

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

Cavite moves to combat province-wide dengue outbreak

IMUS CITY. Cavite - Authorities have implemented measures in a bid to curb dengue in Cavite province.

In capital city Imus, the local council called a special session last July 29, with dengue as the prime agenda.

Officials in other cities and municipalities have also intensified actions with treatment and their cleaning and misting operations.

The provincial government declared on July 18 a province-wide dengue outbreak and state of calamity following the reported deaths and cases in the province.

Turn to page 2



PHO joins Tagaytay in celebrating Nutrition Month

TAGAYTAY CITY. Maging Aktibo... Push Congress wherein al- Ms. Heibel Green Child Transmission of
- The Provincial Health Natin 'in' last July 26 - most 200 pregnant eta discussed Fami- human immunodef-
Office joined Tagaytay at the Sigatona Hall, women attended and ly Planning and Safe cency virus (HIV).
City in celebrating the Tagaytay International actively participated Motherhood while Prenatal Care
45th National Nutrition Convention Center. in the learning ses- Ms. Haydilyn Macle- and Philhealth Ben-
Month dubbed as 'Ka- Part of the pro- sion conducted by an talked about Pre- efits were covered in
Turn to page 2

DIYARYO KABITENYO

ISSN: 2611-821X

ARNULFO BARCO

Publisher - Editor

GEMER BARCO

Operations Manager

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PAPI

Publishers Association of the Philippines, Inc.

Socially active 60-year-olds face lower dementia risk

Being more socially active in your 50s and 60s predicts a lower risk of developing dementia later on, finds a new UCL-led study.

The longitudinal study, published in *PLoS Medicine*, reports the most robust evidence to date that social contact earlier in life could play an important role in staving off dementia.

"Dementia is a major global health challenge, with one million people expected to have dementia in the UK by 2021, but we also know that one in three cases are potentially preventable," said the study's lead author, Dr Andrew Sommerlad (UCL, Psychiatry).

"Here we found that social contact, in

middle age and late life, appears to lower the risk of dementia. This finding could feed into strategies to reduce everyone's risk of developing dementia, adding yet another reason to promote connected communities and find ways to reduce isolation and loneliness."

The research team used data from the

Whitehall II study, tracking 10,328 participants who had been asked on six occasions between 1985 and 2013 about their frequency of social contact with friends and relatives. The same participants also completed cognitive testing from 1997 onwards, and researchers referred to the study subjects' electronic health records.

(CAVITE... from page 1)

upland and lowland districts.

Cavite was the first province in the country to make the declaration.

The latest update that the Provincial Epidemiology Surveillance Unit (PESU) released last July 29 revealed that 22 deaths and 4,389 cases have been recorded in Cavite since January 1,

Cavite has the highest number of cases in Region IV-A or the Calabarzon (Cavite-Laguna-Batangas-Rizal-Quezon) area. It was reported.

In Imus, Councilor Adrian Jay C. Advincula,

chairman of the City Council Committee on Education and Culture and Health and Sanitation, virtually led the session and meeting with City Environment and Natural Resources (CENRO), Disaster Risk Reduction and Management and other concerned offices that tackled, among others, the dengue situation and actions in the area.

"We are taking actions against dengue with all the concerned offices involved. We are taking a united action," Advincula said.

The six most dengue-affected areas in the

city are Barangays Bulaya Na Tubig, Pansing Buzza II, Malagasang II-A and B and Anabo I and II. E-linus reported one death and 348 cases since January 1 this year.

It was agreed upon that cleaning and misting operations would be done in houses, schools and other areas regularly on Thursdays and Fridays or any other set days to prevent the spread of dengue.

Cavite province, deemed as the country's most populous, has eight districts comprising seven cities and 16 municipalities.

The outbreak was initially declared in Dasmariñas, General Trias and the municipalities of Alibon, Carmona, General Mariano Alvarez (GMA), Indang, Naic and Silang.

The provincial government and the health authorities are doing everything to address the dengue problem in the province.

