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

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DIYARYO
KABITENYO
Nagmamalasakit sa lalawigan

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Vol. 23 No. 23 | July 27-August 2, 2020 | P 10.00

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

Gen. Trias launches online city hall transactions

GENERAL TRIAS CITY, Cavite – The local government launched online channels where residents and visitors can safely conduct transactions with government officers.

Online application for local police clearance, travel authority, fit to work and fit to travel application, application for construction pass, building permit, demolition permit occupancy permit, wiring permit, fencing permit and electrical inspection, and other services can now be done online to avoid the coronavirus infection.

The following are the websites Police Of

Turn to page 2

DPWHph workers rush to complete the construction of slope protection structures along the Imus River in Dasmariñas City, Cavite last July 23. The completion of the project this year is expected to lessen flooding in the cities of Imus and Bacoor during rainy season.

Padlocked mall to comply with directives from LGU

TRECE MARTIRES CITY – A mall in this city vowed last July 24 to comply with directives from the provincial government after it was ordered padlocked for alleged failure to comply with quarantine measures.

In a statement, the management of SM City Trece Martires said it would discuss corrective measures with the local government so that it can immediately reopen its doors to the public.

"SM City Trece Martires will comply with the Executive Order issued by the office

Turn to page 2

EXTRAJUDICIAL SETTLEMENT OF ESTATE OF PAULINA VARIAS FERRE

NOTICE is hereby given that the estate of the deceased **PAULINA VARIAS FERRE** who died intestate on May 11, 2000 in Alfonso, Cavite, consisting of the following properties:

1. A residential land measuring 443 sq. m. located in Bonifacio St., Poblacion V, Alfonso, Cavite, covered by Tax Dec. No. 01-0005-00217 and more particularly described under Original Certificate of Title No. P-2329 [FP No. (IV-8)(1398)]

2. A residential house located in the above-mentioned residential land and covered by Tax Declaration No. 01-0005-00219

has been adjudicated and extra-judicially settled by and among her heirs in equal shares, per individual, on March 16, 2020 in Silang, Cavite before Notary Public Atty. Daisy I. Medina and entered in her Notarial Register as Doc. No. 441; Page No. 93; Book No. 13; Series of 2020.

(Sgd.) **All Heirs**

Publication : DIYARYO KABITENYO
Date : July 13, 20 & 27, 2020

EXTRAJUDICIAL SETTLEMENT OF ESTATE EMILIO FERRE ESCOVER

NOTICE is hereby given that the estate of the deceased **EMILIO FERRE ESCOVER** who died intestate on February 28, 2020 in Alfonso, Cavite, consisting of the following properties:

1. 2-storey apartment building located in Bonifacio St., Poblacion V, Alfonso, Cavite and presently covered by Tax Declaration No. 01-0005-00696;

2. 2014 Toyota Fortuner with Plate No. AAW 5376 appraised at P500,000.00; and

3. One-half (1/2) share in Savings Account No. (00973)-1066-18 with BPI Tagaytay Branch with a balance of P6,500,006.76 as of December 17, 2019

has been adjudicated and extra-judicially settled by and among his heirs in equal shares, per individual, further, they hereby SELL, TRANSFER and CONVEY by way of absolute Sale unto MA. GLAYNA MIROS-A DE LEON the Toyota Fortuner for and in consideration of the amount of P500,000.00

on March 16, 2020 in Silang, Cavite before Notary Public Atty. Daisy I. Medina and entered in her Notarial Register as Doc. No. 442; Page No. 93; Book No. 13; Series of 2020.

