

for BEIESP said that it published only articles with original content that passed double-blind peer review and plagiarism checks.

The SSRN preprint server, where papers are shared before peer review, had published 16 SCiGen articles, the study found. A spokesperson for SSRN said it was investigating the issue, and noted that it provided “limited screening” for its preprints (with “advanced screening” for health-care manuscripts).

SCiGen papers are extremely rare: Labbé and Cabanac estimate from their screen that they make up a mere 75 papers per million in the computer-science literature. But, says Labbé, the existence of these papers is an indication of the harmful effects of a ‘publish or perish’ culture, and an example of how nonsensical work can still make it into conference proceedings or journals. “You shouldn’t find these things in the literature,” he says.

600 million doses have been delivered. Sinopharm’s vaccine has been approved in many more nations. But WHO emergency approval could now facilitate the further distribution of both vaccines to low-income countries, through the COVID-19 Vaccines Global Access (COVAX) initiative.

A spokesperson for COVAX member Gavi, the Vaccine Alliance, in Geneva, Switzerland, says Gavi welcomes the news of the listing, “as this means the world has yet another safe and effective tool in the fight against this pandemic”.

The WHO’s efficacy estimate of 51% was based on data from late-stage trials among health-care workers in Brazil, posted online as a preprint in April (R. Palacios *et al.* Preprint at SSRN <https://doi.org/ggjr; 2021>). Of the 9,823 participants included in the analysis, 253 had COVID-19 – 85 in the vaccinated group and 168 among those who received the placebo. None of the vaccinated volunteers was hospitalized or died owing to COVID-19. Smaller, late-stage trials in Indonesia and Turkey have shown higher efficacies, of up to 84%.

Preliminary findings from a post-trial study of 2.5 million people in Chile estimated that CoronaVac was 67% effective at preventing COVID-19, and 80% effective at preventing death from the disease, despite the presence of the Alpha (B.1.1.7) and Gamma (P.1) variants of the virus SARS-CoV-2.

Preliminary results detailed at a press conference in Brazil last week, from a trial in the town of Serrana, suggest that CoronaVac could make a significant dent in the pandemic. The Butantan Institute in São Paulo conducted the study, in which almost the entire adult population of Serrana was vaccinated with CoronaVac. The vaccine significantly reduced cases of COVID-19, hospitalizations and deaths.

The fact that CoronaVac can protect an entire town, despite nearly 40% of the population commuting daily to areas where the pandemic was raging, is “remarkable evidence” that this vaccine could be “a game changer in controlling the pandemic”, says trial leader Ricardo Palacios, medical director of clinical research at the Butantan Institute.

Both of the approved Chinese vaccines use established technology based on inactivated virus and can be stored at fridge temperatures, which makes them easy to distribute. But these kinds of COVID-19 vaccine seem to offer less protection against the disease than do mRNA vaccines, such as that made by pharmaceutical company Pfizer in New York City and biotechnology firm BioNTech in Mainz, Germany, and one made by biotech company Moderna in Cambridge, Massachusetts.

Researchers say this could be due to the technology itself. The vaccines use a killed version of SARS-CoV-2 to induce the human body to make antibodies against many regions of the virus. But only some of these antibodies are effective at disabling the virus, says

CHINA’S CORONAVAC JAB SET TO BOOST GLOBAL IMMUNIZATION CAMPAIGN

World Health Organization approves second of two Chinese COVID shots in use in more than 70 nations.

By Smriti Mallapaty

The World Health Organization (WHO) has approved a second Chinese vaccine for emergency use. CoronaVac was found to be 51% effective at preventing COVID-19 in late-stage trials, and researchers say it will be key to curbing the pandemic.

Its overall protection is lower than that provided by seven other vaccines already listed by the WHO. But, importantly, trials suggest that CoronaVac – an inactivated-virus vaccine produced by Beijing-based Sinovac – is 100% effective at preventing severe disease and death.

“CoronaVac will significantly contribute to

the global fight against COVID-19 as a safe and moderately effective SARS-CoV-2 vaccine,” says Murat Akova, a clinical researcher in infectious diseases at Hacettepe University in Ankara.

CoronaVac’s approval, on 1 June, came about a month after the WHO listed another Chinese vaccine, made in Beijing by state-owned firm Sinopharm, which showed an efficacy of 79% against symptomatic disease. Both vaccines are already used widely around the world, and are driving China’s massive internal immunization campaign.

CoronaVac is sustaining vaccination campaigns in more than 40 countries, including Chile and Botswana. Globally, more than



China’s CoronaVac vaccine is already in use in the Philippines, and many other countries.

News in focus

Gagandeep Kang, a virologist at the Christian Medical College in Vellore, India, who also advises the WHO on immunization.

Other platforms induce more-targeted responses against specific parts of the virus, which might be why they are more effective. The mRNA vaccines encode the 'spike' protein that SARS-CoV-2 uses to enter cells, so they trigger high numbers of antibodies that block that protein.

Most COVID-19 vaccines are given in two doses, and studies are under way to assess whether individuals will need to get booster shots after that. This question might be

especially relevant for those who receive inactivated-virus vaccines such as CoronaVac and Sinopharm's shot, because they produce fewer antibodies, scientists say. But the priority for now should be to get as many people vaccinated with their first two doses as possible, says Kang.