Provincial Epidemiologist Nelson C. Soriano called on residents to seek medical assistance at once if symptoms persist and always clean their house and surroundings to a bid to

prevent the virus.

The provincial and city and municipal governments have put up a "mass" program against dengue which include treatment, larvicide survey or house-to-house search for dengue breeding places and the clean-up operations.

The provincial government declared the province-wide dengue outbreak and placed the whole province on a state of calamity the last time on September 19, 2015. A total of 48 deaths and 12,067 cases were reported from January 1 to December 31 in 2015.

(PHO... from page 1)

talk facilitated by Dr. Nopie John Dalixay from Gen. Emilio Aguinaldo Memorial Hospital and Dr. Liza Fe Capupis, Tagaytay City Health Officer, respectively. Other activities included in the program were the Zumba dance participated by barangay nutrition scholars, health workers and nutrition committees, Gandang Bantla 2019 and Food Festival joined by 14 barangays of the city.

REPUBLIC OF THE PHILIPPINES
FOURTH JUDICIAL REGION
REGIONAL TRIAL COURT
BRANCH 23
TRUCE, MARITIME CITY

EAST-WEST BANKING CORPORATION,
Mortgages.

FORECLOSURE CASE NO. F-144-19

DENMARK KENNETH JARDIN SANCHEZ
Represented by his Attorney-at-Law CLARISSA
JARDIN MARIN,
Mortgages.

NOTICE OF EXTRA-JUDICIAL SALE

Upon Extra-Judicial Petition for Sale under Act 1131, as amended by Act 4118, filed by Mortgagee, EAST-WEST BANKING CORPORATION, with business address at East-West Corporate Center, The Breakers, 5th Ave., cor. 23rd St., Bonifacio Global City, Taguig City against the Mortgagee's DENMARK KENNETH JARDIN SANCHEZ, represented by his Attorney-at-Law CLARISSA JARDIN MARIN, with business and postal addresses at 318, 4, Lot 24, Kateringon 22, Street, Nativitas, Quezon City, Cavite under 2526 Duro St., Greenville Subd., Marikina, Marikina, Quezon City, to satisfy the mortgage indebtedness which as of April 15, 2019 amounts to ONE HUNDRED FIFTY EIGHT THOUSAND SIX HUNDRED TWENTY FIVE PESOS and 1/100 (P1,158,625.00), Philippine Currency, together with interest and penalty charges as of said date but excluding the foreclosure and other necessary expenses incidental to this foreclosure and sale, the undersigned Sheriff will sell at public auction on 03 September 2019 at 10:00 o'clock in the morning at the main entrance of the Government Central Building located at the Provincial Capitol Compound, Truce, Maritime City, to the highest bidder for CASH and in Philippine Currency, the following described property with all the improvements thereon, to wit:

TRANSFER CERTIFICATE OF TITLE NO. 457-261782532

Lot No. 24 Block No. 4 Plot No. Pcd-04-227769

Portion of Block 10, Pcd-04-027722, Divided No. 4771, L.R. No. 564
Location: Barangay of Nativitas, Municipality of Quezon, Province of Cavite, Island of Luzon.

LINE	DIRECTION	ADJOINING LOT(S)
1-2	NE	Lot 25, Block 4, Pcd-04-227769
2-3	SE	Lot 26, Block 4, Pcd-04-227768
3-4	SW	Block Lot 6, Pcd-04-227760
4-1	SW	Lot 22, Block 4, Pcd-04-227769

area: FIFTY FOUR SQUARE METERS (54) more or less.

All needed bids must be submitted to the undersigned on the above stated date and time. In the event the public auction should not take place on the said date and time, it shall be held on 10 September 2019 without further notice.

Prospective bidders/bidders are hereby advised to investigate for themselves the title to the said property and improvements thereon, if any there be.

Dated: Maritime City, 23 July 2019.

