The Lord is like a strong tower, where the righteous can go and be safe.
Proverbs 18:10

DIYARYO
KABITENYO
Nagmamalasakit sa lalawigan

Be alert, stand firm in the faith, be brave, be strong.
1 Corinthians 16:13

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Vol. 23 No. 17 June 15-21, 2020 P 10.00

2nd coronavirus testing facility in Cavite gets DOH approval

The Department of Health (DOH) has approved Cavite's second COVID-19 testing hub located inside the Ospital ng Imus compound.

DOH-Calabarzon Regional Director Eduardo Janairo said in a statement last June 9 that the facility, which will cater to Cavitefios and neighboring areas, was formally opened to the public last June 6.

"Ito ay magagamit natin hindi lang ngayong panahon ng epidemya kundi sa susunod pang henerasyon at sa maraming taon at pagsasanay ng iba pang mga sakit upang mabigyan natin ng agarang lunas," Janairo said.

The facility has two real-time reverse

Turn to page 3

The Department of Health approves Cavite's second COVID-19 testing facility on June 6, 2020.

GenTri drug sting nets P2.5-B 'shabu'

Several huge packs of crystal meth, commonly known as shabu, amounting to P2.543 billion were seized by police officers during a buy-bust operation in General Trias, Cavite, June 11 night, the Philippine National Police (PNP) said.

Reports from the PNP's Public Information Office showed that elements of the PNP Drug Enforcement Group and Cavite Provincial Police Office were able to confiscate shabu placed inside 374 packs, each weighing a kilogram, from suspect Maud Ramorina Abedin Mangotara.

According to reports from the PNP PIO, the operation was conducted around 8:30 p.m.

Turn to page 3

DIYARYO KABITENYO

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(2ND... from page 1)

transcription polymerase chain reaction (RT-PCR) machines which can each handle 400 tests a day.

"We will be expecting 3 more PCR machines so that we can conduct more tests of at least 1,000 a day," Janairo said.

The RT-PCR test is the gold standard for COVID-19 testing in the Philippines.

According to Janairo, the facility was given license to operate on June 8 after a series of evaluation which was completed last May 29.

Janairo said the testing facility is the second local government unit-initiated molecular laboratory in the country with the first one located in Marikina City.

It is also the second coronavirus testing facility in the province. On May 9, the DOH certified the De La Salle Medical and Health Sciences Institute in Dasmariñas to conduct COVID-19 testing.

Janairo said his office will work for the level 3 accreditation of the Ospital ng Imus to "better serve the health needs of the community and all Caviteños."

The Philippines currently has 55 licensed laboratories, including 41 licensed laboratories for reverse transcription polymerase chain reaction tests and 14 GeneXpert laboratories.

Researchers help bring biofriendly materials to drug design for neuro disorders

The contributions of researchers from The University of Texas at El Paso (UTEP) have yielded the first indication that carbon quantum dots, a class of nanoparticles, can be utilized to combat neurological disorders, according to a paper published in the journal Processes as part its special issue on protein biosynthesis and drug design and delivery.

The study, titled "Untangling the Potential of Carbon Quantum Dots in Neurodegenerative Disease," was co-authored by Sreeprasad T. Sreenivasan, Ph.D., and Mahesh Narayan, Ph.D., assistant professor and professor, respectively, in UTEP's Department of Chemistry and Biochemistry. The pair contributed to work by Prakash Narayan, Ph.D., vice president of preclinical research for Angion Biomedica Corp. in Uniondale, New York, and Lindsey Jung, a student at Tenafly High School in New Jersey, who works under Prakash Narayan's supervision.

The study focuses on carbon quantum dots (CQDs), biofriendly materials synthesized from waste materials such as wood, fruit peel, algae and even salmon. A road map laid out by the research team addresses, for the first time, key requirements for the transitioning of their use from environmental sensing applications into the neurodegenerative domain; a crossing-over that requires their separation and total characterization, including aspects related to safety and their ability to target specific receptors in the brain.

