Mr. Kula immediately decided to establish a clinic of Mongolian medicine in his hometown. Nine Mongolian doctors in the clinic are good at treating paralysis, diabetes, lower back pain and stomach and lung diseases. The clinic treats about 25 patients a day, many from European countries. According to Mr. Kula, there are about 40 such clinics of Mongolian medicine in Poland.

Mongolian medicine has been passed down from masters to apprentices and its development has largely depended on doctors’ experiences.

However, Prof. Ce Surongzhabu from the Mongolian Medicine School of the Nationality University of Inner Mongolia, pointed out that contemporary Mongolian medicine practitioners have also developed theories in diagnosis and treatment, based on an overall analysis of the illness and patient's conditions. Prof. Ce calls it “an organic conception of Mongolian medicine”, which holds that the human body and the nature are a unity of opposites.

The nature is comprised of the essence of the five elements: earth, water, fire, air and space, while the human body also consists of materials, though transformed, from the “five elements”.

These are the three sources — keyi or air, sira or heat and badagan or cold — and the seven components — food, blood, muscle, fat, bone, marrow and sperm. Mongolian medicine practitioners are required to study the interrelationships between the sources and the seven components and find out irregularities between the relationships so as to make diagnosis.

Hong Kong to Hold TCM Conference

The First International Conference and Exhibition of the Modernization of Chinese Medicine (ICMCM 2002) will be held from 14–17 March at the Hong Kong Convention and Exhibition Center, Hong Kong, China.

The primary aims of ICMCM 2002 are to foster the modernization and commercialization of Chinese medicine and to advance Hong Kong’s position as a world leading center for Chinese medicine.

ICMCM 2002 will gather industrialists, investors, practitioners, pharmacists, scientists and educators from different parts of China and the world. Participants could establish business relationships with new partners and put their products on Chinese store shelves with the accession of China to the World Trade Organization.

China’s Imitation Generic Drugs See Less Profit

Although imitation generic drugs occupy a lion’s share of China’s pharmaceutical market, imitation drugmakers saw paltry profit rates of five to ten percent in 2001, much lower than profit margins enjoyed by international drugmakers.

Production of imitation generics is a fast and economical way to introduce foreign-developed drugs into the market after their patents expire. Since the 1950s, among the 3000 drugs marketed in China, more than 99 percent are imitation generics. A recent official survey showed that 97.4 percent of recently launched drugs were of the imitation variety.

Currently, more than 6800 Chinese producers of imitation drugs saw average profit rates of five to ten percent, amounting to only 40 to 60 per cent of the average profit rate enjoyed by international imitation drugmakers.
Singapore Sets up Young Investigators Award to Boost Biomedical Research

Twelve promising scientists are recently given substantial awards as recognition of their research ideas by the National University of Singapore (NUS) and the Biomedical Research Council (BMRC). These scientists...
will each receive research funding of up to S$550,000 (US$297,297) for the next three years so that they can pursue their dreams in achieving a breakthrough in their fields.

The winning biomedical research proposals are selected based on their potential to improve human life and they range from repairing bone injuries to new ways of diagnosing and treating cancer. One of the winners is Dr. Gavin Dawe, a 32-year-old Scot who calls Singapore his home. His work will focus on the potential of using adult stem cells to slow down degeneration of the brain with age.

Dr. Dawe said, “I want to know how stem cells behave in the brain. Once we understand the mechanisms involved, we can find drugs to induce stem cells transplanted from other parts of the patient’s own body to repair or replace lost brain cells.” By working with adult stem cells, the assistant professor from the Department of Pharmacology at NUS can avoid the controversy of using stem cells from embryos.

Another award winner is Dr. Han Mingyong, a senior research fellow at the Institute of Materials Research and Engineering. He aims to throw light on the identification of cancer genes and proteins by using nanotechnology. Dr. Han wants to barcode biological molecules like DNA and proteins with tiny crystals that give off colored light.

He said, “What we can do is to put DNA or protein probes labeled with these crystals onto plastic beads. When these probes recognize certain DNA or protein sequences, they will stick to them. We can get the crystals to give off light of various colours, to tell if certain cancer genes or proteins are present.”

Dr. Han, an assistant professor in the Department of Materials Science at NUS, said that these diagnostic “labs on a bead” are more flexible, faster and cheaper than DNA chips currently in use.