(Sgd) JUAN C. ALLOJO III
Sheriff

Copy furnished:

ONA RAMILO & RUBAN LAW OFFICES
Counsel for the Mortgagee
6th Floor, EastWest Corporate Center
5th Ave., cor. 23rd St., Bonifacio Global City, Taguig City 1004

MR. DENMARK KENNETH J. SANCHEZ
MR. CLARISSA J. MARIN
318, 4, Lot 24, Kateringon 22, Street, Nativitas, Quezon City, Cavite
under 2526 Duro St., Greenville Subd., Marikina, Marikina, Quezon City

WARNING: It is absolutely prohibited to accept, allow or assist the sales of Extra-Judicial Sale on or before the date of sale.

Published: DIYARVO KARTENYO
Date: July 22, 29 and August 5, 2019

A wearable device so thin and soft you won't even notice it

Wearable human-machine interfaces — devices that can collect and store important health information about the wearer, among other uses — have benefited from advances in electronics, materials and mechanical designs. But current models still can be bulky and uncomfortable, and they can't always handle multiple functions at one time.

Researchers reported Friday, Aug. 2, the discovery of a multifunctional ultra-thin wearable electronic device that is imperceptible to the wearer.

The device allows the wearer to move naturally and is less noticeable than wearing a Band-Aid, said Compu-Yu, Bill D. Cook Associate Professor of Mechanical Engineering at the University of Houston and lead author for

the paper, published as *Science Advances*.

“Everything is very thin, just a few microns thick,” said Yu, who also is a principal investigator at the Texas Center for Superconductivity at UH. “You will not be able to feel it.”

It has the potential to work as a prosthetic skin for a robotic hand or other robotic devices, with a robust human-machine interface that allows it to automatically collect information and relay it back to the wearer.

That has applications for health care — “What if when you shake hands with a robotic hand, it was able to instantly detect physical condition?” Yu asked — as well as for situations such as chemical spills, which are risky for humans but require human decision-making

based on physical inspection.

While current devices are gaining in popularity, the researchers said they can be bulky to wear, often slow response times and suffer a drop in performance over time. More flexible versions are unable to

provide multiple functions at once — sensing, actuating, stimulation and data storage, for example — and are generally expensive and complicated to manufacture.

The device described in the paper, a metal oxide semiconductor on a polymer base, offers manufacturing advantages and can be processed at temperatures lower than 300 C.

“We report an ultra-thin, mechanically impenetrable, and stretchable (human-machine interface) HEM device, which is worn

REPUBLIC OF THE PHILIPPINES
REGIONAL TRIAL COURT
FOURTH JUDICIAL REGION
BRANCH 109, CARMONA, CAVITE

CAMBLO S. CAPILA
Plaintiff,

Civil Case No. BCY IC-GMA/2018-87
For: Annulment of Sale and Title and
Reconveyance.

ALICE G. AFRICA, HENRY TSAI
AND REGISTRY OF DEEDS OF CAVITE,
Defendants.

X _____ X

ORDER

Substantive the motion in the plaintiff's Motion for Leave to Serve Summons by Publication.

Records of the case shows that summons cannot be served upon defendants Alice Africa and Henry Tsai because they already moved out of the address stated in the Complaint. In view thereof, the motion is hereby granted. Let the service of summons upon defendants Alice Africa and Henry Tsai be effected by publication pursuant to Section 17, Rule 14 of the Rules of Court, for the account of the plaintiff, once a week for two consecutive weeks, in a newspaper of general circulation, in the Province of Cavite, or this Order, the Summons and the Complaint with Annexes, in which case the plaintiff shall forward and copy of this Order, the Summons and the Complaint by registered mail to the last known address of the said defendants. (Further, the plaintiff is directed to show proof thereof, pursuant to Section 18, Rule 14 of the Rules of Court). The defendants are directed to give a period of sixty (60) days from the last date of publication within which to file their Answer.

SO ORDERED:

Carmena, Cavite, April 2, 2019

NIVEN K. CAMLAPAN
Presiding Judge

Copies furnished:

1-27 BIC, File, Executive Office, Bang Bang Sta. Guadalupe, Cavendish Bldg., Boca, Cavite

Alice Africa - 601 Sumaswet Village, San Domingo, Santa Teresita, Paroltagan

Henry Tsai - Unit 902 Richmond Plaza, San Miguel Avenue, corner Lumbaca Drive, Origan, Pang City

SCD-Cavite - Three Martines, Cavite

Republic of the Philippines
REGIONAL TRIAL COURT
Fourth Judicial Region
Branch 109, Carmona, Cavite

CAMBLO S. CAPILA
Plaintiff

BCYC/GMA/2018-87
For: Annulment of Sale and Title and
Reconveyance.