(Sgd.) **All Heirs**

Publication : DIYARYO KABITENYO
Date : July 13, 20 & 27, 2020

EXTRAJUDICIAL SETTLEMENT OF ESTATE OF *JUANA VARIAS FERRE*

NOTICE is hereby given that the estate of the deceased ***JUANA VARIAS FERRE*** *who died intestate on August 12, 1977 in Alfonso, Cavite, consisting of a parcel of residential land without improvements, measuring 2,000 sq.m., more or less, located in Alas-As, Alfonso, Cavite, covered Tax Dec. No. 01-0005-00502 and more particularly described in TCT No. T-412 has been adjudicated and extrajudicially settled by and among her heirs in equal shares, per individual, on March 16, 2020 in Silang, Cavite before Notary Public Atty. Daisy I. Medina and entered in her Notarial Register as Doc. No. 443; Page No. 93; Book No. 13; Series of 2020.*

(Sgd.) ***All Heirs***

Publication : DIYARYO KABITENYO
Dates : July 13, 20 & 27, 2020

The hair-raising reason for goosebumps

If you've ever wondered why we get goosebumps, you're in good company — so did Charles Darwin, who mused about them in his writings on evolution. Goosebumps might protect animals with thick fur from the cold, but we humans don't seem to benefit from the reaction much — so why has it been preserved during evolution all this time?

In a new study, Harvard University scientists have discovered the reason: the cell types that cause goosebumps are also important for regulating the stem cells that regenerate the hair follicle and hair. Underneath the skin, the muscle that contracts to create goosebumps is necessary to bridge the sympathetic nerve's connection to hair follicle stem cells. The sympathetic nerve needs to cold by contracting the muscle and causing goosebumps in the short term, and by driving hair follicle stem cell activation and new hair growth over the long term.

Published in the journal Cell, these findings in mice give researchers a better understanding of how different cell types interact to link stem cell activity with changes in the outside environment.

"We have always been interested in understanding how stem cell behaviors are regulated by external stimuli. The skin is a fascinating system: it has multiple stem cells surrounded by diverse cell types, and is located at the interface between our body and the outside world. Therefore, its stem cells could potentially respond to a diverse array of stimuli — from the niche, the whole body, or even the outside environment," said Ya-Chieh Hsu, the Alvin and Esta Star Associate Professor of Stem Cell and Regenerative Biology, who led the study in collaboration with Professor Sung Jan Lin of National Taiwan University. "In this study we identify an interesting dual-component niche that not only regulates the stem cells under steady state, but also modulates stem cell behaviors according to temperature changes outside."

Many organs are made of three types of tissue: epithelium, mesenchyme, and nerve. In the skin, these three lineages are organized in a special arrangement. The sympathetic nerve, part of our nervous system that controls body homeostasis and our responses to external stimuli, connects with arrector smooth muscle in the mesenchyme. This smooth muscle in turn connects to hair follicle stem cells, a type of epithelial stem cell critical for regenerating the hair follicle as well as repairing wounds.

The connection between the sympathetic nerve and the muscle has been well known, since they are the cellular basis behind goosebumps: the cold triggers sympathetic neurons to send a nerve signal, and the muscle reacts by contracting and causing the hair to stand on end. However, when examining the skin under extremely high resolution using electron microscopy, the researchers found that the sympathetic nerve not only associated with the muscle, but also formed a direct connection to the hair follicle stem cells. In fact, the nerve fibers wrapped around the hair follicle stem cells like a ribbon.

REPUBLIC OF THE PHILIPPINES
FOURTH JUDICIAL REGION
REGIONAL TRIAL COURT
BRANCH 15, NAIC, CAVITE

HOME DEVELOPMENT MUTUAL FUND (Pag-IBIG Fund),
Mortgagee/Petitioner,

-versus-

FNC - 2020-44
For: Extra-Judicial Foreclosure of Real Estate Mortgage under Act 3135, as Amended by Act No. 4118

ROSEMARIE SAYMON BUDIA,
Mortgagor/Respondent.

