

The Lord is like a strong tower, where the righteous can go and be safe.

Proverbs 18:10

DIYARYO KABITENYO

Nagmamalasakit sa lalawigan

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Be alert, stand firm in the faith, be brave, be strong.

1 Corinthians 16:13

Number of COVID-19 cases seen to increase in some Cavite areas

IMUS CITY. Bacoor was the top in Cavite—the number of coronavirus disease (COVID-19) cases in the four biggest districts and at least four municipalities in the province was observed to have gradually increased over the last 10 days as of June 18, after more cases were recorded in Bacoor, Dasmariñas, Imus, and General Trias, the latest final case tracker reports revealed.

The Bacoor case tracker report showed that of the 130 cases, 11 died and 87 have recovered, including the last four reported, with 52 active, 27 probable, and 43 suspect cases.

In her latest report, Mayor Jennifer A. Barraga said Dasmariñas has 84 cases, with 10 deaths and 44 recoveries, and 30 active and 123 suspect cases.

In his June 14 report, Imus Mayor Emmanuel Leonardo

Maliksi said that the city has 71 cases, with nine deaths, 45 recoveries, and 17 active cases.

In its latest re-



BARRAGA



MALIKSI

port, the General Trias city government recorded 35 total cases, with five deaths and 21 recoveries, nine active, 99 probable, 962 suspect, and 366 cleared cases.

The municipalities that reported case increases in the last 10 days were Silang, Rosario (also called San Juan), Carmona, and General Mariano Alvarez (GMA).

Silang now has 21 total cases, Rosario 13, Carmona, 16, and GMA, 15.

The latest COVID-19 case data or tracker reports and messages of Bacoor, Dasmariñas, and General Trias and some other cities and municipalities can be viewed regularly on posts of the local governments and/or the mayors on their Facebook pages.

Other cities and municipalities can be viewed regularly on posts of the local governments and/or the mayors on their Facebook pages.

Videos claiming Taal Volcano's eruption turned out to be thunderstorms

Fears about the possible Taal Volcano eruption surfaced anew after videos of lightning near the area made social media viral last night.

Last January, the world saw the Philippines' small, active Taal Volcano emitting huge plumes of ash that spread across Luzon and other nearby countries.

Subsequently, alert level 4 was raised over the nearby areas and this lasted for weeks.

After the volcano



Alert level has been lowered to 1, authorities reported that the calamity left a hefty P1.2 billion worth of damage in agriculture at its wake.

Last June 18, some Facebook users shared

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DIYARYO KABITENYO

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Super-potent human antibodies protect against COVID-19 in animal tests

A team led by Scripps Research has discovered antibodies in the blood of recovered COVID-19 patients that provide powerful protection against SARS-CoV-2, the coronavirus that causes the disease, when tested in animals and human cell cultures.

The research, published June 15, 2020 in Science, offers a paradigm of swift reaction to an emergent and deadly viral pandemic, and sets the stage for clinical trials and additional tests of the antibodies, which are now being produced as potential treatments

postul that thunderstorms were also experienced in Muzo Esja and some parts of Tarlac, Zambales, Batavia and Pampanga.

Each advisory de-

scribed a thunderstorm as "moderate to heavy rain showers with lightning and strong winds" that lasted for two hours.

After the thunder-

storms stopped, PAGASA advised the public to keep themselves updated through social media.

"All are advised to take precautionary

measures against the impacts associated with these hazards which include flash floods and landslides. Keep monitoring for updates," it said.

used to provide temporary, vaccine-like protection against SARS-CoV-2 infection for healthcare workers, elderly people and others who respond poorly to traditional vaccines or are suspected of a recent exposure to the coronavirus.

The project was led by groups at Scripps Research, IAVI, a non-profit scientific research organization dedicated to addressing urgent, unmet global health challenges; and University of California San Diego School of Medicine.

"It has been a tremendous collaborative effort, and we're now

focused on making large quantities of these promising antibodies for clinical trials," says co-lead author Thomas Rogers, MD, PhD, an adjunct assistant professor in the Department of Immunology & Microbiology at Scripps Research, and assistant professor of Medicine at UC San Diego.

Developing a treatment or vaccine for severe COVID-19 is currently the world's top public health priority. Globally, almost 8 million people have tested positive for SARS-CoV-2 infection, and more than 400,000 have died of severe COVID-19.

