

**Review Article** 

Medical & Clinical Research

### Israel Isolates the Coronavirus Virus Antibody in a "Significant Breakthrough"

### Shimon Shatzmiller

Department of Biological Chemistry, Ariel University, 40700 ARIEL, Israel \*Corresponding author

Shimon Shatzmiller, Department of Biological Chemistry, Ariel University, 40700 ARIEL, Israel

Submitted:22 July 2020; Accepted: 29 July 2020; Published: 05 Aug 2020

Palliative treatments of COVID 19. Possible use of ACE inhibitors (anti-hypertension agents) in the combat with the Coronavirus [1-3].

Time may still prove the greatest equality: The Spanish Influenza that broke out in the United States in 1918 seems to have died during the summer only to return to roaring with a more deadly strain in the fall and a third wave the following year. Eventually, he came to distant places like Alaska and the South Pacific islands, infecting a third of the world's population.

COVID-19 caused by SARS-CoV-2, a respiratory virus that attacks the lungs but can also affect the cardiovascular, neurological, renal, and other organs. Because of the potential severity and these effects throughout the body, full recovery may not be quick or straightforward. It is especially true for patients with serious illnesses who land them in the ICU. But even for patients with relatively mild disease - who do not need hospitalization - it can still take weeks or more to feel closer to normal, especially if they have some degree of pneumonia [4].

JERUSALEM - Israel has isolated a key antibody in its key biological research key, the Israeli defense minister said on Monday, calling the move "a significant breakthrough" toward the possible treatment of the COVID-19 epidemic.

"The monoclonal neutralizing antibody" developed at the Israeli Institute of Biological Research (IIBR) "can neutralize it (the virus that causes disease) within the carriers," Defense Minister Naftali Bennett said. The statement added that Bennett visited IIBR on Monday where he was updated "for a significant breakthrough in finding a cure for the coronavirus."

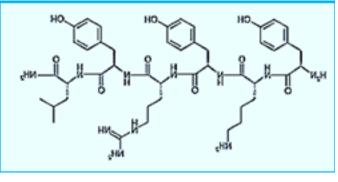
### The ACE2 receptor inhibition: How Is It Connected to Coronavirus and Why Might It Be Key to Treating COVID-19

Potential but not approved risk factors for Coronavirus 2019 (COVID-19) virus in adults and children may include hypertension, cardiovascular disease and chronic kidney disease. The drug usually prescribed for these conditions, ACE (an enzyme converted to angiotensin) Inhibitors, and Ang II receptor blockers (angiotensin II).

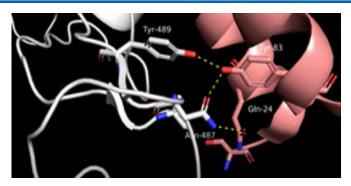
Potential role of the renin-ANG (angiotensin)-aldostrone (RAAS) system in COVID-19. The unique interaction of SARS-CoV-2 with

the host cell is the approximate relationship between COVID-19 and Hypertension, cardiovascular disease and kidney disease. As in SARS-CoV, SARS-CoV-2 Spike protein binds to ACE2 bound to the surface of the respiratory epithelial cells to obtain Cell entry, although SARS-CoV-2 appears to do so with significantly greater affinity. Endocytosis of the SARS-CoV-2-ACE2 complex, as well as the viral ACE2 cell surface. Ejaculation and down-regulation of ACE2, all of which may contribute to reduced expression and activity of ACE2 In infected cells. This general loss of ACE2 functionality may be critical to COVID-19 As proposed in SARS, although it has not yet been Humans.

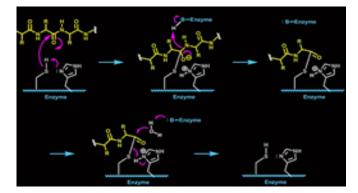
A hexapeptide of the receptor-binding domain of SARS corona virus spike protein blocks viral entry into host cells via the human receptor ACE2. Vertebral infection of Vero E6 cells by SARS coronavirus (SARS-CoV) is blocked by the X-PEPTIDE Tir-Lis-Tir- Arg-Tir-Lau. The PEPTIDE also inhibits the spread of the coronavirus NL63 virus. On human cells both viruses are used Enzyme 2 for the conversion of angiotensin (ACE2) as an entry receptor. Blocking the specific viral entry Alpha Sindbis virus shows no reduction in infection. PEPTIDE 438YKYRYL443 is part of the linker for receptors Domain (RBD) of the SARS-CoV stabbing protein. PEPTIDE libraries were projected by resonating plasma in the surface (SPR) to identify epitopes requiring RBD. 438YKYRYL443 bears the dominant binding nickname Binds to ACE2 with KD = 46 IM. Cover condition was further characterized by the difference in saturation transfer (STD) NMR spectroscopy and molecular dynamic simulations. Based on this information the PEPTIDE can be used as a lead structure to design potential entry inhibitors against SARS-CoV and related Viruses [5, 6].



### HEXA POEPTID



Interaction of agent with



#### Spike tyrosine h-bond

The COVID-19 epidemic unsurprisingly linked to a similar epidemic of misinformation on social media. But there are also some real clinical issues relevant to people suffering from preexisting health conditions, known to be more vulnerable to disease. One issue that has left patients and healthcare professionals alike confused and frightened is the suggestion that ACE-inhibiting drugs may increase the dangers of COVID 19- Usually, ACE inhibitors work by reducing the activity of the regulatory mechanism for hypertension in the body, the renin-angiotensinaldosterone system. So why might it matter to COVID-19? To gain entry into human cells, a key trick used by the coronary virus is to attach to a receptor across the cells that binds to an enzyme linked to ACE, called ACE2. ACE2 has various ACE functions, including activation of angiotensin II.