NOTICE OF EXTRA-JUDICIAL SALE

Upon Extra-Judicial petition for sale under Act 3135, as amended by Act 4118 filed by **HOME DEVELOPMENT MUTUAL FUND (Pag-IBIG Fund)** mortgagee/petitioner, a government financial institution duly organized and existing under and by virtue of Republic Act No. 9679 with principal office at 12th Floor, HDMF Headquarters, Edsa Cor. MRR Quezon Blvd., Mandaluyong City which mortgage against **ROSEMARIE SAYMON BUDIA**, with postal address at Lot 97, Block 27 Phase 7-1 United Homes, Brgy. Tanzang Luma, Naic, Cavite to satisfy the mortgage indebtedness which as of **February 14, 2020** amounts to **TWO HUNDRED SEVEN THOUSAND ONE HUNDRED ONE PESOS & 70/100 (P207,101.70)** Philippine currency, inclusive of interest and other charges, the undersigned Sheriff will sell at public auction on **September 8, 2020 at 10:00 o'clock** in the morning or soon thereafter at the main entrance of the Office of the Ex-Officio Sheriff of the Hall of Justice formerly Mayor Manuela H. Pena Memorial Hall, Naic, Cavite, to the highest bidder, for cash and in Philippine currency, the following described property, with all the improvements existing thereon, to wit:

TRANSFER CERTIFICATE OF TITLE
NO. 057-2016003443

A PARCEL OF LAND (LOT 31 BLOCK 23 OF THE CONSOLIDATION SUBDIVISION PLAN PCS-04-037048, BEING A PORTION OF LOT 2020-A, PSD-04-213710, LOT 2031-A, PSD-04-213715, LOT 2030 AND 2032, BOTH OF GAIC ESTATE (VO-04-000397), L.R.C. RECORD NO. 93605, SITUATED IN BARANGAY TIMALAN, MUNICIPALITY OF NAIC, PROVINCE OF CAVITE, ISLAND OF LUZON, BOUNDED ON THE NE ALONG LINE 1-2 BY LOT 32 BLOCK 23 OF THE CONSOLIDATION SUBDIVISION PLAN, ON THE SE ALONG LINE 2-3 BY LOT 2030, GAIC ESTATE (VO-04-000397), ON THE SW ALONG LINE 3-4 BY LOT 87, BLOCK 23, AND ON THE NW ALONG LINE 4-1 BY ROAD LOT 46 (16.50 M. ROAD ALLOWANCE) LINE 1-2 BY LOT 30 BLOCK 23, ALL OF THE CONSOLIDATION SUBDIVISION PLAN, BEGINNING AT A POINT MARKED "1" ON PLAN, BEING S 63°08'E, 1729.3 KM. FROM BLM. NO. 1, GAIC ESTATE; THENCE S 27°28'E, 90°0, 7.34 M. TO POINT 2; S 62°32'W., 12.25 M. TO POINT 3; N 27°28'E, 90°0, 7.34 M. TO POINT 4; N 62°32'E., 90°0, 8.66 M. TO POINT 1, W OF BEGINNING; CONTAINING AN AREA OF FORTY SQ. METERS AND FIFTY SQ. DECIMETERS (40.50) SQUARE METERS.

All sealed bids must be submitted to the undersigned on the above-stated time and date.

Prospective bidders or buyers are hereby organized to investigate for themselves, the title hereto above described and the encumbrances thereon, if any there be.

In case of the absence of any participating bidder on the above-scheduled date, said auction sale will be reset and finally held on **September 15, 2020** at the same place and time above-mentioned.

Naic, Cavite, July 7, 2020.

(Sgd.) JANELLE V. LALAGONDO, MBA
Sheriff IV

HOME DEVELOPMENT MUTUAL FUND (Pag-IBIG Fund)
12th Floor HDMF Headquarters
Edsa cor. MRR Quezon Blvd., Mandaluyong City

ROSEMARIE SAYMON BUDIA
BLK. 27 LOT 97, LOT PHASE 7,
[illegible]

MARIA VICTORIA D. CAPISAL
Counsel for Petitioner
[illegible]

REPUBLIC OF THE PHILIPPINES
FOURTH JUDICIAL REGION
REGIONAL TRIAL COURT
BRANCH 15, NAIC, CAVITE

HOME DEVELOPMENT MUTUAL FUND (Pag-IBIG Fund),
Mortgagee/Petitioner,

-versus-

FNC - 2020-68
For: Extra-Judicial Foreclosure of Real Estate Mortgage under Act 3135, as Amended by Act No. 4118

MARY JANE JUNGCO PALULIN
Married to EDITO CUZON PALULIN,
Mortgagor/Respondent.

