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## Entrepreneur's Rival in China: The State

By **DAVID BARBOZA**

SHANGHAI — It was the kind of entrepreneurial breakthrough that China counts on to make it a global leader in innovation.

Cathay Industrial Biotech, a private company here, developed a way to ferment hydrocarbons in industrial vats and turn them into advanced nylon ingredients for use in lubricants, diabetes drugs and other 21st-century marvels.

The patents Cathay won prompted Dupont, a leading global producer of nylon, to become one of Cathay's biggest customers. And the \$120 million that Goldman Sachs and other backers have pumped into Cathay in recent years primed investors in China and abroad to eagerly await a public stock offering that had been planned for earlier this year.

They're still waiting.

According to Cathay, a factory manager stole its secrets and started a rival company that has begun selling a suspiciously similar ingredient, undermining Cathay's profits. Instead of planning to go public, Cathay is now struggling to stay in business.

In this counterfeit-friendly nation, employees run off with manufacturing designs almost daily. But according to Cathay, this was copying with a special twist: the new competitor, Hilead Biotech, is backed by the Chinese government.

Court documents show that Hilead was set up with the help of the state-run Chinese Academy of Sciences. And because the project fit national and local government policy goals, Hilead received a \$300 million loan from the national government's China Development Bank. The loan came after the company won the approval of the party secretary of Shandong Province, one of the country's highest-ranking public officials.

"We created a great product and they stole it," Liu Xiucui, Cathay's 54-year-old founder and chief executive, said in an interview in his office.

In a lawsuit, Cathay has accused Hilead of patent infringement and theft of trade secrets. Hilead has countersued, claiming Cathay stole patents from the Chinese Academy. The government has taken Hilead's side, stripping Cathay of one of its top patents.

Although the specifics of the case are in dispute, the broad outline follows what some economists and academics consider a disturbing pattern.

After more than a decade in which private companies have been the prime engine of China's economic miracle, the Chinese government is eager to control more of that wealth — even if that means running roughshod over private companies.

Chen Zhiwu, a professor of finance at Yale University and a harsh critic of the state's dominant role in the economy, says the Chinese government is smothering the private sector. "When the government is involved in business, it's hard for private companies to compete," Professor Chen said.

The usurping of private enterprise has become so evident that the Chinese have given it a nickname: guojin mintui. That roughly translates as "while the state advances, the privates retreat."

Some prominent Chinese economists are warning that the potentially corrosive effects of an approach that favors government companies at the expense of the private sector could eventually stifle innovation, saying it could stunt China's long-term growth and quash the rising aspirations of the nation's 1.3 billion people.

"If China doesn't deal with this problem and strengthen the private sector, this country's growth is not sustainable," said Xu Chenggang, a professor of economics at the University of Hong Kong.

Hilead executives declined to comment for this article. A Chinese Academy of Sciences spokesman would say only that the lawsuit against Cathay was meant to protect his organization's "rights and benefits."

What is clear is that Hilead, with all its government support, has been able to slash prices. Cathay has had no choice but to do likewise, costing the company as much as \$10 million in profit over the last year, a drop of at least 20 percent.

Adding to Cathay's challenges, Beijing officials recently declared its particular type of nylon production a matter of "national security" — a designation that gives state-backed companies like Hilead even more protection and privileges and makes competing with them all the more difficult.

There are a variety of reasons the Chinese government is seeking an enlarged role in the economy — including fears that wealthy entrepreneurs could begin to challenge the Communist Party. There is also an ingrained belief among leaders that the state is better at driving growth and redistributing wealth. And

so state companies have been given the green light to expand their interests and move into anything that promises high returns — whether real estate, finance, technology or other fields.

Private entrepreneurs have long complained about the way state banks discriminate against them, forcing them to turn to loan sharks and pay a higher cost for capital. They also say they are squeezed by state corporations that have the power to overcharge for basic services like power, transportation and telecommunications.

“If the government doesn’t interfere, these entrepreneurs would be productive,” said Zhang Weiyong, a professor of economics at Peking University, one of the country’s most prestigious schools.