(VIDEOS... from page 7)

video clips of lightning level of Taal Volcano seen from afar which they claimed to be near or around the Taal Volcano raising speculations of another looming volcanic eruption. "Taal" trended on Twitter late June 18 following the social media posts.

One Facebook page captioned its post of the clip with "Just in: Taal volcano pumpunk na naman?"

However, the state-run Philippine Institute of Volcanology and Seismology did not announce an imminent eruption and did not raise the volcano alert

level of Taal Volcano from the current level 1.

Instead, the state weather bureau issued thunderstorm advisories on the same day.

Philippine Atmospheric, Geophysical and Astronomical Services Administration has been issuing thunderstorm advisories on its social media account since 2 p.m. of June 18 that cover the following areas: Metro Manila and the provinces Bulacan, Cavite, Batangas, Laguna, Rizal and Quezon.

Around 8 p.m. of June 18, PAGASA is-

used to provide temporary, vaccine-like protection against SARS-CoV-2 infection for healthcare workers, elderly people and others who respond poorly to traditional vaccines or are suspected of a recent exposure to the coronavirus. The project was led by groups at Scripps Research, IAVI, a non-profit scientific research organization dedicated to addressing urgent, unmet global health challenges; and University of California San Diego School of Medicine. "It has been a tremendous collaborative effort, and we're now focused on making large quantities of these promising antibodies for clinical trials," says co-lead author Thomas Rogers, MD, PhD, an adjunct assistant professor in the Department of Immunology & Microbiology at Scripps Research, and assistant professor of Medicine at UC San Diego. Developing a treatment or vaccine for severe COVID-19 is currently the world's top public health priority. Globally, almost 8 million people have tested positive for SARS-CoV-2 infection, and more than 400,000 have died of severe COVID-19. However, the state-run Philippine Institute of Volcanology and Seismology did not announce an imminent eruption and did not raise the volcano alert level of Taal Volcano from the current level 1. Instead, the state weather bureau issued thunderstorm advisories on the same day. Philippine Atmospheric, Geophysical and Astronomical Services Administration has been issuing thunderstorm advisories on its social media account since 2 p.m. of June 18 that cover the following areas: Metro Manila and the provinces Bulacan, Cavite, Batangas, Laguna, Rizal and Quezon. Around 8 p.m. of June 18, PAGASA is-

Republic of the Philippines
**OFFICE OF THE MUNICIPAL
 CIVIL REGISTRAR**
 Indang, Cavite

Publication Notice
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NOTICE TO THE PUBLIC

CCE-0024-2020

In compliance with the publication requirement and pursuant to DCRG Memorandum Circular No. 2013-1 Outlets in the Implementation of the Administrative Order No. 3 Series of 2012 (OR on R.A. 10172), Notice is hereby served by the public that **AMMIE P. FERRER** has filed with this Office a petition for annotation of entry in the date of birth from **February 24, 1972 to February 21, 1972** in the Certificate of Live Birth of **AMY CARO PENALBA** of Indang, Cavite and whose parents are **Virgilio Penalba and Nelta Care**.

Any person adversely affected by said petition may file his written opposition with this Office not later than **June 29, 2020**.

(Sgd.) **MERCI A. CHAVEZ**
 Municipal Civil Registrar

DIYARYO KABITENYO - June 15 & 22, 2020

Republic of the Philippines
 City Civil Registry Office
 Province of Cavite
 City of Indang

NOTICE OF PUBLICATION

In compliance with the publication requirement and pursuant to DCRG Memorandum Circular No. 2013-1 Outlets in the Implementation of the Administrative Order No. 1 Series of 2012 (OR on R.A. 10172), Notice is hereby served to the public that **ARLENE M. SUBROMED** filed with this Office a petition for correction of entry in sex from **MALE** to **FEMALE** in the Certificate of Live Birth of **ARLENE BALLOS MEJOLLO** at City of Indang, Cavite and whose parents are **LUCIANO MEJOLLO and ELYNRA C. BALLOS**.

Any person adversely affected by said petition may file his written opposition with this office not later than **July 6, 2020**.

(Sgd.) **VIOLETA P. SAÑEZ**
 City Civil Registrar

DIYARYO KABITENYO - June 22 & 28, 2020

Republic of the Philippines
 Local Civil Registry Office
 Province: Cavite
 City/Municipality: Indang

NOTICE FOR PUBLICATION

In compliance with Section 5 of Republic Act No. 3698, a notice is hereby served to the public that **MARCELO PASIL** has filed with this Office a petition for change of last name from **MARBY CRIS** to **MARCRIS** in the birth certificate of **MARBY CRIS PALLERNO RUIZ** who was born on **28 APRIL 1984** at **ROGASANO, CAVITE** and whose parents are **ARTURO RUIZ and NELITA E. PALLERNO**.

