



# Chinese medicine goes West

*The search for a source of new wonder drugs*

*By Mark Graham*



FOR THOUSANDS OF YEARS, the Chinese have used soups, pills and lotions extracted from herbs and plants to treat illness and cure disease. Even though the new affluence in China has made Western-style pharmaceuticals eminently affordable, traditional remedies handed down over the generations have maintained their popularity.

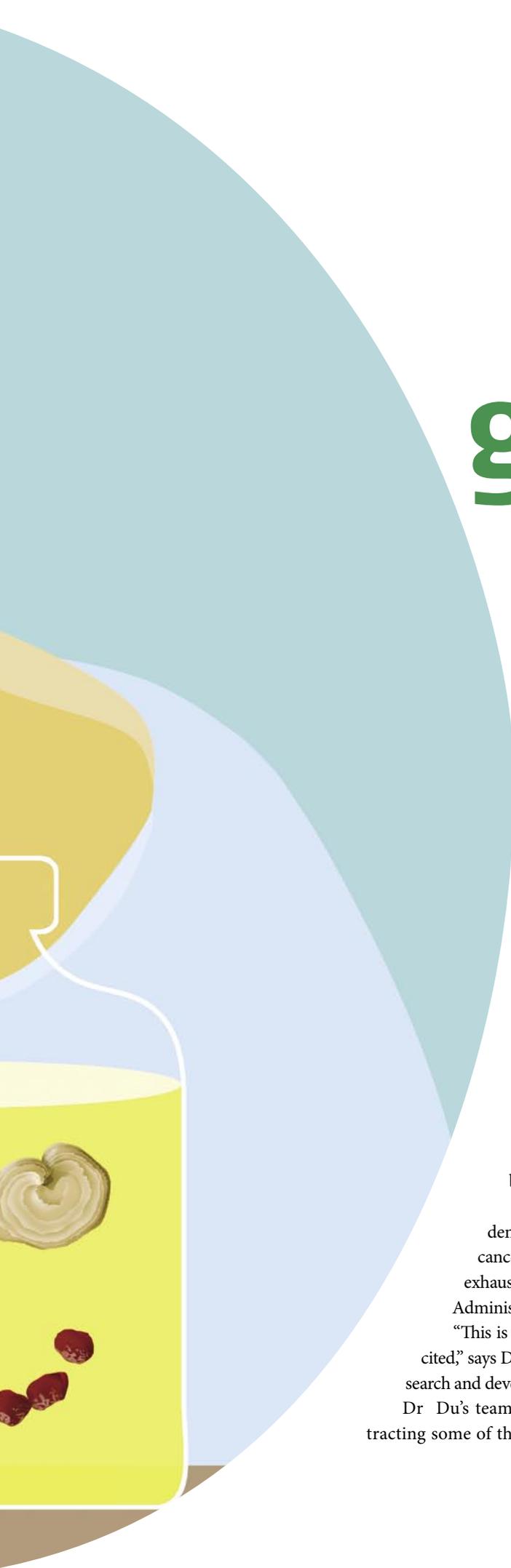
Many of the ancient ways of dealing with medical ailments clearly work well, but until recently there was scant scientific data that would force sceptics to take a hard look at the efficacy of these centuries-old treatments. That is no longer the case.

Hutchison China MediTech Limited (Chi-Med), a company that straddles both the ancient and modern worlds of Chinese medicine, has set out to establish, once and for all, what works and what doesn't, using the precise, thorough and long-term testing that Western-style pharmaceuticals undergo before reaching the market.

To date, the results have been nothing short of sensational, producing solid evidence to show that certain botanical compounds do indeed help in the treatment of cancer and other serious diseases. A number of the drugs are at the final stages of the exhaustive trials demanded by the United States' regulatory body, the Food and Drug Administration (FDA), and could be on the market in just a few years.

"This is pioneering work by any standards, it is inspirational work and we are very excited," says Dr Samantha Du, the China-born, United States-trained scientist in charge of research and development for Chi-Med. "We are beginning to attract a lot of attention."

Dr Du's team works in a state-of-the-art research lab just outside Shanghai and is attracting some of the best talents in the country, ambitious individuals lured by the siren-call



# Tests show that one of the compounds can be

of serious funding, modern working conditions and groundbreaking discoveries. All the work, she stresses, is done in accordance with international standards, using impartial and exhaustive tests. “This is not folklore-based research,” she says emphatically.

