



A boy battles dengue fever in the Children's Hospital in Bangkok, Thailand. PHOTO: NY TIMES NEWS SERVICE

There was little that doctors could do for a 3-year-old boy brought to Bangkok's main children's hospital two weeks ago with dengue fever. Like thousands before him, he had reached the most dangerous phase of the disease, dengue shock syndrome, and he died of internal bleeding and organ failure three days after being admitted. Directly across the street, in the US Army's largest overseas medical research laboratory, military scientists are offering hope for future generations: a vaccine. Developed after decades of trying, it is one of two experimental vaccines that experts believe may be commercially available in about 6 years. Dengue, a mosquito-borne illness once known as breakbone fever for its intense joint and muscle pain and crushing headaches, has a relatively low death rate — about 2.5 percent of hospitalized patients, the WHO reports. But because patients can require constant, careful monitoring, it is one of the costliest diseases in tropical countries. Each year, it leads to about 500,000 hospitalizations around the world.

Dengue is seldom seen in the US or Europe, though it is the second-most common cause (after malaria) of feverish symptoms for Western tourists returning from developing countries.

But it is important to the Army: American soldiers have contracted dengue as recently as the 1990s, on missions in Haiti and Somalia. So it is one of the tropical diseases that are the focus of research here at the Armed Forces Research Institute of Medical Sciences, which the Army has operated with the Royal Thai Army for five decades.

The research center, which employs several hundred people, is housed in an unremarkable 1960s building alongside a greasy alley where food vendors hawk fried grasshoppers and freshly mashed papaya salad.

"There's no dengue in Kansas," said Colonel James Boles, the commander at the laboratory. "No malaria, either. That's why we are here."

A FORMIDABLE FOE OFF THE BATTLEFIELD

In wars past, disease has often proved a greater foe than opposing armies. During the Anglo-Boer War in South Africa in the late 19th century, more soldiers died of typhoid than in battle. Thousands of cases of hepatitis during the Vietnam War among soldiers spurred Army researchers to help develop two of the vaccines now in use to prevent hepatitis A and B.

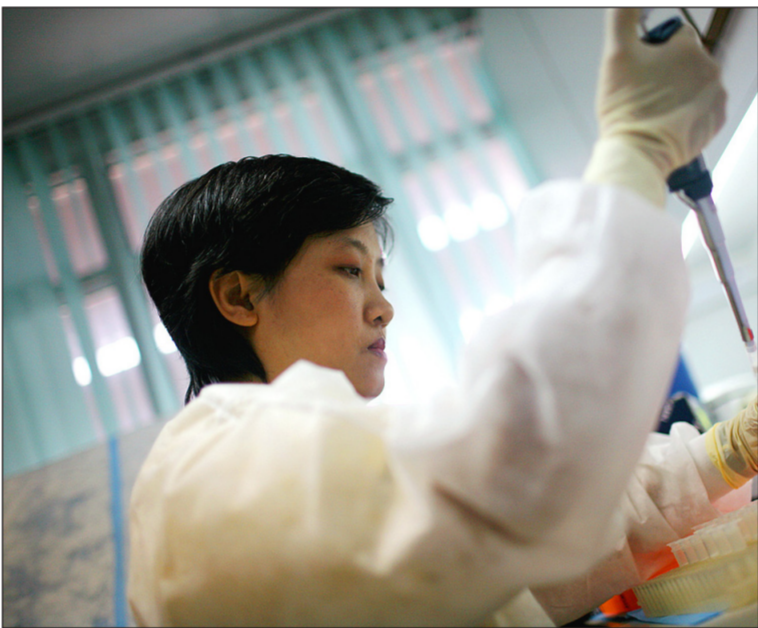
"All we care about is that we get a vaccine that protects soldiers," said Lieutenant Colonel Stephen Thomas, a medical doctor who is director of dengue vaccine development in the Bangkok laboratory. "Fortunately, a lot of our concerns are also global health concerns."

For many years, the leading drugs used to treat malaria were developed by the Army. Today, research on tropical diseases is spread across a broader constellation; in the hunt for a dengue vaccine, money and research have come from the Thai government, nonprofit organizations like the Bill and Melinda Gates Foundation, and drug companies like GlaxoSmithKline, which is working with the Army.

