



COVID-19 Pandemic

# Thailand Starts Human Trials of Homegrown COVID-19 Vaccines

By Zsombor Peter  
June 19, 2021 04:38 AM



A health worker administers a dose of the Sinovac COVID-19 vaccine to a woman at Thai-Japan Bangkok Youth Center in Bangkok, Thailand, June 14, 2021.

BANGKOK – Thailand has begun human trials with two of four homegrown vaccine candidates local scientists are developing against COVID-19, as the country scrambles to secure shots from abroad amid its worst wave of infections since the pandemic began.

The homegrown vaccines will not be ready for mass production in time to help Thailand fight off the latest wave. Officials and developers are hoping, though, that they will arrive in time to give Thailand – and maybe its neighbors – booster shots tailored to the main variants of the novel coronavirus by next year.

“The vaccine will be against the variants like the South African variant and the Indian variant and others, so that will be our strategy,” said Kiat Ruxrungtham, who is spearheading development of one of the most anticipated candidates at Chulalongkorn University’s Vaccine Research Center in Bangkok.

## A shot in the arm

For now, Thailand is relying on a mix of vaccines from foreign drugmakers to reach herd immunity by the end of the year.

Having kept infection rates low through 2020 with tight border controls and strict social distancing, Thailand secured relatively few doses early in the pandemic. It bought a few million shots from China’s Sinovac for the most vulnerable and struck a deal with AstraZeneca that lets local drugmaker SiamBioscience manufacture its COVID-19 vaccine in the country.

Then came the third wave in April, sending death and infection rates to record highs, and authorities on a vaccine shopping spree, striking deals with Pfizer, Moderna, Johnson & Johnson and Sinopharm. The government says it has now locked in 105.5 million doses, enough to cover over 70% of Thailand’s 69 million people, and is looking for more.

US Averaging 107,000 New COVID-19 Cases a Day



For Fourth Week, French Protest Health Pass, Vaccine Mandate



Australia Battles Surge In COVID-19 Infections



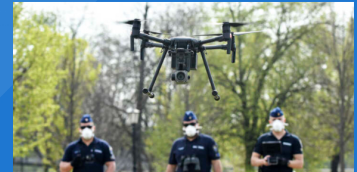
Australia Records Worst Day of COVID-19 Infections



White House: 50% of All Americans Are Fully Vaccinated



## SPECIAL SECTION



### How the Pandemic is Reshaping State Power

Thai authorities and developers, though, still see a crucial role for the homegrown vaccines.

Tanarak Plipat, deputy director-general of disease control at the Public Health Ministry, said the new vaccines will help keep Thailand safe once the effects of the first full round of doses start wearing off.

“There [is] growing evidence that very soon we may need the booster dose of the vaccine, I mean the third or the fourth or the fifth. We don’t exactly know about that, and we don’t know how frequent we need to boost the antibodies,” he said.

“So in the long run, I think we are going to need a constant supply,” he said.

He said some of the vaccines Thailand is developing may also prove better at fending off infection from some of the more contagious variants sweeping the globe. The alpha variant, first identified in Britain, is already the dominant strain in Thailand. The Health Ministry’s medical sciences department recently warned that the even more contagious delta variant, first found in India, could soon take over.

### **Self-reliance**

Tanarak said the difficulties most countries have had securing not just vaccines, but masks and ventilators as well, have taught Thailand that it still needs to try to rely on itself for what it needs when it needs it.

“To secure [the] health for our people, we need to be able to rely on ourselves in the time of [the] pandemic,” he said. “No matter how much money you have, we are not going to get the most important supplies of medical device or medicine or vaccines if you are not being able to produce it yourself.”

If all goes well, he said Thai laboratories could be producing tens of millions of doses of the country’s own COVID-19 vaccines by around the middle of next year.

The Government Pharmaceutical Organization, a state drugmaker, started Phase 1 human trials in March of its candidate using an inactive Newcastle disease virus, which mainly infects birds, and has moved on to Phase 2 with more volunteers.

Chulalongkorn’s Vaccine Research Center started Phase 1 human trials on Monday with what could be the first vaccine against COVID-19 developed in Southeast Asia using messenger RNA, the same technique pioneered by U.S. drugmakers Pfizer and Moderna.

BioNet-Asia, an established local drugmaker, and Baiya Phytopharm, a startup, have yet to begin human trials with their own vaccine candidates.

The Vaccine Research Center had been hoping to start human trials in late 2020. Instead, it says, it had to wait for slots to open at the U.S. labs making their vaccine for the trials, and that government funding — while generous — took longer to arrive than expected.

With human trials of their first-generation vaccine now under way, Kiat and his team are already making plans to do the same in a few months with a second-generation candidate targeting the virus’s variants, a relatively simpler feat with the mRNA technique than with others.

“The same technology, the same formulation, you just change the [gene] sequence,” he said. “If you have more data [from] the first generation, you can use that data to support your second generation. So, second generation we don’t have to [try] too many doses because we learn from the first generation what dose will be the best.”

## In the neighborhood

If and when approved, Kiat said BioNet-Asia was lined up to start making 50 million to 80 million shots per year.

Beyond targeting the dominant global variants of the novel coronavirus, mastering the mRNA technique could also let Thailand quickly tailor vaccines to strains, or combinations of strains, specific to the region or the country, said Lorenz von Seidlein, a vaccine expert at Thailand's Mahidol Oxford Tropical Medicine Research Unit.

"So, if there's a combination of strains which is particular to Thailand, there would be probably a niche then for them to say, this new variant — which we don't know yet but may pop up next year — we quickly can address this in combination with the variants that were here before," he said.

The benefits could spill over to Thailand's neighbors, some of which are also battling their worst waves of infection since the start of the pandemic, including Malaysia, Cambodia and Vietnam.

Kiat said a few other Southeast Asian countries have expressed interest in joining late-stage Phase 2 human trials of his team's vaccines if the results from Phase 1 are promising. He said they were especially interested in the second-generation vaccines they are working on and may consider placing orders.

"Our intention is that if we have efficient production and good-quality vaccine ... we should be able to supply neighborhood countries either through COVAX or whatever," he said, referring to an international plan for supplying poorer countries with free or subsidized COVID-19 shots.



Switch to Dark mode

Search VOA News



### UNITED STATES

US Politics  
Immigration  
All About America  
Silicon Valley And  
Technology

### WORLD NEWS

Africa  
The Americas  
East Asia Pacific  
Europe  
Middle East  
South & Central Asia

### SECTIONS

Arts & Culture  
Day In Photos  
Economy & Business  
Extremism Watch  
Press Freedom  
Science & Health  
VOA StudentU  
VOA Connect  
Refugees

### VOICE OF AMERICA

About VOA  
Contact VOA  
Terms Of Use And  
Privacy Notice  
Accessibility  
Get Our Mobile App  
Usage Requests  
VOA Around The  
World  
VOA Pronunciation  
Guide  
Media Relations  
Listen On The Radio  
Satellite Schedule  
Subscribe To Our  
Newsletters  
Editorials

