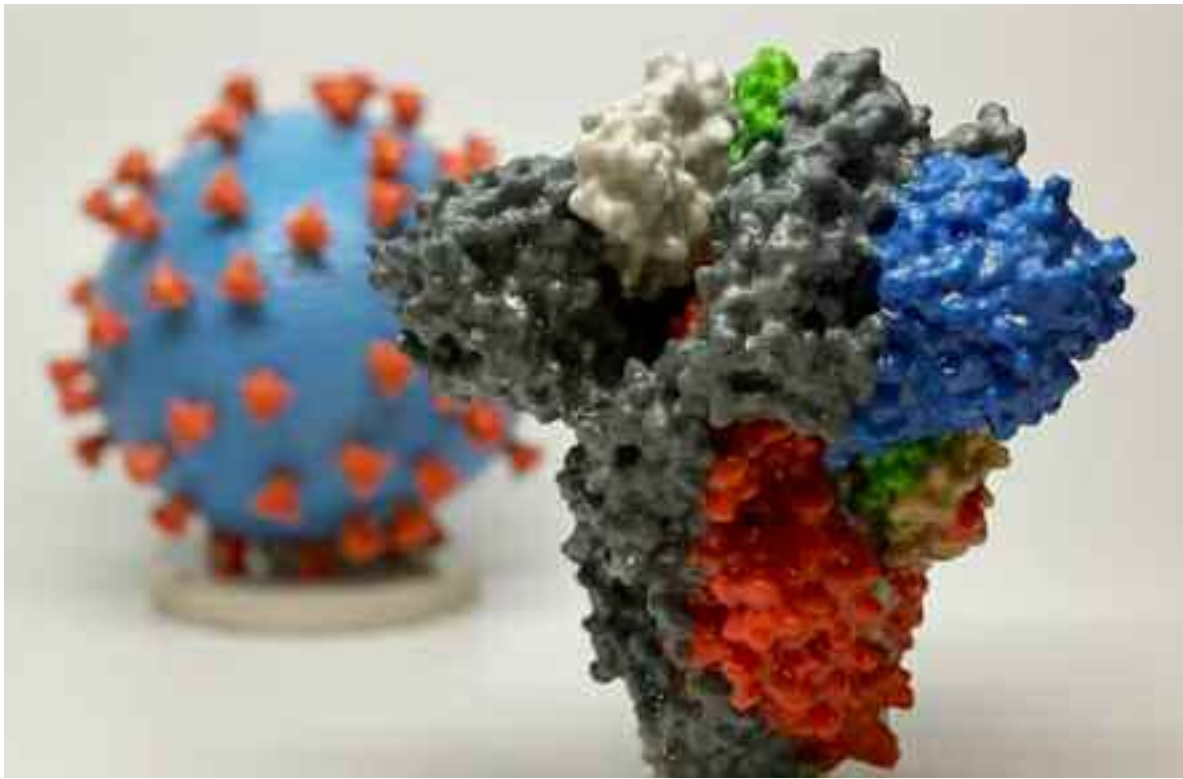


Dutch researchers find 'promising' virus-fighting antibody



PARIS: An antibody that can stop the new coronavirus infecting cells in laboratory tests has been identified by researchers in the Netherlands, in what scientists say could help the development of therapies for COVID-19.

The antibody neutralised the new coronavirus, according to the research published in *Nature Communications*, and the authors said it "offers the potential to prevent and/or treat COVID-19".

It has not yet been tested on animals or in human trials. Researchers from Utrecht University and the Erasmus Medical Centre in Rotterdam injected cells of "humanized mice" with purified versions of the spike proteins used by different coronaviruses — including the ones that cause SARS and MERS — to infect cells.

This immunisation-like process caused the cells to produce neutralising antibodies, which the researchers purified and tested against the virus that causes COVID-19 (SARS-CoV-2), and the one that causes SARS

(SARS-CoV). One of the antibodies stopped both pathogens from infecting cells. Observers commenting on the study cautioned that there was a long way to go before knowing if the newly discovered antibody would work as a treatment. "Simply because we have found an antibody which neutralises a virus in a group of cells in a lab Petri dish doesn't mean that we can expect the same response in patients," said James Gill, honorary clinical lecturer Warwick Medical School.

But he described the discovery as "very promising".

"Treatment cocktail" Usually the antibodies used in antiviral treatments block a pathogen from attaching to cells. In this case, the authors of the study published Monday said that while the antibody appeared to target the binding mechanism of the virus, it did not actually stop it from latching on. Scientists cautioned more research was needed to identify the way in which the antibody did work. But the authors said it could be used ei-

ther alone or in combination with other neutralising antibodies that do target the attachment process, and "could potentially aid the development of therapeutic strategies in the future".

Babak Javid, a professor at the Tsinghua University School of Medicine in Beijing, said it might be an advantage that the antibody could be used in a treatment "cocktail". "It is likely that if the (monoclonal antibodies) mAbs work in slightly different ways, that will be potentially a more potent and more effective treatment than if they all target and work via exactly the same mechanism," he said in response to the study.