Singapore Turns to Supercomputers to Process Life Science Data

Life science research institutes in Singapore need powerful computers that can sift through huge databases to find potential cures for deadly diseases.

For example, the Institute of Molecular and Cell Biology has commissioned a supercomputer cluster made up of 76 processors to sequence the pufferfish’s genome. An industry expert estimated the cost to be in the range of S$2 million (US$1.1 million).

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The benefits of using such computers are evident. Researchers at pharmaceutical giant GlaxoSmithKline combed through research data and found a promising protein involved in bone formation, cathepsin K, in several weeks. The same work done with traditional laboratory methods would have taken a few years.

The demand for fast supercomputers resulted from the huge amount of data generated. Mr. Jon Simmons, vice-president for life sciences at Oracle Corporation, said, “The volume of life science data is doubling every six months. This data avalanche has created an unprecedented demand for information management and analysis.

In fact, some firms are approaching petabyte-sized databases.” He is referring to databases the size of a million gigabytes.

Other computer companies are responding to this surge in data by developing reliable databases, larger memory storage and faster computers.

Mr. Dennis Ang, head of business development for the life sciences at Compaq Computer Asia in Singapore, said, “Compaq has adopted other strategies to increase processing power.

One way is to cluster several computers to let them work on the problem at the same time. Another way is to use ‘grid computing’, where several high-performance computer systems are linked through the Internet.”

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Neuroscience Symposium in Singapore

Two of Singapore’s institutions, the National Neuroscience Institute (NNI) and the National University of Singapore (NUS), are jointly organizing the first NNI-NUS Neuroscience Symposium to be held from 13–16 March at the Tan Tock Seng Hospital in Singapore.

The 4-day event is composed of a public forum, a scientific forum and a clinical forum. The public forum is aimed at promoting basic neuroscience research as a fascinating and creative field for multidisciplinary collaborations and learning. Internationally renowned scientists have been invited to speak on challenging scientific discoveries, in order to inspire students from the universities, polytechnics and junior colleges to take an interest in this field of study.

The scientific forum is a platform for leading international and local neuroscientists to present their cutting-edge research. The forum is divided into four major themes: ion channel/receptor physiology, development, degeneration and regeneration, neurogenetics, and cognition and pain. The clinical forum is aimed at highlighting the contribution of basic research towards the diagnosis and treatment of neurological disorders.

Review Panel Calls for Overhaul to Singapore’s Medical Education System

A five-member panel, led by Lord Ronald Oxburgh of Cambridge University, did an eight-month study of the medical education system in Singapore, looking at the needs of the healthcare sector and its aspirations in life sciences.

The 41-page report recommended that to reach the goal of becoming a world-class health-care and biomedical hub, a radical overhaul of the current medical education system is needed.

The panel noted that there were 5577 doctors registered in 2000, giving a doctor and patient ratio of 1:720, and declared this inadequate given Singapore’s growing, greying population. To meet the needs of the population, the panel felt that there should be 350 medical graduates produced annually over the next 10 years.

In the long term, the panel favored a second medical school other than the only existing medical school at the National University of Singapore (NUS). To be ready around 2015, the new medical school should produce 100 more medical graduates each year.

Meanwhile, the panel recommended that NUS should increase its intake by 20 to 250. It should also implement “a second stream” to take in suitable non-medical graduates who want to become doctors.

About 40 to 50 of such graduates can be accepted initially, and their clinical training can be done at the Singapore General Hospital. The panel said that having more doctors would help ease the burden of junior doctors at public hospitals, who are reported to be overworked and disillusioned.

It also noted that the over-emphasis on health-care provision and teaching was making it hard to attract international scientists and sustain the interest of local scientists.

There are only a handful of clinicians engaged in full-time research work. Given Singapore’s size, there should be 200 full-time physician scientists or biomedical scientists.

While money should be pumped into research projects, funding should be based on merit.