AMENDED NOTICE OF EXTRA-JUDICIAL SALE

Upon Extra-Judicial petition for sale under Act 3135, as amended by Act 4118 filed by **HOME DEVELOPMENT MUTUAL FUND (Pag-IBIG Fund)** mortgagee/petitioner, a government financial institution duly organized and existing under and by virtue of Republic Act No. 9679 with principal office at 12th Floor, HDMF Headquarters, Edsa Cor. MRR Quezon Blvd., Mandaluyong City which mortgage against **MARY JANE JUNGCO PALULIN married to EDITO CUZON PALULIN**, with postal address at 10-18 West Grand Park Plaza Village, Inner Carmle, to satisfy the mortgage indebtedness which as of **February 28, 2020** amounts to **FOUR HUNDRED TWENTY SIX THOUSAND ONE HUNDRED NINETY NINE PESOS & 91/100 (P426,199.91)** Philippine currency, inclusive of interest and other charges, the undersigned Sheriff will sell at public auction on **September 8, 2020 at 10:00 o'clock** in the morning or soon thereafter at the main entrance of the Office of the Ex-Officio Sheriff at the Hall of Justice formerly Mayor Manuela H. Pena Memorial Hall, Naic, Cavite to the highest bidder, for cash and in Philippine currency, the following described property, with all the improvements existing thereon, to wit:

TRANSFER CERTIFICATE OF TITLE
NO. 057-2015035566

A parcel of land (Lot 31-B-2, PT-) (Tax map/ plan Pcs-04-035072 being a portion of the cons of Lots 1403, 1404 & 1405, Naic Estates, owned in the Brgy. of Sabang, Mun. of Naic, Province of Cavite, Island of Luzon - Bounded on the NE , along line 1-2 by Lot 23 on the SE, along line 1-7 by Lot 2 on the SE, along line 2-3 by Lot 30, both of BS. ST. on the SW, along line 3-4 by Road Lot 58 and on E. Hwy. (on Lot 32, BS. ST all of the cons.-subd. plat beginning at a point marked "1" on plan being N. 74 deg. 32E., 1670.19 m. from Mon. No. 1, Naic Estate, thence S 68 deg. 12E., 3.50 m. to pt. 2; thence S 19 deg 48 E 9.00 m. to pt. of beginning, CONTAINING AN AREA OF FORTY SQ. METERS AND FIFTY SQ. DECIMETERS (40.50).

All sealed bids must be submitted to the undersigned on the above-stated time and date.

Prospective bidders or buyers are hereby organized to investigate for themselves, the title hereto above described and the encumbrances thereon, if any there be.

In case of the absence of any participating bidder on the above-scheduled date, said auction sale will be reset and finally held on **September 15, 2020** at the same place and time above-mentioned.

Naic, Cavite, Jun. 14, 2020.

(Sgd.) JANELLE V. LALAGONDO, MBA
Sheriff IV

HOME DEVELOPMENT MUTUAL FUND (Pag-IBIG Fund)
12th Floor HDMF Headquarters
Edsa cor. MRR Quezon Blvd., Mandaluyong City

MARY JANE JUNGCO PALULIN married to
EDITO CUZON PALULIN
10-18 West Grand Park Plaza Village
Inner Carmle, Lot 19 Block 11 PHASE
United Homes, Tanzang, Naic, Cavite

MARIA VICTORIA D. CAPISAL
Counsel for Petitioner
with MCLE Mcleral Years Urgent
[illegible]

REPUBLIC OF THE PHILIPPINES
FOURTH JUDICIAL REGION
REGIONAL TRIAL COURT
BRANCH 15, NAIC, CAVITE

HOME DEVELOPMENT MUTUAL FUND (Pag-IBIG Fund),
Mortgagee/Petitioner,

-versus-

FNC - 2020-56
For: Extra-Judicial Foreclosure of Real Estate Mortgage under Act 3135, as Amended by Act No. 4118

CHRISTIAN BERNARD BULAN
BUHAS married to MARIANNE
MAMAYSON BUHAS,
Mortgagor/Respondent.