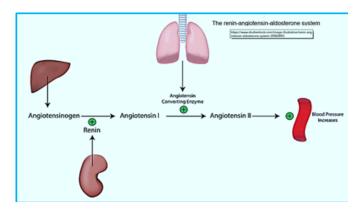
#### Which organs are most severely affected by SARS-CoV-2?

The lungs are the main site of injury as a result of SARS-CoV-2 infection, which causes COVID-19. The virus reaches the lungs after entering the nose or mouth.

ANG II causes lung damage. If there is a decrease in ACE2 activity (because the virus binds to it), ACE2 cannot break down the ANG II protein, which means that more of it can cause inflammation and damage to the body. The virus also affects other tissues that express ACE2, including the heart, where damage and inflammation (heart muscle) can occur. The kidneys, liver and gastrointestinal tract can also be damaged. The blood vessels may also be a site of damage. In a recent research article, we argued that a key factor determining the severity of damage in patients with COVID-19 is abnormally high activity in ANG II.

In most cases, ACE inhibitors do not appear to directly affect ACE2 action. However, they may have indirect effects that may

increase the number of ACE2 receptors. This led to concerns that ACE inhibitors may alleviate COVID-19 disease, especially since these drugs are used in older people with other health problems we recognize are at risk for more severe respiratory complications [7].

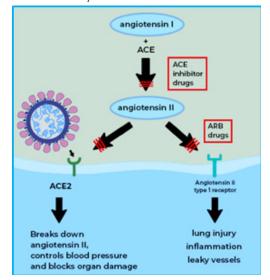


In situation when the amount of ACE2 is reduced. Due to the virus occupies the receptor; many may be more susceptible to serious illness as a result of COVID-19. This is because enough ACE2 is available to facilitate viral entry but the decrease in available ACE2 contributes to further ANG II-mediated impairment. In particular, ACE2 reduction will increase susceptibility to inflammation, cell death, and organ failure, especially in the heart and lungs.

In the intensive quest for treatments for COVID-19, many researchers are focusing their attention on the specific a protein that allows the virus to infect human cells. Call for enzyme 2 to convert angiotensin, or the protein provides the point of entry of the coronavirus into the ACE2 "receptor", and binds to and infects it a wide variety of human cells. Could it be central how to treat this disease? The enzyme converting angiotensin (ACE, aka ACE1) is another protein, also found in tissues such as Lung and heart, where ACE2 is located. Drugs that inhibit ACE1 action are the ACE Inhibitors. Examples of these drugs are Ramipril, Lisinopril and Analepril. These drugs block the ACE1 operations but not ACE2. ACE1 drives the production of ANG II. In fact, there is ACE1 and ACE2 Yin-Yang relationship; ACE1 increases the amount of ANG II while ACE2 decreases the ANG II. By inhibiting ACE1, ACE inhibitors reduce ANG II levels and its ability to increase blood flow Pressure and tissue damage. ACE inhibitors are most commonly prescribed to patients with hypertension, heart failure and kidney disease Another type of common drug, angiotensin receptor blockers (ARBs, for example, losartan, Valsartan has similar effects to ACE inhibitors and may also be beneficial in COVID-19 treatment. Evidence for the protective effect of ACE inhibitors and angiotensin receptor blockers in patients with COVID-19 was presented in the latest work he co-authored by researchers. There is no evidence to suggest the prophylactic use of these drugs; we do not advise readers to take them Drugs in hopes of preventing COVID-19. We want to emphasize that on patients only take these medications as instructed by their healthcare provider [8].

ACE inhibitors (an enzyme that converts angiotensin to bile for the first time) were first introduced in the early 1980s for the treatment of high blood pressure, but their role has increased over the years to manage heart failure, heart attacks, diabetes and kidney disease. Given that, about one-fifth of the adult population in the UK is diagnosed with hypertension, and other cardiovascular conditions are common, these medications are often prescribed. ACE inhibitors

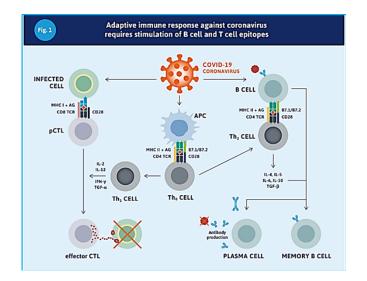
have become the third most common drug in primary care in the UK, and together with their close relatives - angiotensin or ARB receptor blockers - they accounted for 65 million prescriptions issued in the community in 2018.



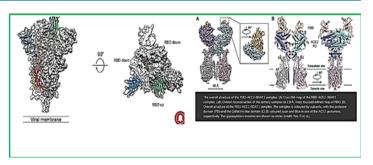
However, the situation is not necessarily that simple. Previous work with the SARS-related condition has shown that ACE2 reduction (and with it, increased angiotensin II) was associated with severe injury. Based on this, it may be expected that ACE and ARB inhibitors, by reducing angiotensin II, will protect for severe lung problems. In an attempt to address these conflicting theories, there is currently a clinical trial examining whether the ARB drug losartan can have benefits in patients with COVID-19.

### Spiky science [9-11]

The COVID-19 genome encodes 10 proteins, including the "spike" (S protein), which is a glycoprotein found on the virus surface. The S protein is considered an attractive therapeutic target given its location, so it can be targeted with antibody. It has been shown that vaccination with animals with S-based vaccines results in the formation of neutralizing antibodies that are effective in preventing infection by homologous coronavirus [12a, b].



