SARS triggers biomedical shake-up in China

David Cyranoski, Guangzhou

The bustling streets of Guangzhou — the centre of last winter's outbreak of Severe Acute Respiratory Syndrome (SARS) — no longer show much evidence of the panic that gripped the region. But the epidemic led to an array of changes in research and public health that are just beginning to make themselves felt.

This summer, plans were laid to establish a new health-research institute in the city itself. Reforms of China's biomedical research infrastructure — including the establishment of a Chinese version of the main US biomedical research agency, the National Institutes of Health(NIH) — have acquired fresh momentum. And work is under way to build or refurbish a network of laboratories with the aim of equipping them to handle dangerous pathogens.

Plans for the Guangzhou institute were confirmed on 5 July, when the Chinese Academy of Sciences (CAS), the city's government and the province of Guangdong each agreed to invest 100 million yuan (US$12 million) in the project. The institute will be established on a new science park in western Guangzhou. A director, charged with assembling a dozen teams to do research there, will be named by the end of October.

The institute's backers say that they aim to attract a strong contingent of researchers from outside China and to establish the facility as a base for international cooperation in health research. Its areas of specialization have yet to be determined, but may include cardiovascular disease and cancer, as well as emerging diseases.

This incubator facility in Guangzhou's science park awaits the arrival of the new research institute.

More far-reaching are proposals for a national, grant-giving biomedical research agency modelled on the NIH. The proposal was made public in a statement earlier this year by 22 senior researchers, including Zhu Chen, vice president of the CAS.

Most biomedical research in China is supported directly through branches of the academy, but advocates of the proposal want an agency that would distribute competitive grants, as the NIH does. "We need to have stable support that can build a health-research community," says Chen.

This month, a group of some 20 senior Chinese scientists worldwide, led by Ray Wu, a plant biologist at Cornell University in Ithaca, New York, and Yi Rao, an anatomist and neurobiologist at Washington University School of Medicine in St Louis, Missouri, appealed to China's prime minister Wen Jiabao to support the idea. Wu says that the group has now been asked to provide a more detailed version of its letter.

The letter criticizes what it calls China's underinvestment in biomedical research, compared with other countries. It cites the need for an organization that can carry out "a fair and transparent peer-review system". China's research structure — dominated by the CAS — has been criticized for lacking such a system.

The organization would initially distribute extramural grants, although in the future it could also support its own laboratories, as the NIH does. The NIH's annual budget of $27 billion represents about 0.27% of the US economy, Rao says, and the proposal calls for a Chinese equivalent to spend 0.14% of China's economic product over the next ten years.

Despite Chen's support, the plan is likely to meet stiff opposition from other CAS officials, who want to retain their central position in Chinese biomedical research.

Meanwhile, many laboratories in China are pressing forward with construction of biosafety laboratories that meet the international P3 standard, which is required for most work on infectious diseases, and even the P4 standard for work on the most dangerous pathogens.

But the drive lacks coordination, researchers say. "No one can keep track of them," says Yun Zhang, a specialist at the CAS's Kunming Institute of Zoology in the province of Yunnan, which is spending 20 million yuan on labs in each class to house primate models for the study of SARS. ■

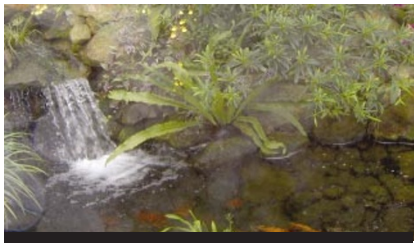
Secret garden opens up to public

David Cyranoski, Guangzhou

China's largest botanical garden is to get a major upgrade, as officials try to involve it in educating the public about science. But some botanists at the garden are appalled at the idea of thousands of people tramping through their precious collections.

The South China Botanical Garden in Guangzhou has until now been run primarily for research purposes. Over the next three years it will receive 300 million yuan (US$36 million) from the Chinese Academy of Sciences, the government of Guangdong province and the city council. Plans still stress the garden's scientific role, and the project calls for 30 internationally recognized articles to be published each year. But the refurbished garden is hoped to draw two million visitors every year with its new slant on education and entertainment.

During the SARS epidemic, the number of visitors to the garden's open areas surged fivefold. "They were looking for something clean and pure," says deputy director Zhou Guoyi. To keep their interest, education facilities will be expanded and the number of species increased from 5,000 to 9,000. Many additions will be wild and endangered plants, opening up new areas of research.



Pure research: botanists fear visitors seeking the purity of nature will damage the collections.

Nonetheless, some botanists fear that their work will be compromised and the change could harm existing collections. The most important ones — including magnolia, ginger and bamboo gardens — have until now been closed to the public. Researchers are worried about vandalism and theft. ■

Minister knocked down by court verdict on mosque demolition

New Delhi India's science minister, Murli Manohar Joshi, has submitted his resignation in the wake of a scandal over the destruction of an ancient mosque more than ten years ago.

In December 1992, fanatical Hindus tore down the Babri Masjid mosque at Ayodhya in the state of Uttar Pradesh, as they wanted to rebuild a Hindu temple they believe once stood on the same site. The act sparked nationwide rioting and fighting between Hindus and Muslims that resulted in hundreds of deaths.