"The carbonaceous quanta are finally making their way from physics into chemistry and now, biology," Prakash Narayan said. "This work lays the foundation for harnessing the enormous potential of carbon quantum dots for therapeutic intervention in neuro disease."

The CQDs are made by "pressure-cooking" waste biomaterials such as fruit peel, amino acids, algae and even fish. As an outcome of the procedure, they are synthesized as a mixture of carbon dots and non-carbon dots. Some of the compounds in the mixture can be toxic.

This aspect would negate their use in biomedical applications.

(GenTRI... from page 1)

side Mangotara's residence at Somer Set 9 Subdivision in Barangay Navarro.

Aside from the packs of shabu, police also recovered boodle money amounting to P1 million, plus two P1,000 bills used by undercover operatives as marked money in purchasing the illegal substance.

Mangotara, who is now under the custody of authorities, will be facing illegal drugs-related charges.

DEED OF EXTRAJUDICIAL SETTLEMENT OF ESTATE
With SPECIAL POWER OF ATTORNEY

NOTICE is hereby given that the estate of the deceased **ANTONIO A. DONES** who died [illegible] on February 16, 2020 at the [illegible] Medical Center, City of General Trias, Cavite, consisting of [illegible] deposits in the following bank accounts:

Bank of the Philippine Islands EPZA, Rosario	[illegible]	P 46,[illegible]
Bank of the Philippine Islands EPZA, Rosario	[illegible]	$ 3,[illegible]

has been adjudicated and extrajudicially settled by and among his heirs in equal shares, [illegible] Bank of Philippine Islands, its administrators and assigns and/or any of its officers or employees from any and all claims, suits, actions or causes of action which they, their successors or assigns now have, or in the future may have against the said Bank in connection with the said deposits; and they hereby further obligate themselves jointly and severally, to indemnify the said Bank, its administrators and assigns and/or its officers or employees for any loss or damage which they may sustain arising out of any claims, suits or proceedings instituted by any third person or entity whether private or governmental including, but not limited, to claims by excluded heirs or tax claims by the government. Further appointing, naming and constituting ARNEL DONES to do the following acts or deeds:

1. To PROCESS and FACILITATE the settlement of ESTATE of our late father ANTONIO A. DONES;
2. To CLAIM, SUBMIT and EXECUTE papers and documents necessary to release the above deposits;
3. To SIGN and EXECUTE all documents necessary for purposes of the foregoing; and
4. To DO any and ALL acts necessary for the purpose.

on February 21, 2020 at Tanza, Cavite, Philippines before Notary Public Atty. [illegible] and entered in her Notarial Register as Doc. No. 174; Page No. 35; Book No. XXXX; Series of 2020.

(Sgd.) All Heirs

Publication: DIYARYO KABITENYO
Dates: June 1, 8 & 15, 2020

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

Publication Notice
R.A. 10172

NOTICE TO THE PUBLIC

CCE-0014-2020

In compliance with the publication requirement and pursuant to OCRG Memorandum Circular No. 2013-1 Guidelines in the Implementation of the Administrative Order No. 1 Series of 2012 (IRR on R.A. 10172), Notice is hereby served to the public that **AMMIE P. FERRER** has filed with this Office, a petition for *correction of entry in the date of birth* from **February 24, 1979** to **February 23, 1979** in the **Certificate of Live Birth** of **AMY CARO PENALBA** at Indang, Cavite and whose parents are **Virgilio Penalba** and **Melba Caro**.

Any person adversely affected by said petition may file his/her written opposition with this Office not later than **June 28, 2020**.

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

DIYARYO KABITENYO - June 15 & 22, 2020

Repetitive negative thinking linked to dementia risk

Persistently engaging in negative thinking patterns may raise the risk of Alzheimer's disease, finds a new UCL-led study.

In the study of people aged over 55, published in Alzheimer's & Dementia, researchers found 'repetitive negative thinking' (RNT) is linked to subsequent cognitive decline as well as the deposition of harmful brain proteins linked to Alzheimer's.

The researchers say RNT should now be further investigated as a potential risk factor for dementia, and psychological tools, such as mindfulness or meditation, should be studied to see if these could reduce dementia risk.