In addition, researchers should have 75 percent of their time set aside for research, and be paid competitive wages. “Without such people,” the panel concluded, “Singapore stands no chance of becoming the biomedical hub for the region.”
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International Firms Invest in Taiwan’s Biotech Market

Leading international corporations, including Sun Microsystems, Oracle, InforMax and Agnitio have invested heavily to explore Taiwan’s biotechnology market, according to a recent report by Taiwan’s Industrial Development Bureau (IDB). The IDB reported that with Sun’s hardware systems, Oracle’s databank, InforMax’s system integration service and Agnito’s solutions for biotechnology research, the Proof of Concept Center of Bioinformatics has been set up at the incubator center of the Industrial Technology Research Institute (ITRI) in Hsinchu. The center will provide services to research units of the ITRI, National Taiwan University, National Yang Ming University and other medical schools.

The report said that IBM and Compaq are also interested in similar projects and that Compaq has already signed a memorandum with the ITRI.

According to statistics released by the Development Center for Biotechnology recently, the production value of Taiwan’s biotechnology-based industry in 1998 amounted to NT$16.2 billion (US$486 million). It is estimated that by 2006, the production value will have reached NT$90 billion (US$2.7 billion).

While a large share of the biotechnology-based research projects in Taiwan are related to the pharmaceutical sector, the IDB report said that the local industry has also seen the tremendous market potential of the environmental biotechnology sector. Big enterprises in the electronics, energy and other hi-tech sectors have made huge investments in environmental biotechnological research, especially the technologies for treating industrial waste.

The IDB statistics indicate that of the 19 million metric tons of industrial waste produced by local industries in 2001, 162 metric tons needed to be processed using special treatment. The IDB reported that it costs around NT$60,000 (US$1800) to process one metric ton of such industrial waste and that the market value can be as high as NT$90 billion (US$2.7 billion) annually. Currently, most of the industrial waste is shipped to other countries for treatment, but more and more local firms have shown interest in the sector, due mainly to the value of the recycled products.

Thailand Funds Six Genome Projects

Thailand will spend 60 million baht (US$1.386 million) a year for five years on six genome projects aimed at advancing the country’s medical and agricultural development. The projects include studies of dengue fever, malaria, the blood disease thalassaemia and renal tubular acidosis, a disease causing a kidney disorder.

Researchers will explore the genome to find more effective ways to cure patients suffering from these diseases. Dr. Somsak Chunharas, secretary-general of Thai National Health Foundation, said that the diseases are selected as data about their symptoms have been collected for years and this would help researchers. He said that the projects also included agriculture with the focus on improving rice growing and shrimp farming. He also emphasized that the result of the researches should be put into use, not just published in academic journals.

The projects, starting this year and running until 2006, are the result of cooperation between the Thailand Research Fund and the National Center for Genetic Engineering and Biotechnology. Since 1999, the country had invested 150 million baht (US$3.465 million) in a five-year project to study the genome of rice.

Besides the annual 60-million-baht (US$1.386 million) budget, Mahidol University will also spend about 10 million baht (US$231 000) this year on its genome project.
Thailand to Hold Pharmaceutical Conference

The first annual Thai Pharmaceuticals 2002 conference will be held at The Regent Bangkok in Thailand from 28–29 March.

In light of the country’s recent health care reforms, this conference brings together a panel of authoritative figures and key industry players to address regulatory updates, the latest developments and new challenges facing the Thai pharmaceutical industry.

Among the highlights of the conference is the ministerial keynote address by Dr. Surapong Suebhumongkee, deputy minister of public health.

The speech, Government Policies for the National Public Health Reform and Health Development Plan, will touch on government policies for the health reform, progress in restructuring the healthcare system, the country’s national health policies from 2002–2006 and future health development plans.

One of the industry experts to speak at the conference will be Mr. Phornvit Phacharintanakul, managing director of Aventis Pharma (Thailand) Ltd. He will be presenting Market Trends, Opportunities, and New Challenges for Thailand’s Pharmaceutical Market amidst Today’s Changing Environment.

The topics to be discussed include Thailand’s market characteristics, key players, growth potential and market drivers; challenges facing local and MNC pharmaceutical companies; opportunities for foreign investment and cooperation in pharmaceutical licensing, production and joint manufacturing.

Additionally, an interactive roundtable discussion will be held to provide a platform for all participants to engage in discussions with a panel of Thai industry leaders and practitioners.

One of the panelists is Dr. Krisantha Weerasuriya, regional advisor on essential drugs and medicines policy of the World Health Organization (Southeast Asia Region).