Immune response to COVID 19 virus. (credit ref [7]) Scientists demonstrate how COVID-19 infects human cells [13]



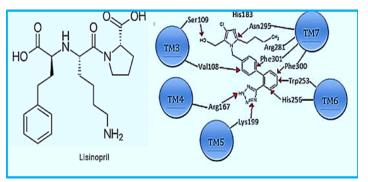
Scientists demonstrate how COVID-19 infects human cells (credit ref. [14])

The coronavirus Spike protein is the new protein that contains about 1,200 amino acids. Some researchers have restricted their research to an area at the edge known as the receptor-related domain (RBD) [15].

The CoV spike (S) protein plays the most important roles in viral attachment, fusion, and entry and serves as a target for the development of antibodies, entry inhibitors, and vaccines. This domain contains about 200 amino acids. However, the difficulty is that these relatively large areas have diverse targets, and the immune system produces antibodies to everyone indiscriminately - which reduces the effectiveness of a potential vaccine.

The researchers used cryogenic electron microscopy to show that coronaviruses enter human cells through interaction with the angiotensin-converted enzyme 2 (ACE2).

One of the most successful and frequently used anti hypertension is the ACE inhibitor LOSARTAN and its analogs [16-18]. ACE inhibitors like Lisinopril and losartan basically do the same thing but in different ways. Lisinopril is in the class of drugs called ACE (angiotensin-converting enzyme) inhibitors.

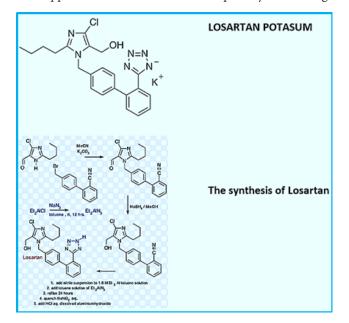


LISINOPRIL and LOSARTAN BOIUND TO ACE (credit ref. [19][29])

Losartan (Cozaar) is applied: Hypertension, Kidney damage from diabetes (also known as diabetic nephropathy), Stroke prevention in patients with hypertension and left ventricular hypertrophy (LVH) [21].

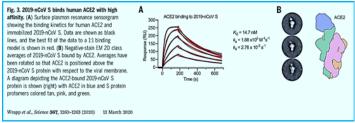
Losartan is in the ARB (angiotensin II receptor-blocker, ARB) class. ARBs are used to lower blood pressure to treat hypertension, heart failure, diabetic nephropathy, coronary artery disease, and heart attack [22]. They work by relaxing blood vessels allowing more efficient pumping of the heart. Both drugs lower blood pressure by essentially stopping certain chemicals in your body that normally make your kidneys retain fluid and your blood vessels tighten.

A large amount of research has been carried out in the quest of learning its biological merits in mending health conditions of humans. Not only people that suffer from their heart condition and blood vessels diseases are given for their maintenance of health but also kidney patients benefit from the properties of this. LOSARETAN in ACE inhibitor of supreme properties a remedy [23-25]. Although many agents that block or compete on the ability of interference with the ace inhibition property, LOSARTAN and analogs are often chosen by medical physician as a first class agent. It is well applied all over the world as an especially useful drug.



The End phase in the synthesis of Losartan potassium (credit ref. [26])

The binding to ACE receptors is widely documented. SARS-CoV and COVID 19 (SARS-CoV2) bind to these two Receptor sites enter lung cells through the fixed receptors. By binding to the receptor sites ACE2. Soluble ACE2 treatment (which is not publicly available) can overcome this. Thus, SARS-CoV 1 and 2 (COVID 19) appear to require angiotensin II by blocking ACE2 / AT2 antagonist activity. This mechanism appears to be shared by other viruses targeting the lungs [27].



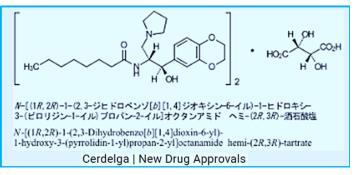
Binding of spike to ACE2 receptor (credit ref. [28])

Losartan is an ACE blocker. It may prevent the penetration of COVID 19 virus into the human cell in order to hijack the multiplication mechanism [29]. Losartan interferes with the function of AT1 and AT2 receptor and by an affecting the function of various metabolic function, reduces the bloof pressure [30].

### Other drugs were found to be effective for Corona

Biological Research Institute: Drugs designed to treat "Gaucher" have led to decreased reproductive capacity of the virus. • They have also been found to be effective in influenza and West Nile fever.

The results of a study conducted by the Institute of Biological Research indicate that derivatives of two drugs designed to treat Gaucher disease shown to be effective against corona virus and may also be effective against future outbreaks of new viruses.



As part of efforts at the Biological Research Institute to detect largescale antiviral drugs which may also prove effective against the corona virus. Scientists at the Biological Institute tested the drug Cerdegla, which received FDA approval and is currently licensed to the drug, are investigating another drug that is due [31].

During study of the Biological Institute, the scientists discovered that treatment of the derivatives of both drugs, led to a significant reduction in the replication capacity of the corona virus. This decrease prevents cell damage after infection with the new corona virus (at this time the drugs tested on cell cultures). The two drugs under development are currently in the stage of evaluating their effectiveness as a treatment against the new animal corona virus.

#### The truth about the "miracle cure" to Corona – REMDESIVIR

Although Ramadsibir has the potential to treat severe corona patients, there is still insufficient information to determine how beneficial it is and what its benefits and limitations are one of the challenges facing humanity in dealing with the corona epidemic COVID-19 is finding an effective antidote to the disease generator, the SARS-CoV-2 virus. In the absence of a vaccine, there is a constant concern that once social isolation and hygiene measures are halted, the plague will resurface fully, and the number of patients and the dead will jump. Because it is a virus, the effort is focused on looking for an antiviral drug, and one of the most promising directions at present is the drug Remdesivir, developed initially to treat the Ebola virus during the big outbreak in Africa in 2014.