The other vaccine at an advanced stage of development is being jointly developed by the French drug company Sanofi-Aventis and a Thai university on the same Bangkok street as the Army lab.

"We're further along with the dengue vaccine than we've ever been," said Duane Gubler, director of the emerging infectious diseases department of the Duke-NUS Graduate Medical School in Singapore. "There's a good possibility that we'll have a vaccine in five to seven years."

The dengue virus is transmitted mainly by a mosquito called *Aedes aegypti*, which survives on human blood. *Aedes* rarely travels more than



At the Armed Forces Research Institute of Medical Sciences in Bangkok, a Thai researcher prepares a specimen, last month. PHOTO: NY TIMES NEWS SERVICE

US Army wages war on dengue

In the US Army's largest overseas medical research laboratory, in Bangkok, military scientists are offering hope for a vaccine against dengue fever

BY THOMAS FULLER
NY TIMES NEWS SERVICE, BANGKOK, THAILAND

Ten years ago, he was one of Japan's richest and most flamboyant characters, a celebrated pop producer who once boasted that he had lost track of how much money he had made.

But Tetsuya Komuro's fall from grace was complete Tuesday when he was arrested on suspicion of fraud, accused of swindling an investor out of US\$5 million, by selling him rights to music he did not own.

Television footage showed investigators marching into Komuro's luxury flat in Tokyo, while the 49-year-old was shown in Osaka, being driven from a hotel in tears. Police said Komuro had admitted the allegations.

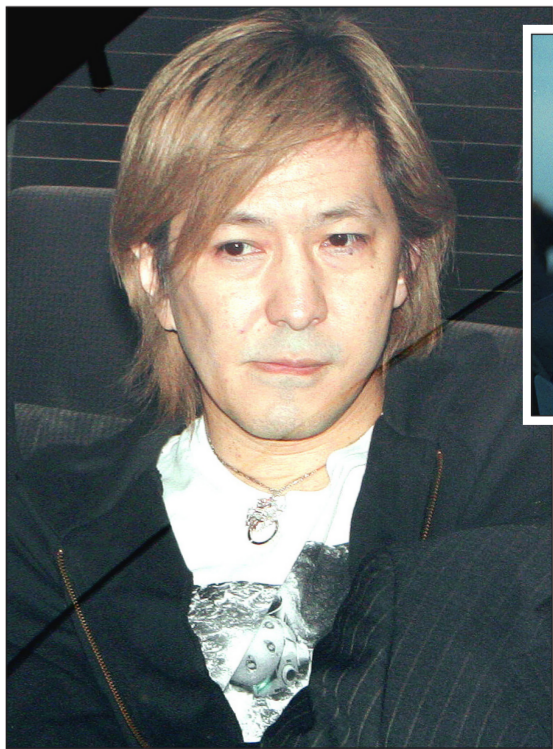
Avex Group Holdings, the label behind Komuro's most successful acts, said it "very much regretted" his arrest. According to media reports, the investor agreed to make a US\$5.5 million down payment for the copyrights to 806 of Komuro's songs, even though the producer knew the rights were not his to sell.

Komuro's knack of spotting budding pop talent generated more than 170 million CD sales and made him one of Japan's richest men in the mid-1990s. The peroxide blond Komuro was never given to moderation — he drove Ferraris and owned villas in Hawaii, Bali and Malibu, and once boasted to a tabloid newspaper: "As my bankbook only shows up to 10 digits, I've lost track of my money."

At the height of his wealth he spent US\$202,000 reserving the entire first-class cabin on a flight from Tokyo to Los Angeles.

While his acts sold millions of CDs in Japan, Hong Kong and Taiwan, they were practically unheard of elsewhere, though he did co-write *Together Now*, the theme tune for the France 1998 World Cup, with Jean-Michel Jarre.

Komuro, who launched his career in 1984 as a keyboard player with the group TM Network, is understood to have fallen into debt after a series of failed overseas business deals and an expensive divorce.



Left: Japanese pop music producer and singer Tetsuya Komuro enters the Osaka prosecution office to be arrested on suspicion of fraud in Osaka, Japan on Tuesday. PHOTOS: AFP

[SOCIETY]

J-pop king held for fraud

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