

Scientists discover 'weak spot' across all major COVID-19 variants

■ AGENCY

TORONTO: A team led by an Indian-origin researcher has discovered a key vulnerability across all major variants of SARS-CoV-2, the virus that causes COVID-19, including the recently emerged BA.1 and BA.2 Omicron subvariants.

The weakness can be targeted by neutralising antibodies, potentially paving the way for treatments that would be universally effective across variants, the researchers said.

The study, published on Thursday in the journal *Nature Communications*, used cryo-electron microscopy (cryo-EM) to reveal the atomic-level structure of the vulnerable spot on

the virus' spike protein, known as an epitope or part to which an antibody attaches itself.

Spike protein is used by the SARS-CoV-2 virus to enter and infect human cells. The researchers also described an antibody fragment called VH Ab6 that is able to attach to this site and neutralise each major variant.

"This is a highly adaptable virus that has evolved to evade most existing antibody treatments, as well as much of the immunity conferred by vaccines and natural infection," said Sriram Subramanian, a professor at the University of British Columbia, and the study's senior author.

"This study reveals a weak

spot that is largely unchanged across variants and can be neutralised by an antibody fragment. It sets the stage for the design of pan-variant treatments that could potentially help a lot of vulnerable people," Subramanian said.

Antibodies are naturally produced by our bodies to fight infection, but can also be made in a laboratory and administered to patients as a treatment.

While several antibody treatments have been developed for COVID-19, their effectiveness has waned in the face of highly-mutated variants like Omicron.

"Antibodies attach to a virus in a very specific manner, like a key going into a

lock. But when the virus mutates, the key no longer fits," said Subramanian.

"We have been looking for master keys -- antibodies that continue to neutralise the virus even after extensive mutations," he added.

The 'master key' identified by researchers is the antibody fragment VH Ab6, which was shown to be effective against the Alpha, Beta, Gamma, Delta, Kappa, Epsilon and Omicron variants.

The fragment neutralises SARS-CoV-2 by attaching to the epitope on the spike protein and blocking the virus from entering human cells.

By mapping the molecular structure of each spike protein, the team has been

searching for areas of vulnerability that could inform new treatments.

"The epitope we describe in this paper is mostly removed from the hot spots for mutations, which is why its capabilities are preserved across variants," said Subramanian.

"Now that we have described the structure of this site in detail, it unlocks whole new realms of treatment possibilities," he said.

Subramanian said this key vulnerability can now be exploited by drug makers, and because the site is relatively mutation-free, the resulting treatments could be effective against existing, and even future, variants.

Rupee falls 20 paise to 79.84 against US dollar

■ STATE TIMES NEWS

MUMBAI: The rupee depreciated by 20 paise to close at 79.84 against the US dollar on Friday amid a strengthening greenback overseas.

At the interbank foreign exchange market, the local currency opened at 79.75 and moved in a range of 79.73 to 79.84 during the day.

It finally ended at 79.84 against the American currency, down 20 paise over its previous close of 79.64.

Forex traders said the US dollar index witnessed an upturn after comments from US Federal Reserve officials over the quantum of rate hikes weighed on investor sentiments.

The dollar index, which gauges the greenback's strength against a basket of six currencies, rose 0.18 per cent to 107.67.

Foreign fund outflows from Indian equities also dragged the local unit down.

Foreign institutional investors were net sellers in

the capital market on Thursday as they offloaded shares worth Rs 1,706.00 crore, as per exchange data.

"Rupee continued to consolidate in a narrow range after hawkish FOMC meeting minutes," said Gaurang Somaiya, Forex & Bullion Analyst, Motilal Oswal Financial Services.

FII buying helped the rupee gain strength in the first half of the week but it later gave up the gains as the dollar index found support near USD 106 and WTI crude near USD 85, he added.

"We expect the USD-INR (Spot) to trade sideways and quote in the range of 79.20 and 79.80," Somaiya added.

Meanwhile, Brent crude futures, the global oil benchmark, declined 1.02 per cent to USD 95.60 per barrel.

On the domestic equity market front, the BSE Sensex ended 651.85 points or 1.08 per cent lower at 59,646.15, while the broader NSE Nifty declined 198.05 points or 1.10 per cent to 17,758.45.

"Rupee traded weak on

Friday backed by some weakness in capital markets from higher levels. The week saw volatile range between 79.35-79.90 as the dollar index stayed in a tight range," said Jateen Trivedi, VP Research Analyst at LKP Securities.

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Dilip Parmar, Research Analyst, HDFC Securities, said the rupee depreciated amid stronger dollar index and risk-averse sentiments. "Low bond price and Foreign fund outflows also weighed on the rupee."