ALICE G. AFRICA, HENRY TSAI and
REGISTRY OF DEEDS OF CAVITE,
Defendants.

S U M M O N S

TO: ALICE G. AFRICA - 601 Sumaswet Village, San Domingo, Santa Teresita, Paroltagan

HENRY TSAI - Unit 902 Richmond Plaza, San Miguel Avenue, corner Lumbaca Drive, Origan, Pang City

GREETINGS:

Summons is hereby served upon you together with the copy of the Complaint with annexes. You are hereby required to answer the Complaint herein attached within a period of sixty (60) days from the last date of publication.

WITNESS THE HONORABLE NIVEN K. CAMLAPAN, Presiding Judge of this Court, this 4th day of April 2019 at Carmena, Cavite, Philippines.

SCD-Cavite
NIVEN K. CAMLAPAN
Judge of Court

Form with multiple sections for summons details, including names, addresses, and court information.

Form with numbered sections (1-4) detailing legal notices, summons, and court orders.



Republic of the Philippines
Province of Cavite
Municipality of Alibon

OFFICE OF THE MUNICIPAL CIVIL REGISTRAR

Publication Notice
R.A. 10172

NOTICE TO THE PUBLIC

Date: July 13, 2015

OCE-0070-2015 (R.A. 10172)

In Compliance with the publication requirement and pursuant to OCRD Memorandum Circular No. 2013-1 Guidelines in the Implementation of the Administrative Order No. 1 Series of 2012 (ORR as R.A. 10172), Notice is hereby served to the public that **VIRGENIA DE OCAÑPO MANSAYAG** has filed with this Office a petition for correction of Date of Birth from "March 28, 1967" to "MARCH 11, 1967" on the certificate of live birth of Virgenia Ocampo at Marikina, Alibon, Cavite and whose parents are Pedro Orange and Magdalena Reyes.

Any person adversely affected by said petition may file his written opposition with this Office not later than August 11, 2015.

(Sgt.) TERBERTA GALANG
City Civil Registrar

DIYARTO KABITENYO - July 29 and August 5, 2015



Republic of the Philippines
OFFICE OF THE CITY
CIVIL REGISTRAR
City of General Trias, Cavite
(044) 596-9614

NOTICE OF PUBLICATION

In compliance with Section 1 of R.A. 9008, notice is hereby served to the public that **FERNANDO BALBIN ARTIBELLO** has filed with this Office a petition for Change of First Name from **TOMAS** to **FERNANDO** in the birth certificate of **TOMAS BALBIN ARTIBELLO** who was born on 21 December 1996 at General Trias, Cavite and whose parents are Hilariano M. Artibello and Maribel C. Balon.

Any person adversely affected by said petition may file his/her written opposition to this Office not later than August 11, 2015.

(Sgt.) ARLENE E. BUGTANG
City Civil Registrar

DIYARTO KABITENYO - July 29 and August 5, 2015

Love, though with a thousand signs and signals, will never be real if it remains unspoken.

-Arnold S. Barco



Republic of the Philippines
OFFICE OF THE CITY
CIVIL REGISTRAR
City of General Trias, Cavite
(044) 596-9614

Publication Notice
R.A. 10172

NOTICE TO THE PUBLIC

Date: July 6, 2015

OCE-0024-2015 (R.A. No. 10172)

In compliance with the publication requirement and pursuant to OCRD Memorandum Circular No. 2013-1 Guidelines in the Implementation of the Administrative Order No. 1 Series of 2012 (ORR as R.A. 10172), Notice is hereby served to the public that **BRENNINGS AMPURIA AMPARQ** has filed with this Office a petition for correction of name (OCCRO Copy) from "MALE" to "FEMALE" in the Certificate of Live Birth of **ANNEVANCE AMPURIA AMPARQ** at General Trias, Cavite and whose parents are Efren C. Ampuro and Alejandra A. Ampuro.