Any person adversely affected by said petition may file his written opposition with this Office not later than **06 July 2020**.

(Sgd.) **MARIA ROSARIO C. MORIANO**
 Municipal Civil Registrar

DIYARYO KABITENYO - June 22 & 28, 2020

Microbes might manage your cholesterol

Researchers discover one day help people manage their cholesterol through diet, probiotics, or entirely new types of treatment.

Date: June 17, 2020

Source: Harvard University

Summary: Researchers discover a link between human blood cholesterol levels and a gene in the microbiome that could

manage their cholesterol through diet, probiotics, or entirely new types of treatment.

In the darkest parts of the world where light fails to flick out the unflinching bonny of the stars, look up. There are still fewer specks illuminating the

universe than there are microbes that play an important role in hidden from sight, a whole universe inside just one human gut. Many species are known, like E. coli, but many more, sometimes referred to as "microbial dark matter," remain elusive. "We know it's there," said Doug Kenny, a Ph.D. candidate in the Graduate School of Arts and Sciences, "because of how it affects things around it." Kenny is co-first author on a new study in *Cell Host and Microbe* that illuminates a bit of that microbial dark matter: a species of gut bacteria that can affect cholesterol levels in humans. "The metabolism of cholesterol by these

microbes may play an important role in hidden from sight, a whole universe inside just one human gut. Many species are known, like E. coli, but many more, sometimes referred to as "microbial dark matter," remain elusive. "We know it's there," said Doug Kenny, a Ph.D. candidate in the Graduate School of Arts and Sciences, "because of how it affects things around it." Kenny is co-first author on a new study in *Cell Host and Microbe* that illuminates a bit of that microbial dark matter: a species of gut bacteria that can affect cholesterol levels in humans. "The metabolism of cholesterol by these

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According to the Centers for Disease Control and Prevention (CDC), in 2016, over 12 percent of adults in the United States age 20 and older had high cholesterol levels, a risk factor for the country's number one cause of death: heart disease. Only half of that group take medications like statins to manage their cholesterol levels, while such drugs are a valuable tool, they don't work for all patients and, though rare, can have concerning side effects.

"We're not looking for the silver bullet to solve cardiovascular disease," Kenny said, "but there's this other

another system at play that could be regulating cholesterol levels that we haven't thought about yet."

The hog sewage lagoon

Since the late 1800s, scientists knew that something was happening to cholesterol in the gut. Over decades, work inched closer to an answer. One study even found evidence of cholesterol-consuming bacteria living in a hog sewage lagoon. But those microbes preferred to live in hogs, not humans.

Previous studies are like a case file of clues (one 1977 lab even isolated the initial microbe but the samples were lost).

Light-activated 'CRISPR' triggers precision gene editing and super-fast DNA repair

In a series of experiments using human cancer cell lines, scientists at Johns Hopkins Medicine say they have successfully used light as a trigger to make precise cuts in genomic material rapidly, using a molecular scalpel known as CRISPR, and observe how specialized cell proteins repair the exact spot where the gene was cut.

Results of the experiments, published June 11 in *Science*, not only reveal new details about the DNA repair process, but also are likely, the researchers say, to speed up and aid understanding of the DNA activity that typically causes aging and many cancers.

"Our new system of gene editing allows for targeted DNA cutting within seconds after ac-

tivation. With previous technologies, gene editing could take much longer — even hours," says prodouctorial fellow Yang Lin, Ph.D., a member of the Johns Hopkins Medicine research team.

The powerful CRISPR tool has, in recent years, enabled scientists to easily change, or "edit," DNA sequences and alter gene functions to speed the pace of research on gene-linked conditions.

Adapted from a naturally occurring gene editing system found in bacteria, CRISPR uses small sequences of genetic material called gRNA as a kind of guide that is coded to match and bind to a specific sequence of genomic DNA within a cell. The CRISPR molecule also contains

an enzyme called Cas9, which acts as the scalpel to cut out the DNA sequence. Then, the cell uses its own enzymes and proteins to repair the sliced DNA, often adding DNA sequences that scientists slip into the cell.

Liu says that studying the DNA repair process has been hampered by an inability to damage the DNA, such as by using CRISPR, in a way that's fast, precise and "on demand."

