchers tracked the sweaty sportsmen's temperature decline from side angles, discovering that they could get more accurate readings from around the temple and ear region than from the body. The team is now expanding its work, on a Department of Health-supported project with the Tsinghua University's Research Institute at Shenzhen, verifying the application of infra-red thermography at Hong Kong's border checkpoints.

Pursuit of a Cure

Back in the labs, Dr Leung's gene-sequencing team was happy to have mapped the SARS genome in near-record time, with fewer people than the North American teams and less sophisticated equipment. But other challenges loomed, like improving the diagnostic method for SARS, and making faster and more accurate tests. Above all, the researchers were acutely aware of the need to develop a vaccine. The coronavirus belongs to a class of RNA viruses, which, like HIV, are notorious for their rapid mutations. That will complicate the search for a vaccine.

Help came in the form of AIDS researcher David Ho. The university already enjoyed a close relationship with Dr Ho. Last July HKU and the Aaron Diamond Aids Research Center - where Ho is Chief Executive - jointly set up an AIDS institute at HKU's medical complex. This May, Dr Ho, prompted by what he saw as similar characteristics between the SARS virus and HIV, e-mailed the university asking what he could do to help.

Dr Ho, who was named Time magazine's 1996 "Man of the Year" for pioneering the use of drugs which inhibit the spread of the HIV virus, flew to Hong Kong with a team that included Beijing native and immunologist Zhang Linqi. The team believed that they could use their experience with HIV to make inhibitors which would block SARS interaction.

They sought to provide numbers, not conjecture

BELOW: Engineers Dennis Y C Leung (梁耀彰) and Andy Chan (陳德儀) investigated the Amoy Gardens outbreak by modeling the buildings' toilets and pipes.



People from the university community join in the April 13 "We Are With You" rally in the Rayson Huang Theatre.

Standing Fast, Reaching Out

As SARS raged, HKU took steps to maintain a semblance of normality - and community

Fighting Fear With The Truth

It was a schoolboy's April's fool joke that no one laughed at. The prank, a website rumor that Hong Kong would be sealed off to contain the epidemic, sparked panic throughout the territory. People shoved into supermarkets and emptied the shelves.

The incident made it clear that the SARS outbreak was creating a ripe environment for rumor and hysteria. Cecilia Chan, Director of HKU's Centre on Behavioral Health, knew that Hong Kong needed a platform where people could get reliable information - and needed it fast.

Together with Albert Chau, Director of the General Education Unit, she set up a website and telephone hotline to distribute information about SARS. The team also established a phonline tutorial service for home-bound students, amid the Hong Kong-wide shutdown of schools. Thus was born the "We Are With You" Movement. Wherever they turned in the university community, the Chan-Chau team found help. "No one turned us down," said Chau. "Everyone wanted to help."

Professor Chan and Dr Chau later sought to turn the SARS acronym on its head. It didn't have to mean Severe Acute Respiratory Syndrome. Instead, it could mean:

- Sacrifice
- Appreciation
- Reflection
- Support
- Sustainable
- Actions for
- Rejuvenation of
- Society

In the first week of April, an online program offering news and information about SARS and tutoring services to secondary students began operation. Some 200 student volunteers were taking the first calls from worried parents and students seeking help with assignments. The volunteers were trained by faculty members on ways to solve callers' problems in the shortest time and to offer referral information for tougher cases.

The "We Are With You" Movement also produced videos with information on SARS, where experts of various backgrounds provided advice on coping.

Containing The Enemy

Late in March, HKU had its first case of SARS. Kitty Chan, Director of the University Health Service, and Registrar Henry Wai formed a group, later known as the HKU Task Force on SARS, to coordinate the university's response. Its chief roles, said Dr Chan, were to implement guidelines and act as a channel of communication, both within the university and with the world.