AMENDED NOTICE OF EXTRA-JUDICIAL SALE

Upon Extra-Judicial petition for sale under Act 3135, as amended by Act 4118 filed by **HOME DEVELOPMENT MUTUAL FUND (Pag-IBIG Fund)** mortgagee/petitioner, a government financial institution duly organized and existing under and by virtue of Republic Act No. 9679 with principal office at 12th Floor, HDMF Headquarters, Edsa Cor. MRR Quezon Blvd., Mandaluyong City, which mortgage against **CHRISTIAN BERNARD BULAN BUHAS married to MARIANNE MAMAYSON BUHAS**, with postal address at 17 Maria Guerrero St. Balintawak Pag-Asa Marilao (Bulacan), Carmle, to satisfy the mortgage indebtedness which as of **January 8, 2020** amounts to **FIVE HUNDRED THIRTY TWO THOUSAND SIX HUNDRED TWELVE PESOS & 87/100 (P532,612.87)** Philippine currency, inclusive of interest and other charges, the undersigned Sheriff will sell at public auction on **September 8, 2020 at 10:00 o'clock** in the morning or soon thereafter at the main entrance of the Office of the Ex-Officio Sheriff of the Hall of Justice formerly Mayor Manuela H. Pena Memorial Hall, Naic, Cavite to the highest bidder, for cash and in Philippine currency, the following described property with all the improvements existing thereon, to wit:

TRANSFER CERTIFICATE OF TITLE
NO. 057-201700001208

A PARCEL OF LAND (LOT 70 BLOCK 9 OF THE CONSOLIDATION SUBDIVISION PLAN PCS-04-035729, BEING A PORTION OF LOT 1-A-1, PSD-04-215200, LOT 2062-A-1, PSD-04-215252, LOT 2063-A-1, PSD-04-215251, LOT 2062 AND 2064, GAIC ESTATE (VO-04-000397), L.R.C. RECORD NO. 1, SITUATED IN BARANGAY TIMALAN, MUNICIPALITY OF NAIC, PROVINCE OF CAVITE, ISLAND OF LUZON, BOUNDED ON THE NE ALONG LINE 1-2 BY LOT 71 BLOCK 9, ON THE SE ALONG LINE 2-3 BY LOT 7 BLOCK 9, ALL OF THE CONSOLIDATION SUBDIVISION PLAN, ON THE SW ALONG LINE 3-4 BY ROAD LOT 46 (16.50 M. ROAD ALLOWANCE), AND ON THE NW ALONG LINE 4-1 BY LOT 69 BLOCK 9, ALL OF THE CONSOLIDATION SUBDIVISION PLAN; BEGINNING AT A POINT MARKED "1" ON PLAN, BEING S 63°08'E, 1729.3 KM. FROM BLM. NO. 1, GAIC ESTATE; THENCE S 27°28'E, 90°0, 7.34 M. TO POINT 2; S 62°32'W., 12.25 M. TO POINT 3; N 27°28'E, 90°0, 7.34 M. TO POINT 4; N 62°32'E., 90°0, 8.66 M. TO POINT 1, W OF BEGINNING; CONTAINING AN AREA OF FORTY SQ. METERS AND FIFTY SQ. DECIMETERS (40.50) SQUARE METERS.

All sealed bids must be submitted to the undersigned on the above-stated time and date.

Prospective bidders or buyers are hereby organized to investigate for themselves, the title hereto above described and the encumbrances thereon, if any there be.

In case of the absence of any participating bidder on the above-scheduled date, said auction sale will be reset and finally held on **September 15, 2020** at the same place and time above-mentioned.

Naic, Cavite, Jun. 7, 2020.