### **A Promising Start**

Mr. Liu, Cathay’s chief executive, has not always been at odds with the Chinese establishment. For years, in fact, he seemed to be a favorite son.

Early in his career he was an avatar of the plan envisioned by China’s leader in the early 1980s, Deng Xiaoping, to send bright Chinese students overseas in hopes of their returning to help the motherland close the gap with the West in science and technology.

After earning a Ph.D. in chemistry from the University of Wisconsin at Milwaukee in 1989, Mr. Liu did come back to China. He collaborated with a series of state institutions, including the Chinese Academy of Sciences. His achievements included helping the government support the country’s fledgling vitamin C industry — an effort so effective that today about 80 percent of the world’s industrially produced vitamin C is made in China.

In 1997, when Mr. Liu founded Cathay with the promise to create a homegrown biotechnology firm, it was showered with government tax breaks and other incentives.

But today, Mr. Liu says the state has become his opponent.

Like many Chinese of his generation, Mr. Liu has known a lifetime of shifting government policies. Born in 1957 in an impoverished village in eastern China’s Anhui Province, he grew up during the Cultural Revolution, a period of social and political chaos that began in 1966 and lasted a decade, in which public officials were paraded through the streets wearing dunce caps, and students were encouraged to lead “struggle sessions” against their teachers.

After Mr. Liu’s father was jailed for supposed political crimes, the family struggled to eat. A strong-willed mother kept the family together, however, and made education a priority.

Mr. Liu completed high school. But with colleges shuttered during the Cultural Revolution, he followed

the prescribed path of so many other graduates in his region: growing rice and wheat and helping organize peasants into farming and construction crews.

Then China abruptly reversed course, announcing in 1977 that it would reopen colleges and reinstitute the national college entrance examination. Mr. Liu's score was high enough to win admission to one of the country's elite schools, the University of Science and Technology of China.

After earning a degree in chemistry and doing advanced work at the Chinese Academy of Sciences, Mr. Liu headed to Milwaukee.

"He was simply the best graduate student I ever had," said Jim Otvos, Mr. Liu's adviser at the University of Wisconsin. "He got his Ph.D. in three years. It usually takes five."

Then came postdoctoral research at Yale and Columbia, which led to a position as a senior research scientist at Sandoz Pharmaceuticals, where Mr. Liu worked on drug development.

### **A Return to China**

In 1994, he returned to China with a simple idea: to find drugs that had gone off patent in the United States or Europe, replicate their properties through reverse engineering and then introduce them to the Chinese market, which was then suffering from a shortage of modern medicines.

Within a year, he raised \$4 million and formed a partnership with Peking University and the Stone Group, one of China's first private companies and an early investor in science and technology start-ups.

"I admire Liu's way of doing things," said Duan Yongji, chief executive at the Stone Group and a member of Cathay's board. "He's extremely tenacious. If I left the office at 12 a.m., he'd leave at 1 a.m."

The result was a series of mostly successful drug deals. With the small fortune he made, he founded Cathay Biotech in 1997.

The company's initial success came in refining a manufacturing process that used microbes to turn a type of wax into diacid, a chemical building block of nylon.

Many companies around the world had discovered various ways to use microbes to produce diacids through fermentation. But most abandoned the work as too costly and complex. When Cathay refined its process, Dupont decided to work with the Chinese company, according to Dupont executives.

By 2003, Cathay says, it was the only company in the world making large quantities of polymer-grade diacids through biofermentation. Outsiders support that claim.

"A lot of work was done on this in the '80s and '90s, but Cathay improved on it," said E. William Radany,

president of Verdezyne, a California company that is producing a similar product.

Today, Cathay produces 13,000 metric tons of diacid a year — about half the world's industrial output.

Along the way, Mr. Liu acknowledges, he probably made some enemies in China. Despite his years of collaborating with the government, Mr. Liu began making public accusations of corruption and scientific fraud in state-run industries and of government meddling in private companies.

In a 2010 article in a Chinese magazine called *Entrepreneur*, for example, he wrote, "The government controls the sources of production cost, adding unnecessary burdens to private companies, like electricity, waste water treatment, etc."