The drug-based mechanism focuses on inhibiting the proliferation of the virus in the body's cells through disruption of key enzyme activity in the virus's genome replication process. To multiply the hereditary material and multiply, viruses such as the corona virus need a unique enzyme from the RNA polymerase enzyme family. The drug Ramdesibir is designed to impair only the corona's RNA polymerase enzyme activity, and not that of human cells [32].

The preliminary results showed that the drug did reduce the mortality rate from 11.6 to 8 percent, but a statistical analysis that takes into account not only the change in mortality but also the

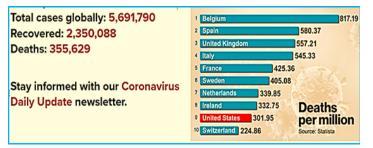
sample size found that the difference was not significant enough to meet the standard of research that usually exceeds at least 95 percent. Opponents of the NIH argue that if the outside committee had not stopped the original study, doctors would have a better chance of drawing clear conclusions about the drug's life-saving efficacy. Another argument against the NIH is that the decision not to use placebo makes Ramadsibir "the standard" in the Corona war, although it is still unclear whether it is good enough to be standard. In the case of Remedisbir, the standard means that all other anti-Corne drugs in the future will be tested for a shorter duration of illness, although it is currently unclear whether this is the important measure for a future drug for Corona.

On the other hand, there are those who think the NIH decision was in fact correct, mainly for ethical reasons. Proponents of NIH argue that patients who are proven to be effective and can save lives should not be prevented, so once the conclusion that Ramdasibir was an effective drug, the use of dummy drugs had to be stopped. In addition, advocates say that while the improvement in mortality was not significant according to the scientific standard (over 95 percent confidence), it was also not low (81 percent), and during an epidemic such as COVID19, patients could not be prevented from treatment that could save their lives.

Currently, the FDA recognizes Ramadsibir as an emergency drug only, which has not prevented the company from producing the drug from signing a distribution agreement with 127 states. We seem to have to wait for more results from the Ramadsivir Experimental Report to see all the details in the big picture.

#### Corona antibodies may disappear after only 6 months

New study found: The antibodies that develop in response to coronaviruses do not stay in the body for a long time [33]. Coronaviruses are different, but researchers say it may be their common denominator.



The immunity that develops in the body after infection with the Coronavirus could disappear after only six months - according to a new study conducted at the University of Amsterdam. Although the study looked at various types of Coronavirus that infect humans, the researchers made it clear that this is also true of the current virus.

"The period of immunity, that is, the period when a person infected with corona protected from recurrence - is alarmingly short," the researchers said. "In the study, frequent recurrences were observed about 12 months after the initial infection, and the number of antibodies decreased significantly after 6 months."

**Exceptional leap: 64 Corona patients were diagnosed a day, a special hearing will be convened this morning** Last update: 29.05.20, 00:20. Is this the "SECOND WAVE?"

Concerned by the Ministry of Health in light of "a relatively unusual increase in infection rates". This morning, the Ministry of Health will convene to discuss a situation assessment: "Don't follow the rules, especially in schools." Outbreak at the Hebrew Gymnasium High School in Jerusalem. Sick students diagnosed in Bat Yam Corona numbers are alarmingly climbing: Health Ministry data released Thursday shows that 64 patients diagnosed yesterday. The ministry accompanied the publication of the data in an exceptional statement: "There has been a relatively exceptional increase in the

infection rate in the last 48 hours. The ministry is again urging the public not to go into complacency and strict adherence to the guidelines. The mood that the Corona is behind us - is incorrect."

In light of the unusual data, the Ministry of Health's leadership will meet this morning to discuss a situation assessment. A senior Health Ministry official told Ynet ahead of the hearing: "It is clear to us that the rules in general and schools particularly are not strict." Among the steps are considered: Extensive testing among foreigners in Tel Aviv as done in Jerusalem. In some of the hospitals, several unusual diagnoses are reported in recent days among the foreign population in southern Tel Aviv. To this should be added high school outbreaks in Jerusalem and sick students diagnosed in Bat Yam [34].



Testing Corona in Jerusalem, May 29 2020



Winter. Outside the "negligible" infection risk

### **Concluding Remarks**

The speed from the devil. We are likely to learn this lesson again. Let's hope that what happens today is not the swallows that herald the arrival of the second wave. Tired of the Corona, but we must understand: The virus is not affected by the Israeli government's administrative measures. And back to normal - only when the virus, really disappeared. And not him. It is alive and well and will continue until the vaccine is found and the drug that really destroys it is found. Patience, gentlemen, and God's will - even a broom shoots!

## There is growing suspicion that winters have infected humans in Corona

"The revenge of the winters" (animals), with the help of the cats: Reporting in the Netherlands, a second worker on a ranch identified for a wintry farm for the fur industry - which probably sticks from the small mammal. Distributors: Probably cats. Veterinarians require: kill all the winters on the affected farms [35].

### The Corona's Good Souls

They all talk about the brave medical staff, but the Corona era also highlighted the sacrifice, social responsibility and giving of a host of volunteers, who did not think for a moment but only how to help populations in crisis: from worrying to the needs of senior citizens through performing corona testing to purchasing computers for teens Poor economics so they can learn through the zoom. This is what the beautiful Israeli looks like [36].