(Sgd.) JANELLE V. LALAGONDO, MBA
Sheriff IV

HOME DEVELOPMENT MUTUAL FUND (Pag-IBIG Fund)
12th Floor HDMF Headquarters
Edsa cor. MRR Quezon Blvd., Mandaluyong City

CHRISTIAN BERNARD BULAN BUHAS
married to MARIANNE MAMAYSON BUHAS
17 Maria Guerrero St. Balintawak Pag-Asa
Marilao (Bulacan), Carmle

REPUBLIC OF THE PHILIPPINES
PROVINCE OF CAVITE
MUNICIPALITY OF NAIC

NOTICE TO THE PUBLIC

CCE-0827-2020 R.A. 10172

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 **RHODELYN HERNANDEZ ANIT** has filed with this office a petition for correction of entry in **sex** from **"FEMALE"** to **"MALE"** in the Certificate of Live Birth of her son **REMEUL HERNANDEZ ANIT.**

Any person adversely affected by said petition may file his written opposition with this Office not later than **August 10, 2020**.

(Sgd.) **GLORIA P. BAGO**
Municipal Civil Registrar

DIYARYO KABITENYO -July 27 and August 3, 2020

Early menstruation linked to increased menopause symptoms

Early menstruation increases the likelihood of hot flushes and night sweats decades later at menopause, according to a University of Queensland study.

School of Public Health researchers analysed data from more than 18,000 middle aged women across the UK, USA and Australia, as part of the Life course Approach to reproductive health and Chronic disease Events (LinkedLACE) international collaboration.

UQ's Dr Hsin-Fang Chung said the study showed women who started menstruating aged 11 or younger had a 50 per cent higher risk of experiencing frequent hot flushes and night sweats – known as vasomotor symptoms – at menopause.

The group was compared with women who had their first period at 14 or older.

"The risk of the women who menstruated early experiencing both symptoms was greater than having either hot flushes or night sweats alone," Dr Chung said.

Evidence of 'hormone disruptor' chemical threats grows

A growing number of chemicals in pesticides, flame retardants, and certain plastics have been linked to widespread health problems including infertility, diabetes, and impaired brain development, a set of reviews of hundreds of studies concludes.

Led by NYU Grossman School of Medicine, a team of environmental health experts analysed research published in the past five years on endocrine disruptors, as well as American and European policies to regulate them. These chemicals are believed to interfere with the function of hormones, signaling compounds made in glands that circulate to influence processes throughout the body.

Publishing online July 21 in the journal The Lancet Diabetes and Endocrinology, the new reports focused on "chemicals of concern," endocrine disruptors common in industrial and household goods. These include perfluoroalkyl substances (PFAS), toxins found in non-stick pans and waterproof clothing, and bisphenols, substances used in many plastics and can linings.

Exposure to certain chemicals found in industrial and household goods has been linked in new studies to obesity, to endometriosis, a painful and abnormal growth of tissue on the outside of the womb, and to polycystic ovary syndrome, a significant cause of infertility.

The recent reviews add 17 new between certain medical conditions and endocrine disruptors to a list of 15 others already identified by a 2015 joint investigation led by the United Nations and the World Health Organization. For example, new findings suggest that PFAS, bisphenols, and certain pesticides may damage semen. In addition, the review identifies numerous new studies that link brain-related health concerns, such as IQ loss and attention deficit disorder (ADD), to flame retardants and chemicals found in certain pesticides.

"These newer studies have strengthened the evidence linking endocrine disruptors to physical and especially neurological health issues," says one of the reviews' lead authors, Linda Kahn, MPH, PhD, a postdoctoral fellow in the Department of Pediatrics at NYU Langone Health.

"Our review of American and European policies argues that current regulations meant to reduce exposure to this class of chemicals are falling short," adds Kahn. "While further research is needed to more firmly establish cause and effect, urgent action is needed now because the public is already paying the costs through serious and long-lasting health problems."

The team's policy review found a lack of a consistent definition of endocrine disruptors across countries. The authors are concerned that current U.S. regulations are based only on exposure to large doses of chemicals, not small, everyday doses over many years, even though recent findings demonstrate that such chemicals are cumulatively dangerous at low levels.