With each suspected case, the HKU Task Force contacted the patient, the patient's doctor and the Department of Health to get the most accurate details. Group members mapped the patient's routine and contacts on campus and notified the university community. With the Estates Office, they supervised disinfection of campus buildings where the patient had been.

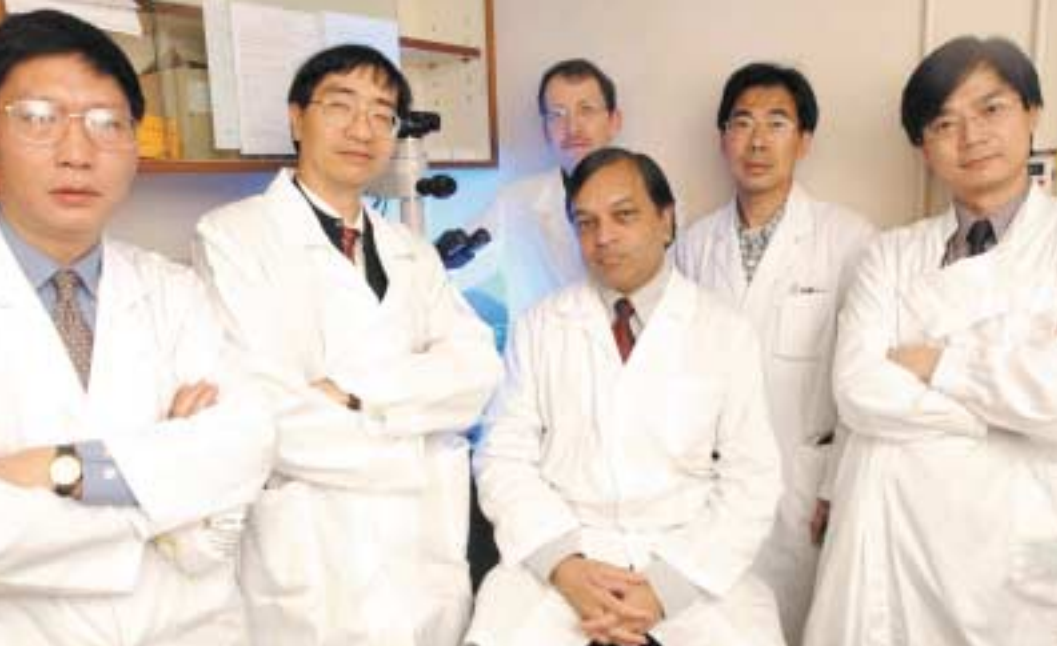
Those who had been in contact with suspected cases were given on-site screening, temperature checks and referrals for further examination such as X-rays, if deemed necessary. The task force also asked close contacts to take 10 days' sick leave, a policy later mandated by the Department of Health.

Keeping Classes Going

The SARS outbreak forced the university to close from March 29 to April 14. But teaching did not stop. "This does not mean that learning will be suspended," said John Spinks, Pro-Vice-Chancellor of Academic and Student Affairs, in an e-mail to staff and students. "We are proud of the fact that HKU students are independent learners," he added. "This is an opportunity to demonstrate this."

During the closure period, websites and videolinks replaced blackboards and pointers as primary teaching tools. Students did their assignments by e-mail, occasionally sending a quick review question to their university teachers lurking in cyber chatrooms.

According to the Office of Student Affairs, well over half of the university employed information and communication technology (ICT) techniques during the shutdown.



Malik Peiris (裴偉士) (centre) flanked (left to right) by Guan Yi (管軼), Yuen Kwok-yung (袁國勇), John Nicholls (黎國思), Chan Kwok-hung (陳國雄), Leo Poon (潘烈文).

In lab tests Dr Zhang experimented with creating synthetic peptides, or protein inhibitors, that could block the ability of the SARS virus to get inside cell cultures. To his delight, he discovered several peptides actually did so, gumming up the process so the virus was unable to fuse with cell cultures.