This virus is a powerful reminder of our shared humanity. It does not discriminate by race, religion or nationality. It infects the rich as quickly as the poor. This makes essential factors just as important as ordinary citizens. In our way we are all equal, which means that we must all deal with this crisis. During increased polarization around the world, this epidemic reminds us of our shared humanity. Its unremitting spread should strengthen our confidence in the universal dignity of all human beings.]

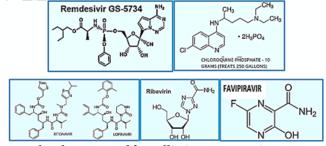
#### Second wave COVID 19 - 115 diagnosed for COVID 19 out of 1400 tested. Government officials: If there is further aggravation tomorrow - strict measures will be taken

Before the Ministry of Health's special briefing, the PM held a conference call with defense ministers, finance and education in light of the leap in Corona's new pillars.

Following the surge in the Coronavirus illness, government officials warned Friday that if further aggravations made tomorrow, stricter measures taken. Before the special briefing by the top of the Health Ministry, Prime Minister Benjamin Netanyahu, who called "to make a living," yesterday, held a telephone conference call with Defense Minister Benny Gantz, Finance Minister Israel Katz and Education Minister Yoav Galant.

### Currently, only palliative therapies for COVID 19 are available

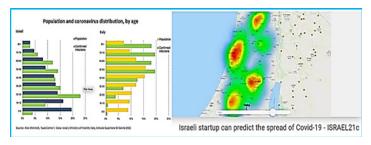
Here are a few drug molecules approves for treatment of the disease in emergency situation: REMDSEVIR, CHLOROQUINE, LOPINAVIR, RIBAVIRIN, FAVIPIRAVIR Mechanism of action revealed for Remdesivir, potential coronavirus drug. Researchers demonstrated how the drug known as remdesivir works, presenting the viral RNA polymerase of coronaviruses as a target for these conditions.



Drug molecules approved for palliative treatment in emergencies

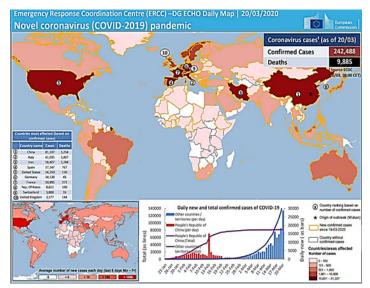
### Weizmann Institute forecast Corona's "second wave" - probably on the way

115 patients in one day - is this the second wave we were so worried about? Weizmann Institute scientists, who have identified the outbreak in Bnei Brak and other communities according to the disease symptoms in the city, estimate the second wave is definitely on the way.



Coronavirus spread in israel

DI survey reveals that public outlook on Netanyahu's coping with the health crisis has changed very badly, while large numbers of the population are probably still worried about getting COVID-19. More than half of Israelis (54.5%) believe there will be a "second wave" of COVID-19 - the disease caused by the pathogen of the Coronavirus.



### Second Wave Corona in Israel

Israel's Biggest Challenge in Preparing for a Second Wave of Coronavirus The assessment that Israel defeated COVID-19 may lead to dangerous complacency • Securing a vaccine means fighting out other countries, and taking a gamble.

Twice a day - about 11 p.m. And shortly after 8 P.M. New releases on television - Israel's Ministry of Health publishes the latest local data on the porn virus epidemic. The people who actually died of the virus have hardly paid attention to the public today; they usually die by shrug - like the deaths of elderly people from other diseases.

People's interest seems to be elsewhere: the number of people who have just been infected since the previous update. These numbers have been low for some time. The unlocking restrictions here began on April 19. Independence Day (April 29) was over two weeks ago. Experts say: The effect of every stage of the virus fight is seen two weeks after its onset, because of the time elapsed between being an infected person and he or she beginning to feel symptoms, he is hospitalized (in some cases) and their condition worsens (in less cases).

## Not only in the gym: new patients were diagnosed in other schools

Over the past few hours, three educational institutions have reported new Corona patients being diagnosed among their students - raising the tension among parents and educational staff. The mass infection event at the Jerusalem gymnasium has caused public panic from a second wave of the virus, and there is now concern about similar cases that may be revealed in other schools.

### The Netanyahu Speech



## Not only in the gym: new patients were diagnosed in other schools

Over the past few hours, three educational institutions have reported new Corona patients being diagnosed among their students - raising the tension among parents and educational staff. The mass infestation event at the Jerusalem gymnasium has caused public panic from a second wave of the virus, and there are now fears of similar cases that may emerge in other schools.

The trend is expanding Tonight (between Saturday and Sunday) the trend of adherence to educational institutions continues, with three other schools in Holon, Kiryat Yearim and Jerusalem reporting on pupils who were discovered to be Corona patients. This past weekend saw a sharp rise in the number of new infections in Corona, after more than 100 students and staff at the Hebrew Gymnasium in Jerusalem were diagnosed with the virus.

Tonight (between Saturday and Sunday) the trend of adherence to educational institutions continues, with three other schools in Holon, Kiryat Yearim and Jerusalem reporting on pupils who were discovered to be Corona patients. This past weekend saw a sharp rise in the number of new infections in Corona, after more than 100 students and staff at the Hebrew Gymnasium in Jerusalem were diagnosed with the virus.

2 gardens in the city of Ramat Elhanan, diagnosed with corona blue. The kindergarten teacher was admitted and, following the incident, 17 children and 9 staff members went into solitary confinement.