The technicians have not yet come up with a cure for cancer, but tests have shown that one compound in particular, known by its code name of HMPL-002, taking the acronym of Hutchison MediPharma Limited, Chi-Med’s wholly owned drug research and development (R&D) subsidiary, can be an enormous help during the chemotherapy and radiotherapy stages of treatment. In tests carried out in both the United States and China, it has been shown to help break down the outer coating of the cancer cells in head, neck and lung cancer, allowing the chemotherapy and radiotherapy to be around 30 per cent more effective. That translates into severely ill patients spending less time undergoing the painful,

traumatic and debilitating treatments.

In China, the tests on HMPL-002 are moving towards phase three, putting them perhaps only a few years away from going onto the market, while another compound trial, using the code-name HMPL-004, is also proving remarkably effective. Tests on patients in the United States suffering from Crohn’s disease, an inflammation of the digestive tract, are in phase two, while in China, the same drug showed positive results on people suffering from ulcerative colitis and is entering the crucial phase three stage.

In other words, there is real evidence that certain traditional Chinese medicines (TCM) can help cure potentially terminal illnesses. “All our efforts are directed towards discovering and developing innovative therapies for the global market with the initial focus on cancer and auto-immune diseases,” says Dr Du. “We are pursuing this



## HERBAL REMEDIES A BIG HIT IN CHINA

**M**ANY PEOPLE in China do not need the evidence of modern drug trials to convince them of the effectiveness of traditional remedies. Take Ban Lan Gen for example, a herb widely available in China that helps people suffering from colds, viral flu, fever and respiratory tract infections.

Hutchison Baiyunshan, a joint venture with Guangzhou Baiyunshan, a pharmaceutical company listed on the Shenzhen stock exchange, produces the herb in granule form and sells more than 330 million doses a year.

Products derived from the herb were used extensively during the Severe Acute Respiratory Syndrome (SARS) outbreak of early 2003 as a preventative measure. As a result of that exposure, Baiyunshan’s Ban Lan Gen granules became one of the leading herbal brands of its kind in the nation.

Traditionally, herbs needed lengthy preparation by boiling and simmering raw materials according to ancient recipes, with the medicine consumed in the form of soup, or as pellets. Usually each recipe combined several herbal ingredients tailored to the individual patient, with each herb performing a specific role.

Modern factory techniques used by manufacturers such as Hutchison Baiyunshan have speeded up those production and extraction processes, resulting in a new lease of life for the medicines. Increasing worldwide interest in homeopathic and natural medicines has also helped.

Hutchison Baiyunshan’s best-selling products include:

- Fu Fang Dan Shen tablets: More than 1.6 billion doses are sold a year; treatment for chest congestion and angina.
- Kou Yan Qing granules: Annual sales of more than 30 million doses; for the treatment of mouth ulcers and periodontitis.
- Xiao Yan Li Dan tablets: 200 million doses sold a year; promotes the functions of the liver and gall bladder.



# a great help during chemotherapy.

mission with passion, imagination, creativity and dedication.”

The seeds of the Chi-Med project were sown when CEO Christian Hogg was working for a US multinational in Guangzhou in southern China. It was there that the Scotsman met his future wife, a Frenchwoman working in the cosmetics business, and became intrigued by the potential of the Chinese consumer market, in particular its traditional medicine industry.

His interest in the industry dovetailed with work initiated in 1998 by Hutchison Whampoa China under its Managing Director, Simon To, to explore the potential of TCM.