Any person adversely affected by said petition may file his written opposition to this Office not later than August 11, 2015.

(Sgt.) ARLENE E. BUGTANG
City Civil Registrar

DIYARTO KABITENYO - July 29 and August 5, 2015

Republic of the Philippines
City Civil Registrar Office
Province of Cavite
City of Isang

NOTICE OF PUBLICATION

In compliance with the publication requirement and pursuant to OCRD Memorandum Circular No. 2013-1 Guidelines in the Implementation of the Administrative Order No. 1 Series of 2012 (ORR as R.A. 10172), Notice is hereby served to the public that **ARMANDO C. MELLENDEZ** has filed with this Office a petition for correction of name in sex from **MALE** to **FEMALE** in the Certificate of Live Birth of **ARMEL FLORES MELLENDEZ** who was born in City of Isang, Cavite and whose parents are **ARMANDO C. MELLENDEZ** and **EMULA G. FLORES**.

Any person adversely affected by said petition may file his written opposition with this office not later than August 11, 2015.

(Sgt.) VIOLETA F. SANSE
City Civil Registrar I

DIYARTO KABITENYO - July 29 and August 5, 2015

No guy has a magic.
Magic is in the heart of the girl living the guy who can send her whole being up in 'Cloud Nine' even with the mere touch on her fingertips.

-Arnold S. Barco

REPUBLIC OF THE PHILIPPINES
REGIONAL TRIAL COURT
FOURTH JUDICIAL REGION
BRANCH 11
BREEZE MARTIRES CITY

HOME DEVELOPMENT MUTUAL FUND,
Mortgagee.

FORECLOSURE CASE NO. F-366-15

CATALINO S. BERMAN
mortgagor to SOLEDAD M. BERMAN,
Mortgagee.

NOTICE OF EXTRA-JUDICIAL SALE

Upon Extra-Judicial Petition for Sale under Art. 1513 as amended by Art. 8123, filed by Mortgagee, HOME DEVELOPMENT MUTUAL FUND, with business address at 17th Floor, JLP Business Solutions Center, No. 409 Shaw Boulevard, Marikina City, against the Mortgagor, CATALINO S. BERMAN mortgagor to SOLEDAD M. BERMAN, with residence and postal address at Q-1-A East Pacific St., Sangley Point, Cavite City in conformity with the mortgage indenture of both said November 5, 2009 agreement to SPEND HUNDRED THIRTYEIGHT THOUSAND FOUR HUNDRED EIGHTY SEVEN PESOS AND THIRTYEIGHT (P38,487.00) Philippine Currency, including interest and penalty charges as of said date but excluding foreclosure expenses and all other charges incident to this foreclosure and sale, the undersigned Sheriff will sell at public auction on October 6, 2015 at 1:00 o'clock in the afternoon at the main entrance of the Government Center Building, located at the Provincial Capitol Compound, Trias Martires City, in the highest bidder for CASH and in Philippine Currency, the following property as well as all the improvements thereon, to-wit:

TRANSFER CERTIFICATE OF TITLE NO. 3-10000

A parcel of land (Lot 3, Blk. 1 of the subdivision plan Public-00212, being a portion of Lot 2778-Div. 4-C, M. Estate, LRC, Sec. 54, 1, situated in the Div. of San Antonio, City of Trias Martires, Isang, bounded on the NE, along Lot 4, 18.70 M. Width on the SE, along Lot 2-3 by Rd. Lot 4, 18.70 M. Width on the SW, along lots 3-4 by Lot 3, all of the said parcel Registering at a pt. marked "1" on plan, a.k.a. containing an area of ONE HUNDRED (100) SQUARE METERS x 0.5

All stated herein to be situated in the subdivision and/or office stated here and place.

In the event the public auction should not take place on the said date and time, it shall be held on October 15, 2015 without further notice.