Lead author Dr Natalie Marchant (UCL Psychiatry) said: "Depression and anxiety in mid-life and old age are already known to be risk factors for dementia. Here, we found that certain thinking patterns implicated in depression and anxiety could be an underlying reason why people with those disorders are more likely to develop dementia.

"Taken alongside other studies, which link depression and anxiety with dementia risk, we expect that chronic negative thinking patterns over a long period of time could increase the risk of dementia. We do not think the evidence suggests that short-term setbacks would increase one's risk of dementia.

"We hope that our findings could be used to develop strategies to lower people's risk of dementia by helping them to reduce their negative thinking patterns."

For the Alzheimer's Society-supported study, the research team from UCL, INSERM and McGill University studied 292 people over the age of 55 who were part of the PREVENT-AD cohort study, and a further 68 people from the IMAP+ cohort.

Over a period of two years, the study participants responded to questions about how they typically think about negative experiences, focusing on RNT patterns like rumination about the past and worry about the future. The participants also completed measures of depression and anxiety symptoms.

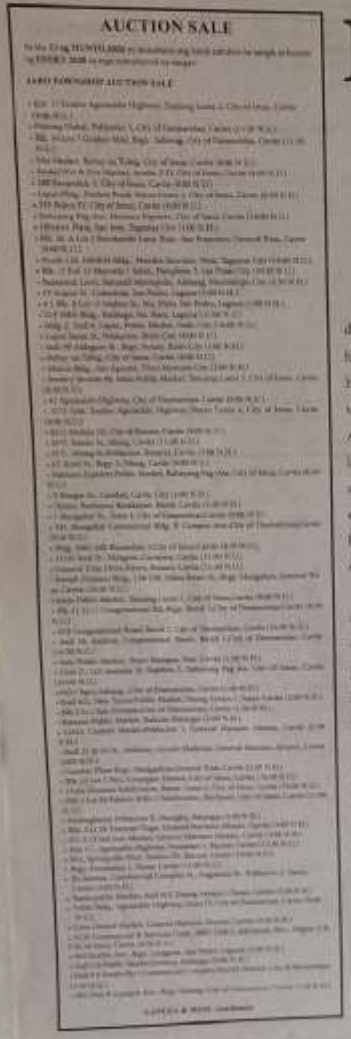
Their cognitive function was assessed, measuring memory, attention, spatial cognition, and language.

Improved MRI scans could aid in development of arthritis treatments

An algorithm that analyses MRI images and automatically detects small changes in knee joints over time could be used in the development of new treatments for arthritis.

A team of engineers, radiologists and physicians, led by the University of Cambridge, developed the algorithm, which builds a three-dimensional model of an individual's knee joint in order to map where arthritis is affecting the knee. It then automatically creates 'change maps' which not only tell researchers whether there have been significant changes during the study but allow them to locate exactly where these are.

There are few effective treatments for arthritis, and the technique could be a considerable boost to efforts to develop and monitor new therapies for the condition.



AUCTION SALE

Researchers put a price tag on alcohol use

Alcohol use disorders are associated with high social welfare and health care costs – but what causes them? A new Finnish study looks at the magnitude and reasons behind the economic burden alcohol use disorders have on society.

Earlier studies have shown that alcohol use disorders lead to various health and social problems, which cause an increase in the need and use of various services. However, the magnitude and distribution of the related costs have not been studied before.

Researchers at the University of Eastern Finland used a machine learning technique that is based on a Bayesian network model to analyse causal relationships between different risk factors and the costs associated with them. The analysis included a total of 16 risk factors, including socioeconomic variables such as age, gender, marital status, unemployment status, and social problems like homelessness, illicit drug use, criminal record, and drunk driving. The researchers also looked at what happens when a patient goes into remission, i.e. stops drinking altogether.

Funded by the Strategic Research Council at the Academy of Finland, the study was carried in collaboration between researchers at the University of Eastern Finland, the Finnish Institute for Health and Welfare, and Aalto University. They used a novel approach to control for confounding factors, allowing them to calculate a rough price tag for each risk factor.