New drug discoveries are closely linked to the quality of lab procedures

In their quest to find new drugs to treat deadly diseases, scientists study millions of molecules at high speed at the same time. Often it is enzymes that are investigated as targets in these 'high-throughput screenings.

New research from the University of Bath in the UK suggests the quality of the lab procedure (or assay) used for these screenings (measured by the "Z' value") has a much bigger impact on the ability to identify effective new molecules than was previously thought. The Z' factor – which can never be greater than 1.0 – is a statistical measure of the researchers' ability to see the required signal. It is used to judge whether the response in a particular assay is large enough to warrant further attention.

As a result of the new study, pharmaceutical companies and other labs around the world will be under pressure to refine their techniques for investigating new drug candidates.

In recent years, there has been an explosion of studies involving enzymes. These studies aim to identify molecules that can be developed into new drugs for treating cancers, infectious diseases and neurodegenerative diseases, amongst other conditions.

"There are a lot of diseases out there for which there is no treatment or the treatments aren't very good," said Dr Matthew Lloyd, who led the study from the University's Department of Pharmacy and Pharmacology. "This explains why there is such a big drive to develop new treatments using high-throughput screening."

In a paper published this month in the Journal of Medicinal Chemistry, Dr Lloyd identifies 75 examples of 'hit' molecules that went on to the next stage of early drug discovery. This is the first time high-throughput screening involving enzymes has been subject to such a focused review and analysis. Dr Lloyd examined scientific papers published between 2002 and 2020 and found that hit frequency was closely linked to assay quality, as measured by the Z'-factor.

Dr Lloyd found that a Z' factor of 0.65 had an average hit rate of 0.22% whereas a Z' factor of 0.8 had an average hit rate of 0.83%, clearly demonstrating the significance of an optimised assay.

"These findings underline how important it is to make sure your assay is the best possible quality it can be," said Dr Lloyd. "A high Z' factor, indicative of high-quality lab procedures, enables more hits to be found and ultimately should increase the chances of new treatments being developed.

High school athletes require longer recovery following concussions

High school athletes sustaining a concussion require careful attention when determining return-to-sport (RTS) timeframes. The purpose of this study was to determine epidemiological and RTS data of a large cohort of high school athletes who sustained one or more concussions. Young athletes are typically sidelined for at least one month after suffering a concussion, according to a Henry Ford Hospital study that provides new perspective on concussions and brain injuries.

The study's results were published ahead of the Michigan High School Athletic Association's recent announcement that the fall high school sports season will begin as traditionally scheduled, with football practices starting on Aug. 10.

The findings published by Orthopedics, a nationally recognized, peer-reviewed journal for orthopedic surgeons, are from a study conducted between September 2013 and December 2018. The study focused on 337 high school adolescents who sustained one or more concussions by analyzing historical data and then comparing it to more recent findings tied to an increase in reported concussions among young athletes.

World's smallest imaging device has heart disease in focus

A team of researchers led by the University of Adelaide and University of Stuttgart has used 3D micro-printing to develop the world's smallest, flexible scope for looking inside blood vessels.

The camera-like imaging device can be inserted into blood vessels to provide high quality 3D images to help scientists better understand the causes of heart attack and heart disease progression, and could lead to improved treatment and prevention.

In a study published in the journal Light: Science & Applications, a multidisciplinary team of researchers and clinicians was able to 3D print a tiny lens on to the end of an optical fibre, the thickness of a human hair.

The imaging device is so small that researchers were able to scan inside the blood vessels of mice.

Dr Jiawen Li, co-author and Heart Foundation Postdoctoral Fellow at the Institute for Photonics and Advanced Sensing, University of Adelaide, says in Australia cardiovascular disease kills one person every 19 minutes.

"A major factor in heart disease is the plaques, made up of fats, cholesterol and other substances that build up in the vessel walls," Dr Li said.

"Preclinical and clinical diagnostics increasingly rely on visualising the structure of the blood vessels to better understand the disease.

"Miniaturised endoscopes, which act like tiny cameras, allow doctors to see how these plaques form and explore new ways to treat them," she said.