Prospective Bidders/Buyers are hereby enjoined to investigate the description of the lots for the said properties and circumstances hereon, if any shall be.
Trias Martires City, July 29, 2015
(Sgt.) LUCIO C. ALLEJO
Sheriff

Copy Forwarded:
HOME DEVELOPMENT MUTUAL FUND
17th Floor, JLP Business Solutions Center,
No. 409 Shaw Boulevard, Marikina City
CATALINO and SOLEDAD M. BERMAN
Q-1-A East Pacific St., Sangley Point, Cavite City
WARNING: It is absolutely prohibited to remove, deface or destroy this Notice of Extra-Judicial Sale on or before the date of sale.
Publication : DIYARTO KABITENYO
Date : August 3, 12 & 19, 2015

Republic of the Philippines
Local Civil Registry Office
Province: CAGI
City/Municipality: Buta

NOTICE FOR PUBLICATION

In compliance with Section 3 of Republic Act No. 9048, a notice is hereby served to the public that **MA. ARLENE J. PRUDENTE** has filed with this Office a petition for change of her name from **ARLENE to MA. ARLENE** in the birth certificate of **ARLENE PROFETA PRUDENTE** who was born on **31 MARCH 1962** to **ROSARIO CASTILLO** and whose parents are **ELIZALDO PRUDENTE** and **SATIVIDAR B. PROETA**.

Any person adversely affected by said petition may file his written opposition with this Office not later than **23 August 2019**.

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

DIYARVO KAMITENYO / August 5 & 12, 2019

3D miniature livers lead the way to patient-specific drug discovery

The human liver is a vital organ involved in multiple functions. Because susceptibility to liver diseases is highly variable among patients, researchers from Tokyo Medical and Dental University (TMDU) and Cincinnati Children's Hospital Medical Center (CCHMC) have engineered a model liver system that can be personalized for disease modeling and drug discovery.

In a study that will be published in August in *Cell Metabolism*, an international team of researchers including TMDU developed a

method for establishing multicellular human liver organoids (miniature livers) comprising different liver cell types that show liver tissue characteristics down to the gene and protein scale. They were able to create the livers within 20 days by combining different actively growing cell types established from pluripotent stem cells (PSCs), which can transform into almost any cell type.

Importantly, the researchers were able to trigger a liver disease known as steatohepatitis in these organoids,

Republic of the Philippines
Province of Cavite
Municipality of Tanauan
OFFICE OF THE MUNICIPAL CIVIL REGISTRAR

KA Form No. 11 (LCRM)

NOTICE FOR PUBLICATION

In Compliance with Section 3 of RA 9048, a notice is hereby served to the public that **MARISSA CATIPON DE YERA-MACAÑING** has filed to this office a petition for Change of First Name from **"TERESITA"** to **"MARISSA"** in the **Certificate of Live Birth** of **TERESITA CATIPON DE YERA** who was born on **December 11, 1958** to **EDUARDO CAYO** and whose parents are **ELFIDIO TIRAYAN DE YERA** and **ROSALIA BERAIN CATIPON**.

Any person adversely affected by said petition may file his written opposition with this office not later than **15 August 2019**.

(Sgd.) **MARIETA R. LOZANO**
Municipal Civil Registrar

DIYARVO KAMITENYO / August 5 & 12, 2019

which was confirmed by the accumulation of fats and increased expression of inflammatory proteins. Additionally, these diseased organoids showed increased levels of fibrosis (tissue scarring) indicators.

"Using atomic force microscopy, we also measured the organoids' stiffness, which reflects the severity of liver fibrosis," says author Shoda Togo. "The ability to trigger disease symptoms in this organ-simulating model will improve our understanding of disease development and underlying causes, and will allow safe drug testing."

In another exciting achievement, the re-

searchers also managed to establish sick liver organoids using PSCs from patients with Wolman disease.

"These patients are deficient in an enzyme involved in breaking down fatty material, resulting in fat accumulation in various organs including the liver," says co-author Rio Ouchi. "We then investigated ways to treat these sick organoids and succeeded in alleviating the disease symptoms using two different methods."

