Biotech's Chinese Connection

Hong Kong—The international press has been so absorbed with stories of scientists from the former Soviet Union being courted by Western governments and companies that it has missed something of a similar trend being played out in Asia. In contrast to its neighbor, China has a booming economy, but an open-door policy is allowing an increasing number of its scientists to establish foreign connections. To capitalize on the trend, Hong Kong last month opened the Hong Kong Institute of Biotechnology (HKIB), a nonprofit R&D center. By combining Chinese expertise in medicinal compounds and cell culturing with Western technical and marketing skills, the institute hopes to develop products that could be licensed to Hong Kong or Western firms.

The official opening of the HKIB coincided with its move into a new facility at Hong Kong's Chinese University. But well before then, in temporary quarters on the Chinese University campus, it was already screening traditional Chinese medicines in search of compounds that could be valuable as medicines or food additives. The institute is also developing experimental cell lines and making genetically engineered versions of promising compounds, taking advantage of the cell-culturing and cloning skills that associate director Lee Siu Leung says are highly developed on the mainland. Already, say institute officials, its first joint venture, with the Palo Alto pharmaceutical company Syntex, has yielded some early leads in the search for new anti-inflammatory drugs, compounds that affect heart and nerve-cell activity, and cancer therapies.

The HKIB was the brainchild of a trio consisting of Charles Kao, vice chancellor of the Chinese University and the institute's acting director; C.N. Yang, the Nobel Prize–winning physicist at the State University of New York at Stony Brook; and Dominic Man-Kit Lam of the Baylor College of Medicine, who served as HKIB's founding director. Initial funding came in a HK $170 million (U.S. $22 million) grant from the Royal Hong Kong Jockey Club, the territory's largest charity, which receives a percentage of all horse-racing bets placed by Hong Kong's avid gamblers.

Helping to tie the China connection was Lee, a Purdue-trained biologist. Lee made his first contacts on the mainland in 1979, when he toured 10 biotechnology facilities in China. He later set up a series of scholarly exchanges between the United States and China, and by the time he returned to Hong Kong in 1989 to help set up the HKIB, he had developed a network of contacts in Chinese science. Once specific projects were under way at the institute, Lee returned to China to recruit researchers.

He has had little trouble persuading people to come to Hong Kong on 1- or 2-year assignments—and mainlanders are willing to work for smaller salaries than their Hong Kong or overseas counterparts would accept. Last year the Chinese government gave its blessing to Chinese scientists' efforts to market their expertise abroad. What's more, as Lee explains, "For the Chinese, working in Hong Kong is a way to get a taste of the West without having to deal with the culture shock they experience when they visit Europe or the United States." The HKIB's full-time staff of 17 now includes three researchers from the Shanghai Institute of Cell Biology.

The Shanghai contingent is already involved in one of the institute's projects, an effort to transfer human genes into mouse fibroblasts to create cell lines for research on the molecular mechanisms of learning and memory. Other Chinese researchers, based in Shanghai at the Shanghai branch of the Chinese Academy of Sciences, are taking part in HKIB's joint venture with Syntex, which was signed last April. The mainland researchers extract candidate medicinal compounds from plants and microorganisms. In Hong Kong, the compounds are tested for their effects on neurotransmitter receptors, while Syntex scientists in Palo Alto study how the same compounds affect enzyme activity and whole cells.

That's just the beginning, if Lee and his colleagues have their way. The HKIB has recently started a third project, to design bacteria that can break down textile dyes—a major source of water pollution in Hong Kong. As the list of projects gets longer, the institute may grow to as many as 100 scientists, including additional recruits from China. With a little help from its mainland neighbor, Hong Kong may find a place on the biotechnology map of the Pacific Rim. ■ **GREGOR HODGSON**

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Bush Tries Trimming R&D Pork

Opening a new front in his battle with Congress over domestic spending, President Bush last week issued a list of 67 items he wants to excise from the 1992 budget—approved by Congress late last year—because he regards them as examples of wasteful "earmarking," a.k.a. porkbarrel politics. Included are several research projects totaling about $4 million, together with research facilities slated to receive about $26 million. All were added by Congress to agencies' budgets.

The White House staff announced that these proposed "line-item rescissions" are "the first of a series" of cutbacks the president will send Congress in the coming months. They will be proposed one at a time as "special messages" requiring individual action, a procedure designed to embarrass the projects' congressional sponsors.

How were the first 67 items selected from the hundreds of special earmarks that get approved each year? According to the Office of Management and Budget, these few were singled out because they had already been identified as excess baggage when the Administration prepared its 1993 budget request. The White House says that all had the following faults: "They were not selected on a merit or peer-reviewed basis, are not nationally significant, and would not have qualified for federal funding in a traditional competitive process." Targets in the R&D category include:

- USDA "special research grants" on Appalachian hardwoods, asparagus and celery molds in Michigan, Vidalia onions and urban pests in Georgia, small fruits and filberts in Oregon, orchards in Vermont, swine in Minnesota, seedless grapes in Arkansas, and prickly pear cactus in Texas, among others.
- A $3 million center of excellence in poultry research at the University of Arkansas in Fayetteville.
- A $20 million research and training facility in Bay City, Michigan, connected with Environmental Protection Agency programs.
- A $3 million NASA-funded earth observation data facility proposed for the Consortium for International Earth Science Network in Saginaw, Michigan.

Many of these targets are in Michigan, home of two influential Democrats, Representatives Robert Traxler, chairman of the appropriations subcommittee that handles budgets of several science agencies, and John Dingell, chairman of the energy and commerce committee. But J. Patrick Jordan, chief of the Cooperative State Research Service, insists that the pain has been spread evenly across all boundaries, without regard to geography or politics. ■ **ELIOT MARSHALL**