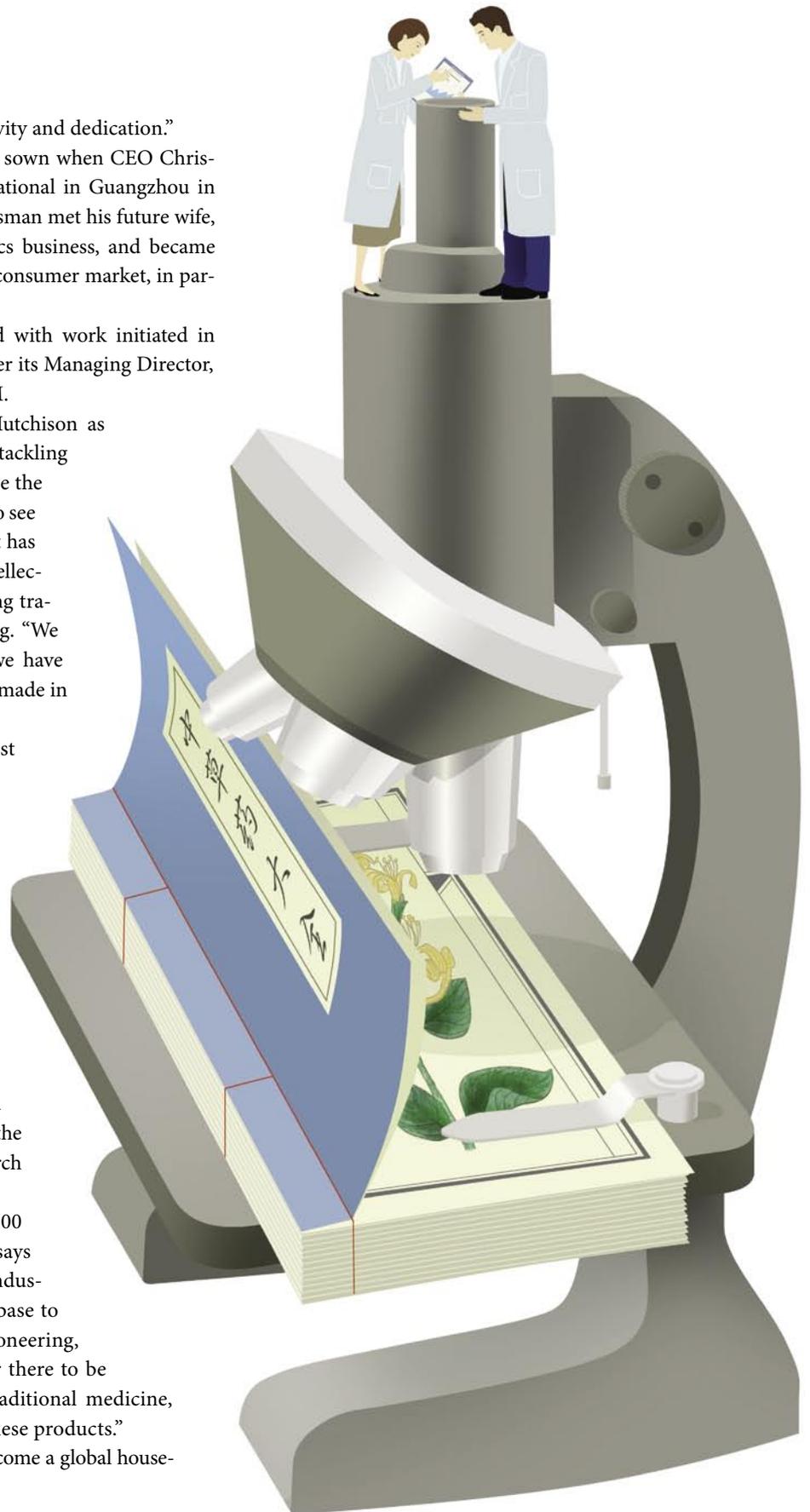
Chi-Med was formed in 2000 with Hutchison as the major shareholder and it was soon tackling the enormous task of helping to modernise the TCM industry and carrying out research to see which compounds were most effective. “It has never been done before. It is a massive intellectual challenge modernising and globalising traditional Chinese medicine,” says Mr Hogg. “We believe there is a big opportunity and we have been encouraged by the progress we have made in the past seven years.”

The fledgling company decided the best way to learn about TCM was from experts on the inside, so it went on a spree of buying existing companies, with the aim of upgrading their production, distribution and marketing facilities to the international standards practised in Hutchison Group companies.

It was decided the headquarters for the China operations would be at one of the newly acquired companies, Hutchison MediPharma Limited in Pudong, Shanghai, which later became the site for a USD30 million world-class research and development laboratory.

“We built our own organisation of 400 medical representatives across China,” says Mr Hogg, 42. “We got a foothold in the industry and it gave the R&D a bit more of a base to start from. If we were going to start pioneering, we had to be in the industry. We felt for there to be a USD15 billion industry in Chinese traditional medicine, there must be some efficacy in some of these products.”

To date, no China medical brand has become a global house-





hold name but the groundbreaking work done at Chi-Med may, ultimately, lead to a pharmaceutical product that is recognised around the world. As and when the drug passes final FDA tests, its usage will be licensed to the major drug companies, with all their formidable marketing and sales skills.