Dr Simon Thiele, Group Leader, Optical Design and Simulation at the University of Stuttgart, was responsible for fabricating the tiny lens.

"Until now, we couldn't make high quality endoscopes this small," Dr Thiele said.

"Using 3D micro-printing, we are able to print complicated lenses that are too small to see with the naked eye.

"The entire endoscope, with a protective plastic casing, is less than half a millimetre across," he said.

Dr Li explains: "It's exciting to work on a project where we take these innovations and build them into something so useful.

"It's amazing what we can do when we put engineers and medical clinicians together," said Dr Li.

Cinnamon may improve blood sugar control in people with prediabetes

Cinnamon improves blood sugar control in people with prediabetes and could slow the progression to type 2 diabetes, according to a new study published in the Journal of the Endocrine Society.

It is estimated that nearly 96 million people in the United States have prediabetes, which occurs when blood sugar levels are higher than normal and often leads to type 2 diabetes. Identifying strategies to prevent the progression from prediabetes to type 2 diabetes is challenging, yet important for a large population.

"Our 12-week study showed beneficial effects of adding cinnamon to the diet on keeping blood sugar levels stable in participants with prediabetes," said the study's corresponding author, Giulio R. Romeo, M.D., of Joslin Diabetes Center in Boston, Mass. "These findings provide the rationale for longer and larger studies to address if cinnamon can reduce the risk of developing type 2 diabetes over time."

The randomized clinical trial investigated the effects of cinnamon supplementation in 51 participants with prediabetes. Participants were given a 500 mg cinnamon capsule or placebo three times a day for 12 weeks. The researchers found that cinnamon supplements lowered abnormal fasting glucose levels and improved the body's response to eating a meal with carbohydrates, which are hallmarks of prediabetes. Cinnamon was well tolerated and was not associated with specific side effects or adverse events.

DIYARYO KABITENYO
Nagmamalasakit sa lalawigan
Vol. 23 No. 23 July 27-August 2, 2020 P 10.00

Artificial cells produce parts of viruses for safe studies

Scientists searching for better diagnostic tests, drugs or vaccines against a virus must all begin by deciphering the structure of that virus. And when the virus in question is highly pathogenic, investigating, testing or developing these can be quite dangerous. Prof. Roy Bar-Ziv, Staff Scientist Dr. Shirley Sholiman Daube, Dr. Ohad Vonshak, a former research student in Bar-Ziv's lab, and current research student Yiftach Divon have an original solution to this obstacle. They demonstrated the production of viral parts within artificial cells.

The cells are micrometer-sized compartments etched into a silicon chip. At the bottom of each compartment, the scientists affixed DNA strands, packing them densely. The edges of the artificial cells were carpeted with receptors that can capture the proteins produced within the cells. To begin with, the scientists flooded their cells with everything needed to make proteins – molecules and enzymes needed to read the DNA information and translate it into proteins. Then, with no further human intervention, the receptor carpet trapped one of the proteins produced in the bottoms of the cells, with the rest of the viral proteins binding to one another, producing structures that the scientists had earlier "programmed" into the system. In this case, they created assorted small parts of a virus that infects bacteria (a bacteriophage).

"We discovered," says Bar-Ziv, "that we can control the assembly process – both the efficiency and the final products – through the design of the artificial cells.

Biggest risk factors identified to try and prevent Alzheimer's disease

There are at least 10 risk factors that appear to have a significant impact on a person's likelihood of developing Alzheimer's disease that could be targeted with preventative steps, suggests research published in the Journal of Neurology, Neurosurgery & Psychiatry.

Focusing on these factors, which include cognitive activity, high body mass index (a late life), depression, diabetes, and high blood pressure, could provide clinicians with an evidence based guideline for prevention of Alzheimer's disease, but a lot more research is needed to come up with other promising approaches to prevent ing the condition.

Currently, around 850,000 people in the UK are affected by dementia – around two thirds of which are Alzheimer's disease – and the condition is a leading cause of death, not helped by the fact that there have been no new drug treatments for dementia in almost 20 years.