For the new experiments, the scientists modified the CRISPR-Cas9 complex by engineering a light-sensitive RNA molecule that allows the CRISPR complex to cut genomic DNA in living cells only when exposed to a particular wavelength of light.

"The advantage of

our technique is that researchers can get the CRISPR machinery to find its target without prematurely cutting the gene, holding back its action until exposed to light," says Johns Hopkins M.D., Ph.D. candidate Roger Zou.

Liu also is a member of the research team. "This allows researchers to have far more control over exactly where and when the DNA is cut," he adds.

Other research teams have experimented with both drugs and light activation to control CRISPR timing, says Tarkip Ha, Ph.D., Bloomberg Distinguished Professor of Biophysics and Biophysical Chemistry, Biophysics and Biomedical Engineering at Johns Hopkins University, and a Howard

Hughes Medical Institute investigator. His team's experiments differ by improving the precise timing of CRISPR cuts and examining how quickly proteins repair the DNA damage.

For the current study, the Johns Hopkins team, led by Ha and Bin Wu, Ph.D., assistant professor of biophysics and biophysical chemistry at the Johns Hopkins University School of Medicine, delivered an electric pulse to cultures of human embryonic kidney cells and bone cancer cells, which opened pores in the cell membrane and allowed the CRISPR complex with the light-activated RNA molecule to slide into the cells. Then, the ac-

tivists waited 12 hours for the CRISPR

plex to bind to a targeted spot on the genomic DNA.

When they shined a light on the cells, they tracked the amount of time it took for the CRISPR complex to make the cut.

The team found that within 30 seconds of skimming the light on the cells, the CRISPR complex had cut more than 50 percent of its targets.

To further examine the timing of DNA repair, the Johns Hopkins scientists tracked when proteins involved in DNA repair latched on to the DNA cuts. They determined that repair proteins started their work within two minutes of the CRISPR activation, and the repair was completed as early

Liver perfusion could save 7 in 10 rejected donor livers

A major study investigating the effectiveness of liver perfusion as a technique to improve the function of donor livers that would have otherwise been rejected has shown that up to 7 in every 10 could be used after just 4-6 hours of the assessment.

The study, 'Transplantation of discarded livers following viability testing with normothermic machine perfusion', published June 17, 2020 in *Nature Communications*, could have significant implications for the liver transplant waiting list and the commissioning of local transplant services.

Currently, across the UK, a third of discarded livers don't meet desired transplant criteria and aren't used. Chronic liver disease in the UK is rising annually, a result of obesity and increasing alcohol

misuse causing approximately 8500 deaths per year. For those with end-stage liver disease, a transplant is the only hope for survival, but demand for livers suitable for transplantation far outstrips supply. According to the latest

NHS Blood and Transplant report, up to 20% of people awaiting a transplant operation died or were removed from waiting lists due to ill health.

A growing proportion of donated livers are coming from high-risk donors with a history of alcohol misuse, obesity or elderly people with comorbidities.

Often when a patient has suffered cardiac arrest that is unexpected and when the patient cannot or should not be resuscitated, these livers are of lower quality and pose risks to recipients. Consequently, the

majority are not transplanted.

Funded by the Wellcome Trust, experts from the University of Birmingham's Centre for Liver and Gastrointestinal Research, University Hospitals Birmingham NHS Foundation Trust and the NIHR Birmingham Biomedical Research Centre have found that just 4-6 hours of normothermic machine perfusion assessment enabled 70 per cent of currently discarded livers to recover enough to allow successful transplantation into a recipient.

Mr Hynek Mergental, Honorary Senior Lecturer at the University of Birmingham and Consultant Surgeon at the UHB Liver Unit said: "Whilst liver transplantation is one of the most advanced surgical procedures, up to now,

there has been no objective means to assess suitability of donor livers for transplantation. The VITAL trial validated our pre-clinical research and pilot clinical observations and these viability criteria can now guide transplant teams worldwide to provide access to the life-saving transplantation to more patients in need."

VITAL project lead, Professor Darjina Mirza, Consultant Transplant Surgeon at University Hospitals Birmingham NHS Foundation Trust, added: "This challenging study was designed to assess function of discarded livers in the real life situation, using the normothermic machine perfusion. The major challenge in this pioneering clinical trial was to assess patients safely while pushing

the envelope of sub-optimal liver utilization."