The other vaccines that the WHO has approved for emergency use are the Moderna and Pfizer–BioNTech shots, as well as those made by Johnson & Johnson and the University of Oxford and AstraZeneca, and a version of the Oxford–AstraZeneca vaccine known as Covishield, which is produced by the Serum Institute of India in Pune.

WILL SCIENTISTS USE GREEK NAMES FOR CORONAVIRUS VARIANTS?

From Alpha to Omega, the WHO's labelling system aims to avoid confusion and stigma.

By Ewen Callaway

When researchers in South Africa spotted a highly mutated strain of coronavirus driving the country's second wave in late 2020, they called it variant 501Y.V2. Other scientific naming schemes have called it B.1.351, 20H/501Y.V2 and GH/501Y.V2. But many media outlets – and some scientists – describe the same virus as 'the South African variant'.

To quell such confusion and avoid geographical stigma, everyone should now just call it 'Beta', according to a naming scheme announced on 31 May by the World Health Organization (WHO) in Geneva, Switzerland, and described in *Nature Microbiology* (F. Konings *et al. Nature Microbiol.* <https://doi.org/10.1038/s41564-021-00932-w>; 2021).

The names, taken from the Greek alphabet (see 'Variants of concern'), are not intended to replace scientific labels, but will serve as a handy shorthand for policymakers, the public and other non-experts who are increasingly losing track of variant names.

"It is a lot easier for a radio newsreader to say 'Delta' than bee-one-six-one-seven-two," says Jeffrey Barrett, a statistical geneticist leading SARS-CoV-2-sequencing efforts at the Wellcome Sanger Institute in Hinxton, UK. "So I'm willing to give it a try to help it take off."

"Let's hope it sticks," says Tulio de Oliveira, a bioinformatician and director of the KwaZulu-Natal Research Innovation and Sequencing Platform in Durban, South Africa, whose team identified the Beta variant.

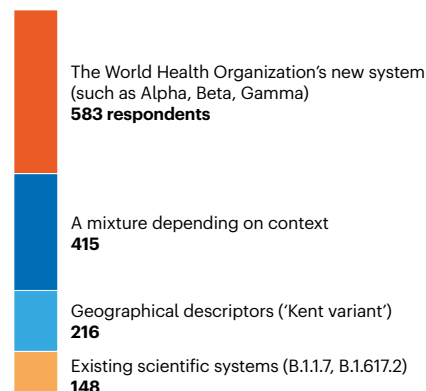
In an online poll by *Nature*, the vast majority of respondents said that they planned to adopt the new labels, either alone or together with the scientific designations (see 'Greek naming system preferred').

The system could be especially useful in countries battling a number of variants, such as South Africa, where a variant found in the United Kingdom and known to scientists as B.1.1.7 – now called Alpha – is on the rise. And researchers such as de Oliveira are watching out for cases of the B.1.617.2 variant identified in India, now called Delta.

Confusion isn't the only reason to go with a

GREEK NAMING SYSTEM PREFERRED

Nature asked readers how they thought they would describe coronavirus variants in future. Of 1,362 respondents, most said they would use the new Greek naming system, or a mixture of names depending on context.



simplified naming system, say advocates of the new system. Terms such as 'the South African variant' and 'the Indian variant' can stigmatize countries and their residents, and might even discourage nations from running surveillance for new variants. "The geographical names, we have to stop with that – really," says de Oliveira. He is aware of countries in Africa where health ministers have been reluctant to announce the discovery of new local variants because of concerns about being made pariahs.

"I can understand why people just call it 'the South African variant' – they don't mean anything by it," says Salim Abdool Karim, an epidemiologist at the Centre for the AIDS Program of Research in South Africa in Durban. "The problem is, if we allow it to continue, there are people who have an agenda and will use it."

Barrett intends to embrace the new system in media appearances, but suspects geographical descriptors won't go away quickly. "The reason we use country names (which is problematic) is that it ties the variants to the story of the pandemic in a way that's easier to remember," he wrote in an e-mail to *Nature*. "The new system is still very anonymous and it will still be hard for the public to remember who's who."

In recent months, most scientists have settled on a single lineage-naming system that describes variants' evolutionary relationships. With time, the WHO's naming system might gain the same currency among the general public, says Jeremy Kamil, a virologist at Louisiana State University Health in Shreveport.

VARIANTS OF CONCERN

WHO label	Pango lineage	GISAID clade	Nextstrain clade	Earliest documented samples	Date of designation
Alpha	B.1.1.7	GRY	20I/S:501Y.V1	UK, Sept 2020	Dec 2020
Beta	B.1.351	GH/501Y.V2	20H/S:501Y.V2	South Africa, May 2020	Dec 2020
Gamma	P.1	GR/501Y.V3	20J/S:501Y.V3	Brazil, Nov 2020	Jan 2021
Delta	B.1.617.2	G/452R.V3	21A/S:478K	India, Oct 2020	May 2021

Source: WHO

SOURCE: NATURE POLL