Holon received an official statement Saturday that a seventh-grader

from Holon School in Holon was diagnosed with Corona after feeling ill over the past few days. After a preliminary investigation and following the Ministry of Health's guidelines, the government decided that four seventh and sixth grade students placed in solitary confinement for 14 days - and not return to school today. The school administration and Holon municipality are in direct and continuous contact with the Ministry of Education and the Ministry of Health.

### PM: "If we don't keep the rules, we'll go back to restrictions"

Background: The big increase in morbidity in recent days -Netanyahu held a press conference • "It's not over, the Corona is not behind us," the prime minister said. "He addressed the issue of the education system:" The data does not have to close all schools "• This week: Enforcement is expected to tighten Prime Minister Benjamin Netanyahu spoke, in light of the rise in the number of people infected in Corona in recent days and the fear of a second wave of morbidity, and in the background the feeling of complacency in the public. Netanyahu spoke at the press conference with Finance Minister Israel Katz and Education Minister Yoav Galant. Largely resident, but only where patients were found: "The data does not require it."

#### Minister of Health against Complacency in Public: A 5-fold increase in the percentage of subjects found to be positive Health minister Edelstein said that there is an increase in morbidity

even when the number of patients in the gymnasium in Jerusalem lowered. He warned of another expansion. According to him, Israel is preparing to conduct 15,000 tests a day.

Health Minister Yuli Edelstein said on Sunday (May 31, 2020) at the opening of the cabinet meeting that there was a five-fold increase in the percentage of infected persons who diagnosed positive for COVID 19. Edelstein, who did not address yesterday's statement to Netanyahu's media, Finance Minister Katz and Minister of Education Galant, spoke after Prime Minister Gantz replaced the alleged increase in morbidity.

"I hear people saying what this panic is, it's just a high point event in the gym and it doesn't concern me," Edelstein said in a criticism of someone waving his hand at the data. "I also hear voices saying what it means to increase 40 people in a country of nine million, but even when the number of gymnasium patients reduced, there is an increase."

# More schools are closing; Health Ministry official: "Stay away from children, don't hug"

Six other Israeli schools have identified cases of Koronovich virus among students on Saturday and Sunday, and another is suspected in the case where many students have quarantined. Channel 12 reported that the schools in Jerusalem, Holon and Kiryat Aram all had isolated classes after it became clear that they were carriers.



Another 11 Corona patients and teachers were diagnosed today out of 50 new patients in Israel [41]. Nearly 10,000 students and teachers have so far are sent for home-isolated. Deputy Director-General of the Ministry of Health Prof. Itamar Grotto said: "When a family has an adult or a background illness - it is best to stay away from the children."

# The survey reveals: 2-3% of Israel's population has already been infected in Corona

A special study conducted by Tel Aviv University revealed that between 200 and 300,000 people in the country were exposed to the 24 virus. Prof. Danny Cohen, who conducted the survey: "The findings indicate that the closure did the job."

Were we hoping for herd immunity? It turns out it is still far away: The first Ministry of Health antibody survey, the epidemic team and Tel Aviv University indicate that only 2-3 percent of the population, between 200 and 300,000 people in Israel, have already been infected with the Coronavirus.

The joint study aims to give the Ministry of Health information to help manage the epidemic. He first relied on blood tests for IGG antibodies, which indicate a response of the body's immune system to the virus. The reaction usually develops two or three weeks after exposure, and it also occurs in people who have been exposed to the virus and have not developed the symptoms of the disease.

## Schools and kindergartens have been closed since the morning of June 4, 2020

Five schools in Tel Aviv district ceased operations this morning after being diagnosed with corona patients. Ten educational institutions have closed: Following a diagnosis of standardized patients, the Ministry of Education announced Thursday (Thursday) the closure of ten schools and kindergartens across the country. The outbreak in educational institutions continues, and so far, more than 50 schools have been closed, with thousands of students and teaching staff sent to isolation.

Five schools closed in Tel Aviv District: Gwenim Elementary School in Tel Aviv, where two sick students diagnosed. Ben-Zvi High School was closed after one patient diagnosed. There is a "bluecollar" student and teacher in COVID 19, one blue-collar student, and one Terra Santa High School diagnosed with one patient.

# More than 20 schools and kindergartens have been closed since this morning

Across the country, schools have been closed since the morning after Corona patients were diagnosed • More than 1,000 students and teaching staff sent to isolation today

More and more schools are closing after Corona patients discovered: Following the diagnosis of more patients in educational institutions, the Ministry of Education announced Thursday (Thursday) the closure of more than twenty schools and kindergartens across the country. More than 1,000 students and teaching isolated since yesterday, with 21 more schools closed today after patients discovered. So far, patients diagnosed in schools in more than 30 different localities. 72 schools have been closed to date, and thousands of students and teaching staff sent to isolation.

9,079 students and teaching staff are in isolation, and 285 diagnosed with patients so far - 24 of them today. Five schools closed in Tel

Aviv District: Gwenim Elementary School in Tel Aviv, where two sick students diagnosed. In Givatayim Ben Zvi High School was closed after one patient diagnosed. In Jaffa, three schools were closed. Tabaa Primary School closed In which a blue-collar student and teacher in Corona, one Ferrer Elementary School, one bluecollar student was diagnosed and one Terra Santa High School one patient was diagnosed as well.