Already there are provisional tie-ups. A deal has been signed with Merck of Germany to collaborate on cancer drug discoveries and Chi-Med has a similar arrangement with Procter & Gamble to work on possible skincare products. In August, Hutchison MediPharma also entered a drug discovery and development agreement with Eli Lilly. "This is a landmark deal for both Hutchison MediPharma and Chi-Med," says Dr Du. "We aim to discover and develop innovative medicines to meet global market needs with big pharma quality. We have built a strong drug discovery and development platform focused on oncology and auto-immune indications in the past few years."

The process of doing the research, creating a product, testing it and finally putting it on sale, is a slow one. The clinical trials are by nature extremely complex but, put in simple terms, the onus is on the researchers to prove that the drugs are not dangerous, and really do help cure people. The tests are in three different phases, and the closer the trials move successfully towards the end of the third stage, the more likely it is that permission will be given by influential bodies such as the US FDA for the drug to go on the open market.

"You can get to the end of phase two of tests and still be five years away from market," explains Mr Hogg. "While the ultimate objective is to get new drugs to market, the day-to-day focus is about progressing candidates through the pre-clinical and clinical phases where great intellectual property-driven value can be created in the short term."

It is the research though, that is generating the real buzz, particularly as the words cancer and cure have been linked together. The testing procedure was given an extra fillip when the FDA ruled that existing evidence of a compound's

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## HOW THE WEST WAS WON

**P**IONEERING comes with potential pitfalls, as Chi-Med discovered with its initial attempts to make TCM user-friendly for Western customers. The Sen chain in London is now a thriving business, but it took time to get the formula just right, ensuring that customers felt comfortable and relaxed in the stores.

While it succeeded in presenting the modern face of Chinese medicine, the initial Sen store proved to be over-designed, to the extent that casual customers were reluctant to pop their heads around the door.

The decision was taken to go back to basics. The flagship outlet was given a more welcoming look so customers could saunter in and browse, perhaps opting for a treatment from the in-house doctors, seek advice from staff on appropriate pills and lotions or have a foot massage.

Business boomed. It proved to be a question of presentation, pitching the products in the right way to the appropriate market. "It has gone from strength to strength," says Chi-Med CEO Christian Hogg. "We put in a seating area with nice red carpets and lovely leather chairs and did a much better job of merchandising the products.

"Now we have expanded from 43 products to 250 in body care, bath and beauty skincare; all very high-end products. We offer acupuncture, foot reflexology and now have five shops."

The success of Sen confirms that there is a huge potential market in the Western world for traditional Chinese medicines.

Sen now has outlets in prestigious London stores such as Harvey Nichols, reaching customers from all over the world, and a further seven shops in the British capital are scheduled to open before the end of next year. Also on the drawing board is a plan to offer the Sen beauty and skin products through the A S Watson-owned Marionnaud chain, which has over 1,200 stores in Europe.

"We thought Western consumers were increasingly interested in complementary and alternative medicines, especially herbal medicines, and we felt that TCM represented the biggest pool of knowledge in botanical medicines," says Mr Hogg. "We felt if we packaged it right, Western consumers would go for it. You have to understand the customer."



safety would help it to breeze through the first series of trials. That was music to the ears of scientists, who could confidently point to the substances being safely in use for hundreds, even thousands of years in China.

Paradoxically, or perhaps appropriately, the scientist heading up the project did not originally have a particular interest in TCM. Dr Du grew up in China where traditional remedies for coughs and colds, cuts and bruises were prescribed but during her professional life in the United States the focus was purely on Western-style pharmaceutical remedies.

When Chi-Med first came calling, she was only mildly interested. Over time, it became clear that this was a unique opportunity, heading up a well-funded project that could even become a history-making one and she moved her home and family to Shanghai.

Once there, Dr Du, 42, realised the scale of the task ahead. The scientist scoured the country for the brightest and the best,

determined to assemble a team capable of working to demanding, American levels of professionalism. It proved to be a tough task.

"After six months travelling around China, I realised that research and development was at an early stage," she recalls.

"It was impossible to set up any operation with global ambition. I proposed that we build the R&D facility and now we have global quality and are the best in China.

"We have 66 different patents and eight discovery programmes at different stages and two clinical trials in the United States. We have a technical platform that is first class in the world, not just in China, and have gone from zero to 150 staff."

The large capital investment and diligent professionalism is clearly beginning to pay off. All the tests so far indicate that tens of millions of people suffering from serious, life-threatening illnesses may be helped on the road to recovery through the medium of TCM. 



# This is not folklore-based research.