Parmar further said the dollar index continues to retrace the mid-July to mid-August sell-off. The hawkish comments from Federal Reserve members also added fuel to the fire with markets again pricing in a 75 bps hike in the next meeting.

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India will be superpower if all fulfill their duties with PM Modi's 5 resolves in mind: Adityanath

■ STATE TIMES NEWS

BALLIA (UP): Uttar Pradesh Chief Minister Yogi Adityanath on Friday urged people to fulfil their duties keeping in mind the five resolves mentioned by Prime Minister Narendra Modi in his Independence Day speech.

In his Independence Day address to the nation from the ramparts of the Red Fort, Modi urged citizens to focus their energies on five resolutions -- to turn India into a developed nation, remove every trace of bondage, take pride in its heritage, unity and integrity, and fulfil their duties to achieve the dreams of freedom fighters by 2047.

"Prime Minister Modi on August 15 gave five resolves to the people. If every person moves on the path of duty keeping in mind the five resolves, then India will definitely become a superpower. In the days to come, India will lead the world," the Uttar Pradesh chief minister

said at a public meeting here on the occasion of Ballia Balidan Diwas.

About the occasion, Adityanath said, "It is said Ballia gives no importance to discipline. But, the discipline which was needed for the country's development after Independence, Ballia showed that. The attitude which should have been shown at the time of servitude, Ballia showed it."

"When it was needed, Mangal Pandey ignited the spark of the fight for freedom. This fight continued. When Mahatma Gandhi gave the slogan of Quit India, Chittu Pandey effectively played his role," he said.

Chittu Pandey, popularly referred to as the Shere-Ballia (Lion of Ballia), was a revolutionary who headed the national government declared and established on 19 August 1942 for a few days before it was suppressed by the British.

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who opposed the 2015 deal, saying it gave Iran a path to develop nuclear weapons by time-limiting the most onerous restrictions on its nuclear activities. They say there's now even more tangible evidence that Iran's malign behavior make it impossible to deal with.

Two of the most outspoken critics of the deal, Republican senators Ted Cruz of Texas and Tom Cotton of Arkansas, have weighed in on what the Rushdie attack should mean for the administration.

The ayatollahs have been trying to murder Salman Rushdie for decades, Cruz said. Their incitement and their contacts with this terrorist resulted in an attack. This vicious terrorist attack needs to be completely condemned. The Biden administration must finally cease appeasing the Iranian regime.

Iran's leaders have been calling for the murder of Salman Rushdie for decades, said Cotton. We know they're trying to assassinate American officials today. Biden needs to immediately end negotiations with this terrorist regime.

Under the Iran Nuclear Agreement Review Act, or INARA, the administration must submit any agreement with Iran for congressional review within five days of it being sealed. That begins a 30-day review period during which lawmakers may weigh in and no sanctions relief can be offered. That timeline means that even if a deal is reached within the next week, the administration will not be able to start moving on sanctions relief until the end of September, just a month from crucial congressional midterm elections. And, it will take additional time for Iran to begin seeing the benefits of such relief because of logistical constraints.

Granting terrorism sanctions relief amid ongoing terror plots on US soil is somewhere between outrageous and lunacy, said Rich Goldberg, a former Trump administration national security council staffer and longtime deal critic who is now a senior fellow at the Foundation for Defense of Democracies, which has also lobbied against a return to the JCPOA.

While acknowledging the seriousness of the plots, administration officials contend that they are unrelated to the nuclear issue and do nothing to change their long-held belief that an Iran with a nuclear weapon would be more dangerous and less constrained than an Iran without one.

The JCPOA is about the single, central challenge we face with Iran, the core challenge, what would be the most threatening challenge we could possibly face from Iran, and that is a nuclear weapon, State Department spokesman Ned Price said this week.

There is no doubt that a nuclear-armed Iran would feel an even greater degree of impunity, and would pose an even greater threat, a far greater threat, to countries in the region and potentially well beyond.

Every challenge we face with Iran, whether it is its support for proxies, its support for terrorist groups, its ballistic missiles program, its malign cyber activities every single one of those would be more difficult to confront were Iran to have nuclear weapons program, he said.

That argument, however, will be challenged in Congress by lawmakers

who opposed the 2015 deal, saying it gave Iran a path to develop nuclear weapons by time-limiting the most onerous restrictions on its nuclear activities. They say there's now even more tangible evidence that Iran's malign behavior make it impossible to deal with.

Misuse of probe agencies erodes their credibility, helps corrupt get away: Congress

■ STATE TIMES NEWS

NEW DELHI: After the CBI raided Delhi Deputy Chief Minister Manish Sisodia on Friday, the Congress said the "relentless misuse" of investigation agencies against political rivals erodes their credibility and can help the corrupt to get away, even though its Delhi leaders claimed the raids exposed the AAP leader's "corrupt face".