The study population comprised 363 Finnish alcohol use disorder patients diagnosed in 2011-2012. Their data were collected from various patient information systems and social welfare databases over a period of five years.

Surprisingly, the number of diagnoses of chronic conditions played the biggest role in the overall cumulation of costs in patients with alcohol use disorder. In patients with at least two chronic conditions, the average 5-year costs of care were 26,000 euros (around 30,000 US dollars) higher than in patients without multiple diagnoses. The costs of care were also increased by earlier use of specialized care (and its high costs), receiving income support, and being over 55 years old. In addition, drug use, homelessness and the number of psychiatric diagnoses also increased the costs of care. Sustained abstinence, on the other hand, lowered the costs.

A model created by the researchers shows that roughly 43% of alcohol use disorder patients who quit drinking belong to the lowest cost quartile, compared with the respective figure of 24% for current drinkers.

Antihistamines and similar drugs could slow down Huntington's disease

Scientists have described a potential new therapeutic strategy for slowing down early-stage Huntington's disease in a new study published June 9, 2020 in eLife.

The research in mice indicates that targeting the histamine H3 receptor (H3R) – a well-established drug target for other conditions such as hay fever – could help to prevent imbalances in dopamine signalling that lead to brain-cell death and deficits in movement and memory.

"It was already well known that dopamine signalling goes away in Huntington's disease, but we and other research teams have shown more recently that dopamine receptors and histamine receptors are found together and control signalling in the brain," explains lead author David Moreno-Delgado, who was a Postdoctoral Research Scientist at the University of Barcelona, Spain, at the time the research was carried out, and is now Biology Team Leader at NovAliX, Belgium. "Because dopamine receptors are found in many normal cells throughout the central nervous system, we proposed that targeting dopamine signalling through the histamine receptor might be a more effective strategy to slow the progression of Huntington's disease."

The team looked at whether these protein partners are found together in mice with Huntington's disease and could potentially be targets for treatment. They found that at two- and four-months-old, both healthy mice and those with asymptomatic Huntington's disease have the dopamine D1 receptor (D1R)-H3R complex. But when the team looked at older mice aged six- and eight-months-old, the mice with Huntington's disease (now symptomatic) had completely lost the D1R-H3R complexes. The individual receptors were still present, but at the most advanced stage of the disease, these proteins were no longer acting together as partners.

To confirm the role of the D1R-H3R complex, the team tested the effects of an antihistamine drug called thioperamide on movement, learning and memory in mice with Huntington's disease. Mice treated with thioperamide were only as likely to fall as healthy mice of the same age, while those treated with saline were unable to maintain their balance. Moreover, in a test of memory, the mice treated with saline showed no preference for familiar objects, whereas those treated with thioperamide had no such memory deficits.

The team next explored whether these results were due to the treatment preserving the D1R-H3R complexes. Studies of tissues from treated and untreated mice showed that only the treated animals still had H3R/D1R complexes at six and eight months of age. Moreover, when they treated mice with Huntington's disease that had already reached seven months of age (when these protein partners are no longer found together), thioperamide had no effect on movement, learning or memory deficits. This confirms that the protective effects of thioperamide occurs through the D1R-H3R complexes and that these need to be present for the drug to work.

Finally, the team looked at human brain tissue samples for the presence of D1R-H3R complexes. They found that, in healthy individuals and people with early-stage Huntington's disease, the D1R-H3R complexes were present. By contrast, in people with more advanced disease, the D1R-H3R complexes were almost absent.

"The imbalance of dopamine signalling in disease progression represents a potential point of no return for Huntington's disease patients as it can eventually lead to nerve cell dysfunction and death," explains senior author Peter McCormick, Senior Lecturer at Queen Mary University of London, UK. "In this study we show that D1R/H3R complexes are found within the brain at early- but not late-disease stages and that targeting these complexes could potentially slow the progression of early-stage disease.