Since tests have yet to be conducted on animals, let alone humans, scientists are still cautious about the potential applications. Still, they hope the discovery will lead to the creation of "designer drugs," said Professor Peiris, that can "target the vulnerable stage" of the SARS virus's life cycle. At present, the most effective drug in the anti-SARS arsenal is the anti-viral drug Ribavirin, which was not designed to treat SARS, but hepatitis and other respiratory diseases. Taken in large doses, it has serious side

effects, causing birth defects and the bursting of red blood cells.

The laundry list of challenges to be met remains dauntingly long. Uppermost on researchers' minds: improving diagnostic tests so that speedier and more accurate results can be obtained. Making anti-viral drugs specifically designed to combat SARS. Creating a vaccine. "All this cannot be done without money, political conviction and support from the overall community," says S K Lam (MBBS '67; MD '75), Dean of Medicine. "We are dealing with a disease without textbooks or journals," he said, "we are writing the chapters as the disease unfolds itself."

*Reporting by Journalism students:
Tim LeeMaster, Patricia Cheng and
Wong Chun-fai*

Related Websites

University SARS Web site

<http://www.hku.hk/sars/>

Faculty of Medicine

<http://www.hku.hk/facmed/>

Yu Chun Keung Medical Library

<http://www.lib.hku.hk/medlib/sars/>

Clinical Trials Centre

<http://www.hku.hk/ctc/>

We Are With You Movement

<http://www.hku.hk/gened/withu/>

Mapping Atypical Pneumonia (SARS)

<http://facarts.hku.hk/geog/sars/>

Analysis of SARS data

<http://hkustasc.hku.hk/users/plhyu/SARS/home.php>

SPACE We Shall Overcome

<http://www.soul.hkospace.org/wellwishes/msg/special/page1.htm>

SARS Fund (Donation details)

<http://www.hku.hk/sarsfund/>

In hospitals, labs and offices around Hong Kong, many of our members laboured long and mightily in fighting against SARS. The examples are numerous, and include:

1 Dr Lo Wing-lok (勞永樂) (MBBS '79)

President of HK Medical Association

2 Dr Kenneth Tsang (曾華德)

Associate Professor of Department of Medicine; Physician-in-charge of SARS wards in Queen Mary Hospital.

3 Dr Leong Che-hung (梁智鴻) (MBBS '62)

Chairman of Hospital Authority

4 Dr Seto Wing-hong (司徒永康)

Chairman of Infection Control, Queen Mary Hospital; Honorary Professor of HKU Department of Microbiology

5 Dr Ko Wing-man (高永文) (MBBS '81)

Director of Professional Services and Affairs, Hospital Authority; Acting Chief Executive of Hospital Authority when Dr Ho Siu-wei suffered from SARS.

6 Professor Leung Ping-chung (梁秉中) (MBBS '66, MS '81, HonDSocSc 2001)

Chairman, Institute of Chinese Medicine Management Committee; Professor of Orthopaedics & Traumatology, CUHK

7 Professor Sung Jao-yiu, Joseph (沈祖堯) (MBBS '83)

Chairman of Medicine and Therapeutics and Associate Dean of Faculty of Medicine, CUHK; Recently appointed by HKU as Honorary Professor of the Faculty of Medicine

Both Dr Ho Shiu-wei and Dr Fung Hong were infected with SARS and later recovered.

Photos: Ming Pao

Professor Tam Siu-lun, John (談兆麟)
(PhD '90)
Department of Microbiology, CUHK

Dr Yeoh Eng-kiong (楊永強)
(MBBS '71)
Secretary for Health, Welfare and Food

Dr Ho Shiu-wei (何兆煒)
(MBBS '83)
Chief Executive of Hospital Authority



Dr Fung Hong (馮康) (MBBS '81)

Hospital Chief Executive of Prince of Wales Hospital; Cluster Chief Executive (New Territories East)



Professor Chung Sheung-chee (鍾尚志)

(Science student '73-'74)
Dean of the Faculty of Medicine, CUHK