

# U.S. Biotech Is Thriving In Japan

Chiron got start by using  
blood test on Emperor Hirohito

By Alex Barnum  
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Talk about an entree to the Japanese market. Most U.S. companies have trouble selling to the masses of Japan, let alone the imperial palace, but the first Japanese customer for Chiron Corp.'s hepatitis C test was the emperor himself.

As Emperor Hirohito lay on his deathbed in the last months of 1988, receiving blood transfusions almost on a daily basis, the imperial court doctors worried that he might become infected with the hepatitis C virus, which had reached epidemic levels in the nation's blood supply.

So the head of the Japanese Red Cross turned to Chiron, the Emeryville-based biotechnology company, and asked if Hirohito's doctors could use a still-experimental test — the only one that could detect the elusive virus — to screen the emperor's blood.

The emperor died in early 1989. But Chiron's test made an indelible impression among officials of Japan's blood banks and diagnostic industry. And Chiron and its marketing partner, Ortho Diagnostics Systems KK, have been treated like royalty ever since.

Today, Chiron's hepatitis C test has sales in Japan of \$60 million a year, equal to sales in the United States even though Japan has half the population. And it has reduced the incidence of hepatitis C from blood transfusions by more than 75 percent.

"It created a lot of visibility for us," says Edward J. Penhoet, chief executive of the Emeryville-based biotechnology company. Adds a Chiron spokesman: "We're probably better known in Japan than in the United States."

Chiron's success in Japan may be exemplary, but it is not unique. At a time when other U.S. industries are struggling to infiltrate Japanese markets, the U.S. biotechnology industry —



BY TOM LEVY/THE CHRONICLE

Chiron scientists (from left) Mike Houghton, Qui-Lim Choo and Amy Weiner with Samurai gear, a gift from Japanese partner Daiichi

armed with only a handful of products — is already making waves on the other side of the Pacific.

And that success is likely to continue. With more than 400 products in development, the United States has a commanding lead in biotechnology. And Japan shows few signs of mastering biotech in the same way it has automobiles and electronics, observers say, despite

the fact that the Japanese government has identified it as an important industrial priority.

The U.S. competitive advantage in biotech, they say, will create a healthy market for U.S. imports for some time to come, building on the historic success of the pharmaceutical industry,

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# WHY U.S. BIOTECH FIRMS ARE THRIVING IN JAPAN

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one of the few remaining U.S. industries that has a trade surplus with Japan.

"It's very important for American competitiveness," says Akihiro Yoshikawa, a health economist at Stanford University.

## Still Some Barriers

To be sure, barriers still exist. There are important differences in how medicine is practiced in the two countries. And most biotech companies have allied with large Japanese chemical and pharmaceutical firms to conduct clinical testing, to get marketing approval and to navigate the country's complex drug marketing system.

But even that is beginning to change. The Ministry of Health is beginning to adopt more of a western approach to drug approval. And more biotech firms, such as Chiron, are collaborating with U.S. multinational drug companies. Some, such as Amgen Inc. of Thousand Oaks, are even setting up their own marketing arms.

"We've made a commitment to go into Japan ourselves," says Lowell Sears, Amgen's chief financial officer. "The system is changing to the point where you can make an entry yourself without a partnership."

Last year, the U.S. biotech industry even scored a victory over the Japanese patent system, long a barrier to U.S. high-tech companies.

## Patent Victory

In the first major biotech patent case in Japan, Genentech Inc. won a ruling from the Osaka District Court that Toyobo Co. had in-

fringed the South San Francisco company's patent on TPA, its flagship heart-attack drug. The victory came despite the opposition of more than 20 Japanese companies.

The court took the unusual step of seizing Toyobo's inventories and blocking Toyobo and marketing partner Daiichi Pharmaceuticals from selling the product, eliminating Genentech's only major competitor in Japan. Japanese sales of TPA in the first six months since

to be infected.

The Japanese Ministry of Health and Welfare has identified hepatitis C as one of the country's top health problems, and observers say it has the kind of awareness in Japan that AIDS has in this country.

Originally known as non-A non-B hepatitis, hepatitis C is spread by blood transfusions, intravenous needles and sexual con-

## *Chiron's hepatitis C test won approval in Japan five months earlier than in the U.S.*

its approval last May were about \$50 million, according to Genentech.

"That was incredibly exciting," says Susan Clymer of Nichibe Bio, a San Francisco consulting firm. "People always suspect the Japanese patent authorities try to protect Japanese companies. This may be an important precedent for foreign biotechnology companies."

But no company has quite matched Chiron's success in Japan, which CEO Penhoet attributes to a simple fact: "We have a blockbuster product that the Japanese really need, and they know they really need it."

## Japanese Epidemic

As in other parts of Asia, hepatitis C has reached epidemic proportions in Japan. The Japanese Red Cross estimates that 4 percent of Japanese, or 5 million people, are infected with the hepatitis C virus. By comparison, only about 1 percent of Americans are believed

tact. It is far more likely than other forms of hepatitis to lead to cirrhosis of the liver and liver cancer, the leading form of cancer in Japan.

Although researchers have suspected the existence of a hepatitis C virus since the early 1970s, its small concentrations in infected blood foiled early attempts to identify it. And to this day, researchers have never actually seen the virus under a microscope.

In an approach that others doubted would ever work, Chiron researchers Michael Houghton, Qui-Lim Choo, George Kuo and Amy Weiner used gene-splicing techniques to copy the virus, and developed a test for it. That feat was hailed in a front page article in the Asahi Shimbun, Japan's largest newspaper, that featured a front-page photo of Chiron Chairman William Rutter.

A year after Chiron's hepatitis C test had been used to screen the emperor's blood, the test easily won Japanese marketing approval

in December 1989, five months before it received approval in the United States.

In the two years that Chiron's hepatitis C test has been on the market in Japan, annual sales have reached \$60 million. The company splits the profits with its marketing partner, Ortho Diagnostics KK.

## Test Lowers Risk

The test has had a dramatic effect in lowering the risks of Japan's blood supply. New infections from blood transfusions have dropped to 40,000 a year from 160,000 a year. And with approval of a more sensitive, second-generation test, that number is expected to drop as low as 10,000.

Given the incidence of hepatitis C in Japan, Chiron's future there seems assured. The company is leading the race to develop a vaccine for the disease. And it has a venture with Daiichi to market DNA probes, a sensitive genetic test that can measure not only the presence of the hepatitis virus but how effective drugs are in treating it.

## United Offering McDonald's Meals

### Chicago

McDonald's Corp., already the biggest fast-food chain on Earth, is expanding its presence in the sky through a link-up with United Airlines.

United, the nation's second-biggest carrier, said yesterday it has begun offering McDonald's cheeseburgers, sausage biscuit sandwiches and cookies on more than 250 flights.

Reuters