Computer modelling predicts where vaccines are needed most

Researchers have developed a model that can estimate regional disease burden and the impact of vaccination, even in the absence of robust surveillance data, a study in eLife reveals.

The report, originally published on May 26, highlights areas that would have the greatest benefit from initiating a vaccination programme against the virus, Japanese encephalitis (JE). This will in turn guide rational assessment of the cost and benefit of vaccinations, and support policymaker decisions on allocating vaccines.

JE is a viral infection of the brain transmitted by mosquitoes. It is endemic in Asia-Pacific countries, with three billion people at risk of infection according to the World Health Organization (WHO). Only a small number of infections are symptomatic (ranging from one in 25 to one in 1,000), but people with symptomatic infections have a high risk of death (around one in three of those infected). Those who survive are often left with considerable neurological and psychological symptoms.

There are a number of vaccines available for JE, but in 2013, WHO prequalification was given to a new JE vaccine that requires only a single dose, is cheap to produce and is safer than previous vaccines. This led to a great increase in vaccination in Asia. However, given the disease's widespread prevalence across several countries, it has not been possible to estimate the impact of these vaccinations on disease burden.

"Vaccination is the most effective method of prevention but it is difficult to decide where it should be implemented or to estimate the quantitative impact without good-quality surveillance data from before and after vaccination," says lead author Tran Minh Quan, who was a Research Assistant at the Oxford University Clinical Research Unit, Wellcome Trust Asia Program, Vietnam, at the time of the study, and is now a graduate student at the University of Notre Dame, Indiana, US. "We developed a new approach using a modelling method that overcomes some of the limitations of sparse and variable surveillance data."

The team took a two-step approach to their analysis. First, they reviewed the available data on cases of JE and grouped this data by age. By focusing on age, this took out other variables and allowed the team to analyse the data according to a simple rule: the higher the rate of infection, the earlier in life people will acquire the infection. Then, by using a model that calculates the rate of infection using the age-grouped data, they generated a value called Force of Infection (FOI). This gives an idea of the intensity of transmission within a particular region.

In the second step, they used this FOI value to generate the disease burden in a specific region. When they ran this analysis with and without data on vaccination programs, it provided an estimate on the impact of vaccination on the number of global JE cases to date.

From this analysis, the team estimated that between 2000 and 2015, there were nearly two million cases of JE worldwide (1,976,238). Without vaccination, this number would have been 2,284,012, meaning that more than 300,000 JE cases were prevented globally because of vaccination. China had the highest burden of the disease but also benefited from the greatest impact of vaccination. On the other hand, estimates for countries including India, Vietnam and Indonesia suggested that up until 2015 these countries had high transmission intensity and that vaccination could be scaled up or introduced in these areas.

"Poor clinical outcomes and lack of a specific treatment makes JE prevention a priority," says senior author Hannah Clapham, who was a Mathematical Epidemiologist at the Oxford University Clinical Research Unit, Wellcome Trust Asia Program, Vietnam, at the time the study was carried out, and is now Assistant Professor at NUS Saw Swee Hock School of Public Health, Singapore.

Study reveals birth defects likely caused by flame retardant

A new study from the University of Georgia has shown that exposure to a now-banned flame retardant can alter the genetic code in sperm, leading to major health defects in children of exposed parents.

Published recently in Scientific Reports, the study is the first to investigate how polybrominated biphenyl-153 (PBB153), the primary chemical component of the flame retardant FireMaster, impacts paternal reproduction.

In 1973, an estimated 6.5 million Michigan residents were exposed to PBB153 when FireMaster was accidentally sent to state grain mills where it made its way into the food supply. In the decades since, a range of health problems including skin discoloration, headache, dizziness, joint pain and even some cancers have been linked to the exposure.

More striking, the children of those who were exposed seemed to experience a host of health issues as well, including reports of hernia or buildup in the scrotum for newborn sons and a higher chance of stillbirth or miscarriage among adult daughters.

Yet, little work has been done to understand how the chemical exposure could have impacted genes passed from an exposed father, said study author Katherine Greeson.