Mr Tamara Peters, Consultant Transplant Surgeon at UHB explains: "This ground-breaking trial has proven that objective parameters can be used for making a decision to use a borderline liver. The observed 100% study participants post transplant survival was reassuring and provided our patients and the surgical team with confidence to implement and further expand this approach, which now helps the sickest patients on our waiting list to undergo transplantation sooner and safer."

Dr Simon Allard, Reader in Liver Immunobiology at the University of Birmingham's Institute of Immunology and Immunotherapy, said: "It has long been recognised

that as a consequence of our population aging the quality of donated livers keeps declining. Based on our latest discoveries we believe that in the near future the machine perfusion platform will facilitate therapeutic interventions to improve liver viability. We expect we will be able to save even more organs than 70% observed in the VITAL trial, including livers from donors with known alcohol misuse or obesity."

Tim Essex, Head of Innovation Programmes at the Wellcome Trust, said: "Many more patients who need liver transplants will benefit from this technology. Giving recipients the tools to assess if a liver transplant will be viable will help the thousands of people who have chronic liver disease globally."

New nanoparticle drug combination for atherosclerosis

Physicochemical cargo-swapping nanoparticles (CSNP) designed by KAIST can help significantly reduce cholesterol and macrophage foam cells in arteries, which are the two main triggers for atherosclerotic plaque and inflammation.

The CSNP-based combination drug delivery therapy was proved to exert cholesterol-lowering, anti-inflammatory, and anti-proliferative functions of two common medications for treating atherosclerosis that are cyclodextrin and statin. Professor Ji-Ho Park and Dr. Heonjin Kim from KAIST's Department of Bio and Brain Engineering said their

study has shown great potential for future applications with reduced side effects.

Atherosclerosis is a chronic inflammatory vascular disease that is characterized by the accumulation of cholesterol and cholesterol-loaded macrophage foam cells in the intima. When this atherosclerotic plaque clogs and narrows the artery walls, they restrict blood flow and cause various cardiovascular conditions such as heart attacks and strokes. Heart attacks and strokes are the world's first and fifth causes of death respectively.

Oral statin administration has been used in clinic as a standard care for atherosclerosis, which is

prescribed to lower blood cholesterol and inhibit its accumulation within the plaque.

Although statins can effectively prevent the progression of plaque growth, they have only shown modest efficacy in eliminating the already-established plaque. Therefore, patients are required to take statin drugs for the rest of their lives and will always carry the risk of plaque ruptures that can trigger a blood clot.

To address these issues, Professor Park and Dr. Kim exploited another antiatherogenic agent called cyclodextrin. In their paper published in the journal of Controlled Release on March 10, Professor Park and Dr. Kim reported that

the polymeric formulation of cyclodextrin with a diameter of approximately 10 nanometers (nm) can accumulate within the atherosclerotic plaque 14 times more and effectively reduce the plaque even at lower doses, compared to cyclodextrin in a non-polymer structure.

Moreover, although cyclodextrin is known to have a cytotoxic effect on hair cells in the cochlea, which can lead to hearing loss, cyclodextrin polymers developed by Professor Park's research group exhibited a varying biodistribution profile and did not have this side effect.

In the follow-up study reported in ACS Nano on April 28, the

researchers exploited both cyclodextrin and statin and formed the cyclodextrin-statin self-assembly drug complex, based on previous findings that each drug can exert local anti-atherosclerotic effect within the plaque. The complex formation processes were optimized to obtain homogeneous and stable nanoparticles with a diameter of about 100 nm for systematic injection.

The therapeutic synergy of cyclodextrin and statin could reportedly enhance plaque-targeted drug delivery and anti-inflammation. Cyclodextrin led to the regression of cholesterol in the established plaque, and the statins were shown to

inhibit the proliferation of macrophage foam cells. The study suggested that combination therapy is required to resolve the complex inflammatory cholesterol-rich microenvironment within the plaque.

Professor Park said, "While nanomedicine has been mainly developed for the treatment of cancer, our studies show that nanomedicine can also play a significant role in treating and preventing atherosclerosis, which causes various cardiovascular diseases that are the leading causes of death worldwide."

This work was supported by KAIST and the National Research Foundation (NRF) of Korea.