On 18 September this year, an Uttar Pradesh court upheld allegations that Joshi, along with six others, instigated the mosque's destruction. The court has ordered that the group face criminal charges, although Joshi maintains his innocence and has filed a petition against the ruling. India's deputy prime minister, Lal Krishna Advani, was also named in the case but has been exonerated.

As *Nature* went to press, Joshi's resignation had not been accepted by India's prime minster, Atal Behari Vajpayee.

D. CURRAN/AFP

Demolition squad: the Babri Masjid mosque was destroyed by Hindu fundamentalists in 1992.

Money runs out for project to spy on bank transactions

Washington The US Congress has axed a Pentagon intelligence office that has come under fire from civil-rights advocates.

The Information Awareness Office was part of the Defense Advanced Research Projects Agency (DARPA), an arm of the defence department. The office was criticized last year for a plan to comb the financial details of millions of citizens in search of potential terrorists.

The project was the brainchild of former DARPA director John Poindexter, who resigned last month amid a row over another project, in which participants could bet on future terrorist attacks (see *Nature* 424, 601; 2003).

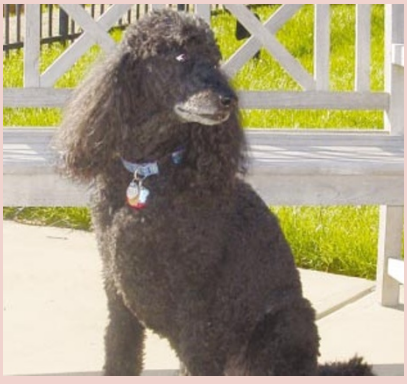
Many US security experts argued that the projects should not have been terminated, despite protests from civil-rights groups that they were unethical.

Venter's dog's genome sets tongues wagging

Washington First he sequenced his own DNA. Now Craig Venter has sequenced the DNA of his pet poodle, Shadow (pictured).

Choosing to sequence a dog is a wise move, as there are more than 350 known canine genetic diseases — more than for any other animal apart from humans — although picking a poodle may seem a curious choice. A US government project, expected to be completed early next year, has chosen to sequence a boxer, as this is one of the least genetically variable breeds and is likely to give a representative sequence.

But dog breeds are more than 99% identical to one another, so Shadow's sequence should be adequate for studying some diseases. It should also help track canine evolution. Based on the sequence, which is 80% complete, it is estimated that 18,473 dog genes have human equivalents — slightly more than are known to be shared by humans and mice (E. F. Kirkness *et al. Science* **301,** 1898–1903; 2003).



TIGR

California rejects party line on stem-cell work

San Diego More human embryos could be available for research in California as of January 2004, thanks to legislation signed into law last week.

The law requires staff at fertility clinics to ask all patients if they are happy for their discarded embryos to be used for research. Currently, the law only suggests discussing the option of embryo donation with patients.

This ruling is part of a raft of legislation regarding stem-cell work in California — in spite of a federal decision in 2001 to limit such research. A registry of donated embryos is planned, and a 13-member commission of scientists, ethicists, attorneys and religious leaders will be in place by 2005 to provide guidelines for the work. Some state legislators are also pushing for hundreds of millions of dollars in bonds to create a pool of stem-cell research funding.

Brazilian ruling sows seeds for transgenic future

Washington Brazil, one of the world's largest exporters of soy beans, has legalized the planting of transgenic versions of the crop for the coming growing season. The government's decision is expected to pave the way for the permanent legalization of genetically modified crops.

Brazil's courts banned transgenic crops in 2000, but farmers in the south of the country have long been suspected of importing transgenic seeds illegally from Argentina. Currently, 20–30% of Brazil's soybean crop is thought to contain transgenes. Last year the government granted an exemption from the ban, initially for a single growing season. That concession has now been extended for another year.

Brazil's official 'transgenic-free' status has allowed it to continue selling produce to European countries that refuse to import transgenic food. But that could soon change.

Nigeria joins the space age with first satellite

London Africa took a big step into space on 27 September with the successful launch of a Nigerian Earth-monitoring satellite.

The craft, NigeriaSat-1, will monitor Nigerian territory to help prevent disasters caused by floods, landslides, oil spillages and fires, or to assist relief workers during such emergencies. It will be operated by the country's National Space Agency in Abuja.

The satellite will form part of a disaster-monitoring constellation — a cluster of satellites built by the British company Surrey Satellite Technologies. An Algerian contribution to the cluster was launched last November, and two other satellites — from Turkey and Britain — were launched with NigeriaSat-1 by a Russian booster. A Chinese satellite will join them in early 2005.

NigeriaSat-1 is the first product of a €20-million (US$23-million) investment in space science made by the Nigerian government in 2001.

Correction

Due to an editing error, last week's article "SARS triggers biomedical shake-up in China" (D. Cyranoski *Nature* **425,** 333; 2003) incorrectly states that most of China's biomedical research is supported by the Chinese Academy of Sciences when in fact the responsibility is divided among several governmental bodies. The article also incorrectly implies that the academy aims to retain this central position in biomedical funding by resisting new initiatives. In fact, many leaders of the academy strongly support the initiative described in the article and have been instrumental in introducing it to China's prime minister.