He also had occasional run-ins with people at the powerful Chinese Academy of Sciences, one of whose vice presidents until a few weeks ago was Jiang Mianheng, the son of the former Chinese President Jiang Zemin.

Beyond Mr. Liu's impolitic complaining, legal experts say, his biggest mistake may have been failing to carefully protect his technology. Although Mr. Liu says he knew how common it was for factory bosses to make off with trade secrets, he let a team of crucial employees depart a few years ago — and simply ignored the exodus.

### **Government Backing**

In its lawsuit, Cathay contends that the theft of its manufacturing designs took place in 2008. That was after Wang Zhizhou, deputy general manager at the company's diacid manufacturing plant, in Shandong Province, decided to resign.

Mr. Wang could not be reached for comment, despite repeated efforts. But former colleagues say he had complained about being passed over for the top position at the Shandong plant and was dissatisfied with his \$1,500-a-month salary — about half what he could earn elsewhere, several experts said.

Cathay's lawyers say Mr. Wang left with six other workers and formed Hilead, along with Chen Yuantong, a retired scientist from the Chinese Academy of Sciences.

In an interview, Mr. Chen, now Hilead's chief scientist, denied that Mr. Wang's departure from Cathay involved any theft of trade secrets. He said Cathay should have tried harder to retain Mr. Wang. "Who will leave a company if the company doesn't have a management problem or pays well?" Mr. Chen said.

A co-founder and the initial financial backer of Hilead was Cao Wubo, a wealthy entrepreneur who had strong ties to the Shandong provincial government and had already turned a military pharmaceutical maker into a Nasdaq-listed company. According to court papers, Mr. Cao said in early 2009 that Hilead

had promising technology and deserved strong government support.

He got it. In May 2009, the party secretary in Shandong — one of the nation's most powerful leaders — helped put the project on the fast track.

And two months later, in July 2009, Mr. Cao met with a dozen officials from the city of Laiyang, which had built a high-tech industrial park in Shandong Province.

A planning document from that meeting said the local government would seek more than \$150 million in financing for Hilead from a provincial infrastructure fund as well as local government banks.

It is unclear whether the government at this point knew about Cathay's patent or that Mr. Wang had come from Cathay. Analysts say that rather than being a target of government animus, Cathay may have simply been an unintended victim — collateral damage — of the Chinese government's drive to bolster state partners like Hilead.

With the Academy of Sciences blessing Hilead, the China Development Bank agreed in 2009 to make a \$300 million loan to the company. In 2010, Hilead opened its huge biotechnology plant, and began marketing its own diacid for use in making specialty nylons.

Hilead's path hasn't been without potholes. The company was implicated when Mr. Cao's other business, Jiangbo, was delisted by Nasdaq in the United States this year after the Securities and Exchange Commission issued a subpoena seeking financial documents and halted trading in the stock.

In a class-action lawsuit filed in Florida against Jiangbo, lawyers allege that the company failed to disclose a \$25 million payment to Hilead. The suit accuses Jiangbo of issuing "materially false and misleading" financial statements.

In its own business, though, Hilead appears to be on a roll. Shortly after the factory opened in 2010, Hilead quickly began offering its products to big purchasers of nylon components, including Dupont, and promised to slash prices to compete with the market leader, Cathay, according to court documents. Hilead quickly acquired an estimated 10 percent share of the global market.

Only after filing his lawsuit earlier this year did Mr. Liu realize the forces he was up against.

Tapping his own government ties in the city of Jining, where his diacid factory is located, Mr. Liu persuaded the local courts to authorize a police inquiry. In September, a court dispatched officers 400 kilometers north to Hilead's factory in Laiyang, to investigate whether the company had copied Cathay's production techniques.

But when the court officers arrived at the factory gate, they were told that Hilead had been designated a

national security interest by the Beijing government. No outsiders could enter the complex. Cowed, the officers drove back to Jining to deliver the bad news to Mr. Liu.

“Personally, I will not give up on this dream,” Mr. Liu said. “I’m Chinese, you know, so the Chinese government should want me to contribute. We’re pioneers. If the Chinese government does not allow me to do this, I will find another place.”

*Gu Huini contributed research.*