The research comes as scientists are looking at using blood plasma from people who have recovered from COVID-19, which would contain a mixture of antibodies, in therapies for those infected.

Individual laboratory-produced monoclonal antibodies could be manufactured in much larger quantities, Javid noted. —AFP

Working from home may not be as good for the environment as expected

Working-from-home accelerated by the Covid-19 pandemic might not be beneficial to Mother Earth as we initially would've thought. As it turns out, energy savings were offset by increased travel for recreation or other purposes, together with additional energy use in the home, says a new study quoted by IANS. The majority of studies on the subject analysed by the University of Sussex researchers in the UK agreed that working-from-home reduced commuter travel and energy use — by as much as 80% in some cases.

"While most studies conclude that teleworking can contribute to energy savings, the more rigorous studies and those with a broader scope present more ambiguous findings," said study researcher Andrew Hook, Professor at the University of Sussex. "Where studies include additional impacts, such as non-work travel or office and home energy use, the potential energy savings appear more limited — with some studies suggesting that, in the context of growing distances between the workplace and home, part-week teleworking could lead to a net increase in energy consumption," Hook explained. "While the lockdown has clearly reduced energy consumption, only some of those savings will be achieved in more normal patterns of teleworking," explained study researcher Steven Sorrell. "To assess whether teleworking is really sustainable, we need to look beyond the direct impact on commuting and investigate how it changes a whole range of daily activities," he added. The study, published in the journal *Environmental Research Letters*, provides a systematic review of current knowledge of the energy impacts of teleworking, synthesising the results of 39 empirical studies from the US, Europe, Thailand, Malaysia and Iran published between 1995 and 2019.

According to the researchers, even the mass migration of workers to home working might have only a small impact on overall energy usage. One study noted that even if all US information workers worked from home for four days a week, the drop in national energy consumption would be significantly less effective than a 20% improvement in car fuel efficiency. The study also hints that technological advances could erode some of the energy savings due to the short lifespan and rapid replacement of Information and communications technology (ICTs), their increasingly complex supply chains, their dependence on rare earth elements and the development of energy-intensive processes such as cloud storage and video streaming. The authors added that modern-day work patterns are becoming increasingly complex, diversified and personalised, making it harder to track whether teleworking is definitively contributing energy savings. The research was conducted by the Centre for Research into Energy Demand Solutions (CREDS), a UK-based research centre, which tracks changes in



Getz Pharma set to disinfect thousands of health facilities, screen over 25,000 doc-

KARACHI: Getz Pharma announced Tuesday that it is set to disinfect over 8,000 clinics, 650 hospital wards and conduct free screening tests of more than 25,000 doctors across Pakistan.

In a statement, the company said that these measures were being taken under its "Care for Heroes" initiative to combat coronavirus in healthcare facilities. "In order to minimise the risk of this contagion at clinics and hospitals, Getz Pharma will regularly be disinfecting these venues for the next six months using CHEMGENE HLD4, a WHO approved chemical, which is a proven disinfectant against coronavirus," the statement read. The pharmaceutical company will also provide personal protective equipment (PPE) including masks, sanitisers, and gloves and conduct free coronavirus antibody screening tests of over 25,000 doctors especially in isolation centres to ensure the safety of health care professionals fighting on the frontlines to combat the pandemic.

"More than 100 clinics across Karachi have been disinfected under this initiative and the company will soon be extending this effort to other cities," said the company in its statement. According to the press release, the first hospital disinfection drive took place at Karachi's Jinnah Postgraduate Medical Centre (JPMC) which covered 28 wards, 96 doctor's hostel rooms, around 200 houses in the doctor's colony, out-patient departments (OPDs), emergency rooms, and duty rooms. Appreciating the initiative, Executive Director JPMC Dr.



Seemin Jamali said: "We at JPMC are very grateful to Getz Pharma who has come forward in arranging holistic sanitisation of our premises in the wake of COVID-19. We truly appreciate [their] help."

Earlier this month, Managing Director and CEO of Getz Pharma Khalid Mahmood met Sindh Health Minister Dr Azra

Pechuho and Chief Minister Murad Ali Shah to discuss strategies to help those affected by the pandemic. "The company has donated more than 1.9 million Hydroxychloroquine tablets, 15,000 testing kits and over 1,500 PPEs to the Sindh government and is also supporting research on the fast-track development of COVID-19 treatment

in Pakistan," according to the press release. "During these unprecedented times, the private-sector should step up and shoulder the responsibility of the government to control the spread of this virus especially from the hotspots like clinics and hospitals," said the Getz Pharma CEO. —*The Business Report*

World Thalassaemia Day 2020: Everything you need to know about this blood disorder

World Thalassaemia Day is observed on every 8th of May. This day tries to create awareness about the disease and help thalassaemia patients lead a normal life despite the burden of the disease. Due to the COVID-19 pandemic, World Thalassaemia Day 2020 will be celebrated through different online activities. The theme for the International Thalassaemia Day 2020 is - 'The dawning of a new era for thalassaemia' which states that it is time for a global effort to make novel therapies accessible and affordable to patients.