A fair reward ensures a good memory

How does memory work and how can we optimize its mechanisms on a daily basis? This question is at the heart of many neuroscience research projects. Among the brain structures examined to better understand memory mechanisms, the reward system is now at the center of investigations. Through the examination of brain activity in healthy human subjects, scientists from the University of Geneva (UNIGE) have highlighted the lasting positive effect of a reward – monetary, in this case – on the ability of individuals to retain a variety of information. Moreover, and much more surprising, the research team demonstrated that the average accumulation of reward should be

neither too small nor too large. By ensuring an effective neural dialogue between the reward circuit and the memory circuit, this delicate balance allows the proper encoding of memories in our brain. These results can be read in Nature Communications. Empirically, it seems quite logical that obtaining a reward can improve the memories associated with it. But what are the brain mechanisms at work, and how can we exploit them to optimize our memory capacity? "The positive influence of a reward on memory is a well-known phenomenon," says Sophie Schwartz, full professor in the Department of Basic Neurosciences at the UNIGE Faculty of Medicine, who led this work. "However,

our experiment aimed to take a further step in understanding this mechanism by looking at two important aspects: does the effect last over time and what role does the accumulation of reward play? To answer these questions, the scientists have developed an experiment using functional magnetic resonance imaging, an imaging technique that allows real-time observation of the brain in action. About 30 healthy subjects were asked to remember associations between objects and people: each correct answer was associated with points gained, and each incorrect answer with points lost (the points were then converted into money). Twenty minutes later, the subjects were asked to retrieve

these associations to earn additional points. Critically, the average number of points that could be gained varied over the course of the experiment. "Contrary to what one might have thought, the best results were not associated with the highest accumulation of rewards, the point where subjects should have been the most motivated," says Kristofer Berg, a researcher now at the Weizmann Institute of Science and the first author of this work. "The most effective? Somewhere between the highest and lowest accumulated rewards. Our brain needs rewards to motivate, but also challenge," explains Sophie Schwartz. "If the task is too easy, motivation decreases as quickly as

if it is too difficult, and that affects our ability to encode information. Imagine picking berries in the forest: if they are everywhere, you do not have to remember where to find them. If there are only a few, the effort required to pick them is too great in relation to the possible gain – a few berries will not feed us. Now, if clusters of berries are scattered throughout the forest, remembering their exact location will allow us to pick more in a short time." In the brain, memory is primarily managed by the hippocampus, a region of the brain responsible for encoding and storing memories. When a reward is involved, however, another region is activated, the ventral tegmen-

tal area, which is involved in the reward system and responsible for the release of dopamine related to the satisfaction of obtaining a reward. "It is the dialogue between these two brain areas that helps maintain motivation, improve learning, and consolidate memories, even over time," explains Kristofer Berg. "This experiment shows the importance of motivation in memory and learning, but also the subtle, and probably individual specific, balance that should be maintained. These lessons are particularly useful in the school environment, with the idea of creating learning contexts that would better fit the motivation according to the needs of children."

A sugar hit to help destroy cancer cells

Like any cells in the body, cancer cells need sugar - namely glucose - to fuel cell proliferation and growth. Cancer cells in particular metabolize glucose at a much higher rate than normal cells. However, researchers from USC's Viterbi's Mark Family Department of Chemical Engineering and Materials Science have unlocked a weakness in a common type of cancer cell: sugar inflexibility. That is, when cancer cells are exposed to a different type of sugar - galactose - the cells can't adapt, and will die.

The discovery, which could have important implications from cancer-causing agents named AET and galactose, and therefore they die when exposed to this type of sugar.

Zheng said that galactose is quite structurally similar to the glucose which helps cancer cells thrive, but that it has some differences. Graham said that exposing cells to galactose forces them to do more oxidative metabolism, where oxygen is used to convert sugars into energy, as opposed to glycolysis, where energy is derived from glucose.

Half of the world's population exposed to increasing air pollution

Half of the world's population is exposed to increasing air pollution, new research has shown.

A team of researchers, led by Professor Gavin Shaddick at the University of Exeter, has shown that, despite global efforts to improve air quality, vast swathes of the world's population are experiencing increased levels of air pollution.

The study, carried out with the World Health Organisation, suggests that air pollution constitutes a major, and in many areas increasing, threat to public health.

The research is published in leading journal *Climate and Atmospheric Science* on Wednesday, June 17th 2020.

Professor Shaddick, Chair of Data Science & Statistics at the University of Exeter, said: "While long-term policies to reduce air pollution have been shown to be effective in many regions, notably in Europe and the United States, there are still regions that have dangerously high levels of air pollution, some as much as five times greater than World Health Organisation guidelines, and in some countries air pollution is still increasing."

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