Delhi Congress leader Alka Lamba said Sisodia should face the action by the probe agency instead of "running away" to the cool climes of Himachal Pradesh. She also claimed the "corrupt face" of the self-acclaimed "truly honest" minister of the Aam Aadmi Party today stands exposed.

She also accused Sisodia of ignoring norms in opening liquor vending in the national capital and thrusting the youth into liquor by reducing the legal age for drinking from 25 to 21 years.

Another Delhi Congress leader, Abhishek Dutt, accused the AAP government of indulging in corruption in the liquor policy and granting licences to those who were close to them. He also shared pictures of Sisodia and Kejriwal with those who he claimed to be running liquor vending in the national capital.

However, Congress spokesperson Pawan Khera tweeted, "The flip side to relentless misuse of agencies against political rivals is that even legitimate, rightful actions of agencies come under a cloud of suspicion. In the process, the corrupt get away hiding behind the 'misuse' argument and the honest end up paying the price." The CBI on Friday carried out searches at the residences of Manish Sisodia and IAS officer Arava Gopi Krishna and 19 other locations after registering an FIR for alleged irregularities in the formulation and execution of the Delhi Excise Policy brought out in November last year.

5,36,891 crore respectively, Punjab has the distinction of being the leader in the debt to Gross State Domestic Product (GSDP) ratio at 53.3 in the current fiscal, according to the written submission.

The top court is hearing the PIL which opposes the practice of political parties promising freebies during elections and seeks the Election Commission to invoke its powers to freeze their election symbols and cancel their registration.

It is also considering the distribution of freebies by the political parties from public funds and its adverse impact on the fiscal health of the country.

ducted (sanchaait) by him," It is for the chief minister to answer the minister of Bihar on this, he said.

"His new government has a large number of ministers with criminal records which confirms fears of the return of jungle raj in the state. The incident involving Lalu ji's son-in-law is a clear sign that the RJD supremo will try to interfere in the workings of the new government," Modi, now a Rajya Sabha MP, added.

RJD leaders were, predictably, tight-lipped over the embarrassing episode while those in the chief minister's JD(U) said they could comment only after it became clear why Shailesh Kumar was present at the two meetings.

Lalu's son-in-law spotted at Bihar Govt meetings, BJP fumes

■ STATE TIMES NEWS

PATNA: The Nitish Kumar government in Bihar was on Friday embarrassed as video footages surfaced wherein a son-in-law of Lalu Prasad, founding president of the RJD that helms the new ruling coalition, was seen at two official meetings.

Notably, both the meetings were presided over by Prasad's elder son Tej Pratap Yadav, who was sworn in as a minister earlier this week with environment, forestry and climate change portfolio.

According to video clips, at the first meeting of officials that Yadav attended in his capacity as minister on July 17, Shailesh Kumar, married to his eldest sister Misa Bharti, a Rajya Sabha MP herself, was seen seated in

the back row.

However, a day later, Kumar was again present at a meeting of the pollution control board, seated next to his brother-in-law minister.

The course of events drew strong condemnation from the BJP, which has lost power following the volte-face by the chief minister last week.

"Tej Pratap Yadav remains in news for all the wrong reasons. Now, as a minister he seems to have outsourced his duties to his brother-in-law," said Sushil Kumar Modi, a senior BJP leader who had served as the state's deputy CM for over a decade.

"Lalu ji's son-in-law was not just present at the meetings. The meetings, where he had no business to be present, were in fact being con-

ducted by him," It is for the chief minister to answer the minister of Bihar on this, he said.

During interrogation, Yaseen revealed to the police that hawala money was being routed to India through South Africa and collected in Surat and Mumbai.

He ran a garment business in Meena Bazaar and was the Delhi link to send this money to terror operatives in Jammu and Kashmir through couriers, Special Commissioner of Police (Special Cell) HGS Dhaliwal said.

The officer said recently,

Rs 24 lakh hawala money was sent from South Africa to support terror activities in India. Out of this, Yaseen transferred Rs 17 lakh through two couriers to a terror operative named Abdul Hamid Mir in Jammu and Kashmir.

The police, however, arrested Mir from Jammu bus stand on Wednesday and recovered Rs 10 lakh cash from him. The remaining Rs 7 lakh were recovered from his house, Dhaliwal said.

Yaseen described the talks "very fruitful".

"We discussed a wide range of issues on the Uzbek-Indian agenda, as well as interaction within the framework of multilateral structures, in particular the #SCO," Norov tweeted.

Another Delhi Congress leader, Abhishek Dutt, accused the AAP