### First publication: Netanyahu in closed talks scolds ministers -"The competition that opens faster will lead to a sharp increase in morbidity"

Prime Minister v. Ministers • "Everybody is hyperactive and wants to do in his field but it has wide implications," he told them in closed talks. Also: Fear of legislative delays following Knesset member's adoption in Corona - epidemiological investigation underway PM Netanyahu rebuked prime ministers for their decision to open the economy too quickly: This emerges from private talks scheduled for Thursday (Thursday) in the Central Edition. For more updates and submitting your stories - go to the news Facebook page The Transport Minister (Regev) declared that in any event the train would return to activity. Education Minister Galant said that schools should not be closed before there was a discussion in the MLA; Prime Minister Netanyahu scolded ministers today and told them in private conversations:



נתניהו בשיחות סגורות: ״שרים מכריזים על החלטות באופן עצמאי. כל אחד היפראקטיבי ורוצה לעשות בתחומו אבל יש לזה השלכות רוחב. יש תחרות מי יפתח יותר מהר וככל שאתה פותח מהר יותר גם עלולה להיות הדבקה.״

"Ministers announce decisions independently. Everyone is hyperactive and wants to do something in their field, but it has wide-ranging implications. During those talks, the prime minister also said that he did not want to go back to "tougher instructions", but he was looking at a stop in relief and even daily. Following the remarks made by the prime minister, a directive from the NSC published in the Ministerial Corps' WhatsApp Group, where he reassures them that "summaries regarding the general policy must obtain the consent of the NSC and as far as the PM's approval also discussed.

## Record of more than a month in the number of infections and in the number of tests

For the third time in a week, the daily infection rate was higher than 100, yesterday reaching 121. Number of tests: 14,139, higher than April 23. School closures continue: A student was diagnosed with Corona in junior high school in Rishon Lezion, and the division closed. Yesterday: Record of daily infections in the world Yaron Druckman, Adir Yanko and Tamar Trabelsi Haddpfad Significant increase in the number of corona tests - along with a record of more than a month, in the number of people infected: for the third time in the last week the number of daily diagnosed with the coronavirus has crossed the 100 threshold. According to the updated data, the number of people diagnosed yesterday reached 121 - a record of over a month.

The alarming rise in the number of infections in the past week seems to be a good one when you look at the number of active corona patients (the total number of infections less recovered and the patients deceased). After dropping below 2,000 on May 27, there has been a steady rise recently, and now the number of active patients is 2,245. So far, Corona has recovered 15,026 people, and the total number of infections is 17,562.

### The outbreak in the education system: 92 schools an kindergartens closed

304 students and teaching staff have already applied • Nearly 14,000 are in isolation • Five educational institutions have been closed since yesterday evening, following instructions to deactivate each institution.

The worrying trend continues: According to the updated Ministry of Education, 304 students and teaching staff have so far been in COVID 19. It's been an increase of three patients since yesterday evening. On Friday, the ministry announced that 13,702 students and teaching staff had gone into isolation.

Yesterday, the number of schools and kindergartens closed was 87, and today the figure has risen to 92. Some authorities have already announced a return to distance education or capsule splitting, and the Education Ministry has made it clear that they will not take action against administrators who choose not to pursue a full-time curriculum.

# Court: "Emergency law is necessary"; Ministers are entitled to corona tests

The Court announced that the public sent hundreds of reservations to the bill intended to give the government broad powers in the Corona period • Mendelblit further explained: It was not possible to extend the date of receiving comments from the public • Ministers would be allowed to be tested after the cabinet meeting - but parliamentary aides request reviewed.

The law provokes controversy, protest - and the special policy towards ministers: Last Thursday, hundreds of people in Tel Aviv protested the Emergency Law, dubbed the "Corona Law" - a law

that gives unlimited powers to the police and the government. Twelve demonstrators arrested during a protest against the law. Prime Minister Netanyahu tried to calm the spirits when he announced that police would not conduct searches without a warrant, the public sent hundreds of comments and reservations to the law. The Knesset is outraged: after it has emerged that the ministers will receive corona-tests at their request - but their aides referred to the health funds, and some have also received adverse reactions.

The Coronavirus Emergency Bill in Israel can perpetuate the violation of human rights. Contrary to three-month standard emergency regulations, the government is trying to extend its special powers for 10 months. Such legislation addresses citizens as issues and will allow chaos to prevail.

### References

- 1. Allan S Brett, David M Rind (2020) "ACE Inhibitors and ARBs During the COVID-19 Pandemic 17" https://www.jwatch.org/ na51345/2020/04/09/ace-inhibitors-and-arbs-during-covid-19-pandemic
- 2. "What It's Like to Recover From COVID-19". https://www. consumerreports.org/coronavirus/recover-from-covid-19what-its-like/
- 3. Anna-Winona Struck, Marco Axmann, Susanne Pfefferle, Christian Drosten, Bernd Meyer (2012) "A hexapeptide of the receptor-binding domain of SARS corona virus spike protein blocks viral entry into host cells via the human receptor ACE2". Antiviral Research 94: 288-296.
- 4. YouTube presentation on the role of spikes in anticorona research. https://www.youtube.com/watch?v=IuJqbV4D8Cc
- 5. "What we know about ACE inhibitors, high blood pressure and COVID-19". https://theconversation.com/what-weknow-about-ace-inhibitors-high-blood-pressure-andcovid-19-133970
- 6. "What is the ACE2 receptor, how is it connected to coronavirus and why might it be key to treating COVID-19? The experts explain". https://theconversation.com/whatis-the-ace2-receptor-how-is-it-connected-to-coronavirusand-why-might-it-be-key-to-treating-covid-19-the-expertsexplain-136928
- 7. Graham Simmons, Dhaval N Gosaliai, Andrew J Rennekamp, Jacqueline D Reeves, Scott L Diamond, et al. (2005) "Inhibitors of cathepsin L prevent severe acute respiratory syndrome coronavirus entry". Proc Natl Acad Sci USA 102: 11876-11881.
- 8. Alexandra C Walls, Young-Jun Park, M Alejandra Tortorici, Abigail Wall, Andrew T McGuire, et al. (2020) "Structure, function and antigenicity of the SARS-CoV-2 spike glycoprotein". Cell 181: 281-292.e6.
- 9. Traggiai E, Becker S, Subbarao K, Kolesnikova L, Uematsu Y, et al. (2004) An efficient method to make human monoclonal antibodies from memory B cells: potent neutralization of SARS coronavirus. Nature Medicine 10: 871-875.
- 10. Yang Z-Y, Kong WP, Huang Y, Roberts A, Murphy BR, et al. (2004) A DNA vaccine induces SARS coronavirus neutralization and protective immunity in mice. Nature 428: 561-564.
- 11. Allyson Mann (2020) Searching the COVID-19 spike protein for a potential vaccine". https://news.uga.edu/searching-thecovid-19-spike-protein-for-a-potential-vaccine/
- 12. Wanbo Tai, Lei He, Xiujuan Zhang, Jing Pu, Denis Voronin, et al. (2020) "Characterization of the receptor-binding domain