"It is still a relatively new idea that a man's exposures prior to conception can impact the health of his children," said Greeson, an environmental health science doctoral student in Charles Easley's lab at UGA's College of Public Health and Regenerative Bioscience Center.

"Most studies where a toxic effect is observed in children look only to the mothers and the same has been true of studies conducted on PBB153," she said.

Greeson and a team of researchers from UGA and Emory University used a unique combination of observational and laboratory approaches to demonstrate how PBB153 acted on sperm cells.

"Typically, scientific studies are either epidemiological in nature and inherently observational or focus on bench science, but in this study, we did both," said Greeson.

This approach allowed the researchers to mimic the known blood exposure levels of PBB153 in a lab environment.

"We were uniquely able to recreate this effect using our previously characterized human stem cell model for spermatogenesis," she said, "which allowed us to study the mechanism that causes this effect in humans."

The team looked at the expression of different genes in their human spermatogenesis model after dosing with PBB153 and found marked alterations in gene expression between dosed and undosed cells, specifically at genes important to development, such as embryonic organ, limb, muscle, and nervous system development.

"PBB153 causes changes to the DNA in sperm in a way that changes how the genes are turned on and off," said Greeson. "PBB153 seems to turn on these genes in sperm which should be turned off," said Greeson, which may explain some of the endocrine-related health issues observed in the children of exposed parents.

Though the study used this model to directly replicate exposure to PBB153, Greeson says this approach could be used to better understand the impact of other environmental exposures on reproduction, including large-scale accidental exposures to toxic chemicals or everyday exposures.

"Hopefully this work will lead to more studies combining epidemiology and bench science in the future, which will tell us more about why we're seeing an effect from an environmental exposure in human populations and encourage experimental studies to more closely mimic human exposures," she said.

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Nagmamalasakit sa lalawigan
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Virus DNA spread across surfaces in hospital ward over 10 hours

Virus DNA left on a hospital bed rail was found in nearly half of all sites sampled across a ward within 10 hours and persisted for at least five days, according to a new study by UCL and Great Ormond Street Hospital (GOSH).

The study, published as a letter in the Journal of Hospital Infection, aimed to safely assess how SARS-CoV-2, the virus that causes Covid-19, may spread across surfaces in a hospital.

Instead of using the SARS-CoV-2 virus, researchers artificially replicated a section of DNA from a plant-infecting virus, which cannot infect humans, and added it to a millilitre of water at a similar concentration to SARS-CoV-2 copies found in infected patients' respiratory samples.

Researchers placed the water containing this DNA on the hand rail of a hospital bed in an isolation room – that is, a room for higher-risk or infected patients – and then sampled 44 sites across a hospital ward over the following five days.

They found that after 10 hours, the surrogate genetic material had spread to 41% of sites sampled across the hospital ward, from bed rails to door handles to arm rests in a waiting room to children's toys and books in a play area. This increased to 59% of sites after three days, falling to 41% on the fifth day.

Dr Lena Ciric (UCL Civil, Environmental & Geomatic Engineering), a senior author of the study, said: "Our study shows the important role that surfaces play in the transmission of a virus and how critical it is to adhere to good hand hygiene and cleaning

Drug researcher develops 'fat burning' molecule

Obesity affects more than 40 percent of adults in the United States and 13 percent of the global population. With obesity comes a variety of other interconnected diseases including cardiovascular disease, diabetes and fatty liver disease, which makes the disease one of the most difficult – and most crucial – to treat.

"Obesity is the big gest health problem in the United States. But, it is hard for people to lose weight and keep it off; being on a diet can be so difficult. So, a pharmacological approach, or a drug, could help out and would be beneficial for all of society," said Webster Santos, professor of chemistry and the Cliff and Agnes Lilly Faculty Fellow of Drug Discovery in the College of Science at Virginia Tech.

Santos and his colleagues have recently identified a small mitochondrial uncoupler, named BAM15, that decreases the body fat mass of mice without affecting food intake and muscle mass or increasing body temperature. Additionally, the molecule decreases insulin resistance and has beneficial effects on oxidative stress and inflammation.