World Thalassaemia Day 2020: What is Thalassaemia? Symptoms, causes, treatment and much more

What is thalassaemia? Thalassaemia is a blood disorder in which your body has less hemoglobin than normal. This disorder is passed down through families. Hemoglobin is the protein in red blood cells that carries



oxygen. Patients with thalassaemia suffer from anemia due to low levels of hemoglobin.

Symptoms of thalassaemia The symptoms of thalassaemia may vary according to the type and severity of the disease.

Some common symptoms may include:
Weakness
Pale skin
Bone deformities
Dark urine
Constant fatigue

Slow growth
Abdominal swelling
Thalassaemia can cause constant fatigue
Causes of thalassaemia Thalassaemia is genetic. You get it from your parents. Now, tests are conducted before the birth of the child to take the necessary steps from an early stage. This disease cannot be prevented since it is genetic.

Treatment: Mild thalassaemia may not require treatment but people with severe thalassaemia require regular blood transfusions to cope with the condition. Medicines and supplements are also required for a normal life.

Living with thalassaemia: Thalassaemia patients experience slow growth due to low hemoglobin levels and anemia. Therefore, it is necessary to maintain a healthy diet. Also, stay connected with your doctor constantly for medication and supplements to avoid complications. —*NDTV*

Doing yoga three times a week may help curb migraine symptoms

Spending time on a yoga mat could do wonders for people with migraine. Those who added yoga to their routine found it provided better relief than medication alone. A study in *Neurology* suggests that yoga could reduce frequency, duration, and pain from migraine. It supports past research Trusted Source showing that yoga can be effective in alleviating migraine.

Only about half the people who take medication for migraine experience relief, noted Dr. Rohit Bhatia, lead author from the All India Institute of Medical Sciences.

Evaluating yoga as a migraine treatment Bhatia evaluated 114 people between the ages of 18 and 50. They all had episodic migraine, which is defined as having 4 to 14 headaches per month. The people were randomly assigned into two groups: those only on medication and those on medication who also practiced yoga. Both groups were given appropriate medications and counseling on lifestyle changes such as getting enough sleep, exercise, and eating well.

The yoga group underwent a 1-hour yoga practice 3 days a week for 1 month. The practice included breathing exercises, meditation, and yoga postures. After the first month, they practiced yoga at home 5 days a week for an additional 2 months. Participants wrote down all migraine information, including the duration of the episode, severity, and medication taken.

While everyone saw improvements, the benefit was higher in those who added yoga. That group began with an average of 9.1 headaches

per month and ended the 3-month study period with 4.7 headaches per month — a 48 percent reduction. The medication-only group began the study reporting 7.7 headaches per month and reported 6.8 per month at the end of the study period. They saw a 12 percent decrease.

After 3 months, the average number of pills taken by those in the yoga group went down 47 percent. The average amount of pills taken in the medication-only group decreased by about 12 percent during the same time. "Our results show that yoga can reduce not just the pain, but also the treatment cost of migraines," Bhatia said in a statement. "That can be a real game-changer, especially for people who struggle to afford their medication. Medications are usually prescribed first, and some can be expensive."

Study limitations Bhatia said in a statement that more research is needed to see if the benefits of doing yoga would last for a longer period. Also, the information was self-reported, and data may not be consistent, Bhatia added. He could not be reached for comment.

It is difficult to draw much of a conclusion from a study designed this way, noted Dr. Amy Gelfand, director of pediatric headache at UCSF Benioff Children's Hospital. "Just like pharmacologic treatments must have a placebo-control for comparison, behavioral studies need to have an attention-control group for comparison," she said. For example, the group that did not receive yoga instruction should have had an interaction with a provider for the same dura-

tion. "Without such a control group, it's difficult to conclude whether the observed effect was actually from yoga, or from the nonspecific benefit of interacting with a caring and attentive person during those hours," she said.

Dr. Teshamae S. Monteith, chief of the headache division at the University of Miami Miller School of Medicine, said that well-designed studies are lacking when it comes to exploring yoga's effects on patients with migraine. "We also do not know what medications were used both acutely or preventively. Ideally, preventive medications should be stable for 2 months before the randomization," she added.

Yoga as medicine Though there are questions on its efficacy, there is some evidence for relaxation therapy as a nonpharmacological treatment for migraine, Monteith told Healthline. She referenced a 2007 study Trusted Source in *Headache* that found positive benefits of yoga to treat migraine without aura.

Aside from stress reduction, there could be other effects from doing yoga that alleviate migraine symptoms. "Yoga may alter the autonomic nervous system and thus the interconnections with the trigeminal vascular system," Monteith explained. "Imaging studies have also shown a positive effect of yoga on the limbic system, pain matrix, and the brain networks including the default mode network. Yoga may be also helpful for a number of factors that are associated with migraine, such as sleep, physical function, and