(RBD) of 2019 novel coronavirus: implication for development of RBD protein as a viral attachment inhibitor and vaccine" Cell Mol Immunol 17: 613-320.

- 13. "Study of Open Label Losartan in COVID-19" https:// clinicaltrials.gov/ct2/show/NCT04335123
- Genevieve Estenne, Pierre Dodey, Patrice Renaut, Gerard Leclerca (1995) "SYNTHESIS AND BIOLOGICAL EVALUATION OF NEW ARYLTHIOPHENE ANALOGS OF DuP 753". Bioorganic & Medicinal Chemistry Letters 5: 15-18.
- 15. Mary Donoghue, Frank Hsieh, Elizabeth Baronas, Kevin Godbout, Michael Gosselin, et al. (2000) "A Novel Angiotensin-Converting Enzyme-Related Carboxypeptidase (ACE2) Converts Angiotensin I to Angiotensin 1-9". Circulation Research 87: e1-e9.
- M DE Gasparo, KJ Catt, T Inagami, JW Wright, TH Unger (2000) "International Union of Pharmacology. XXIII. The Angiotensin II Receptors". Pharmacological Reviews 52: 415-472.
- 17. Martin Clement, Stephane S Martin, Marie-Eve Beaulieu, Caroline Chamber, Pierre Lavigne, et al. (2005) "Determining the Environment of the Ligand Binding Pocket of the Human Angiotensin II Type I (hAT1) Receptor Using the Methionine Proximity Assay". The Journal Of Biological Chemistry 280: 27121-27129.
- Leigh Krietsch Boerner (2020) "Rethinking the role of blood pressure drugs in COVID-19". https://cen.acs.org/biologicalchemistry/infectious-disease/Rethinking-role-bloodpressure-drugs-in-COVID-19/98/i20
- 19. Ehlers MRW, Riordan JF (1991) Angiotensin-converting enzyme. Zinc- and inhibitor-binding stoichiometries of the somatic and testis isozymes. Biochemistry 30: 7118-7126.
- 20. Juan Simon Rico-Mesa, Averi White, Allen S Anderson (2020) "Outcomes in Patients with COVID-19 Infection Taking ACEI/ARB" Current Cardiology Reports 22: 31.
- 21. Carlos M Ferrario, Jewell Jessup, Mark C Chappell, David B Averill, K Bridget Brosnihan, et al. (2005) " Effect of

Angiotensin-Converting Enzyme Inhibition and Angiotensin II Receptor Blockers on Cardiac Angiotensin Converting Enzyme 2". Originally published 111: 2605-2610.

- 22. Wrapp D, Wang M, Corbett KS, Goldsmith JA, Hsieh CL, et al. (2020) Cryo-EM structure of the 2019-nCoV spike in the prefusion conformation. Science 367: 1260-1263.
- 23. Norman E Davey, Gilles Trave, Toby Gibson (2011) "How viruses hijack cell regulation". Trends in Biochemical Sciences 36.
- 24. https://www.israelhayom.co.il/article/764675
- 25. https://www.ynet.co.il/articles/0,7340,L-5737755,00.html
- 26. https://nypost.com/2020/05/23/coronavirus-immunity-could-disappear-after-six-months-study/
- 27. https://www.ynet.co.il/articles/0,7340,L-5738605,00. html#autoplay
- 28. https://www.ynet.co.il/articles/0,7340,L-5736568,00.html
- 29. https://www.ynet.co.il/articles/0,7340,L-5730936,00.html
- 30. https://www.jpost.com/opinion/south-african-chief-rabbi-topost-coronavirus-has-a-spiritual-effect-621939
- 31. https://www.drugtargetreview.com/news/56798/mechanismof-action-revealed-for-remdesivir-potential-coronavirusdrug/
- 32. https://www.haaretz.com/israel-news/.premium-israels-biggest-challenge-in-preparing-for-a-second-wave-ofcoronavirus-1.8847477
- 33. http://www.makro.co.il/newsisrael/2020 q2Articled69ecca9cb76271026. htm?sCh=31750a2610f26110&pId=173113802
- https://www.timesofisrael.com/virus-cases-found-in-3-moreschools-as-ministers-decide-against-sweeping-closure/
- 35. https://www.mako.co.il/newseducation/2020\_q2/ Article11646c8dab38271027. htm?sCh=31750a2610f26110&pId=173113802
- 36. https://www.haaretz.com/israel-news/.premium-israels-emergency-coronavirus-bill-will-perpetuate-infringementon-human-rights-1.8885062

**Copyright:** ©2020 Shimon Shatzmiller., This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.