As the current treatment for Wolman disease is extremely expensive, this new research model is expected to facilitate the discovery,

Paradoxical outcomes for Zika-exposed tots

In the midst of an unprecedented Zika crisis in Brazil, there were a few flickers of hope: Some babies appeared to be normal at birth, free of devastating birth defects that affected other Brazilian children exposed to the virus in utero. But according to a study published online July 8, 2019, in *Nature Medicine* and an accompanying commentary co-written by a Children's National clinician-researcher, the reality for Zika-exposed infants is much more complicated.

The study authors found progressively higher risks for developmental, hearing and eye abnormality depending on how early the pregnancy was at the time the infants were exposed. Because Zika virus has an affinity for immature neurons, even babies who were not born with microcephaly remained at continued risk for suffering abnormalities.

Study authors led by Karin Nielsen-Saines at David Geffen UCLA School of Medicine followed 214 infants in Rio de Janeiro who had been exposed to the Zika virus during pregnancy, performing neurodevelopmental testing when the babies ranged in age from 7 to 32 months. These infants' mothers had had Zika-related symptoms themselves, including rash.

Although many children had normal assessments, 29% scored below average in at least

one domain of neurological development, including cognitive performance, fine and gross motor skills and expressive language. Sarah B. Malkey, M.D., Ph.D., and a colleague write in a companion commentary published online by *Nature Medicine* July 29, 2019.

The study authors found progressively higher risks for developmental, hearing and eye abnormality depending on how early the pregnancy was at the time the infants were exposed. Because Zika virus has an affinity for immature neurons, even babies who were not born with microcephaly remained at continued risk for suffering abnormalities.

Of note, 24 of 49 (49%) infants who had abnormalities at birth went on to have normal test results in the second or third year of life. By contrast, 17 of 60 infants (28%) who had normal assessments at birth had below-average developmental testing or had abnormalities in hearing or vision by age 32 months.

INTER-ASIA DEVELOPMENT BANK
Name of Bank

PUBLISHED BALANCED SHEET
(Head Office and Branches)
As of June 30, 2019

CONTROL PROOFLIST

	Account Code	Current Quarter	Previous Quarter
Cash and Cash Items	100000000000000000	5,977,575.53	6,892,222.21
Due from Bangko Sentral ng Pilipinas	105100000000000000	21,919,540.48	22,118,460.13
Due from Other Banks	105200000000000000	19,964,809.31	20,442,708.29
Financial Assets at Fair Value through Profit or Loss	110000000000000000	0.00	0.00
Available-for-Sale Financial Assets-Net	115000000000000000	2,822,881.21	2,822,881.83
Held-to-Maturity (HTM) Financial Assets-Net	115200000000000000	0.00	0.00
Unsold Debt Securities Classified as Loans-Net	115300000000000000	0.00	0.00
Investments in Non-Marketable Equity Security-Net	115400000000000000	0.00	0.00
Loans and Receivables - Net	119400000000000000	282,101,281.15	252,672,486.44
Other Financial Assets	148000000000000000	2,096,849.85	2,068,341.68
Equity Investment in Subsidiaries, Associates and Joint Ventures-Net	195452000000000000	0.00	0.00
Bank Premises, Furniture, Fixtures and Equipment-Net	195500000000000000	5,129,900.78	5,794,229.02
Lease and Other Properties Acquired-Net	195501000000000000	14,525,803.08	14,527,743.81
Non-Current Assets Held for Sale	199000000000000000	0.00	0.00
Other Assets-Net	211000000000000000	12,578,840.92	11,871,788.22
Net Due from Head Office/Branches/Agencies, if any (P1), branch of a foreign bank	255200000000000000	0.00	0.00
Financial Liabilities at Fair Value through Profit or Loss	218000000000000000	0.00	0.00
Deposit Liabilities	218000000000000000	273,524,863.71	252,285,780.41
Due to Other Banks	220000000000000000	0.00	0.00
Bills Payable	220100000000000000	0.00	400,000.00
Bonds Payable-Net	220200000000000000	0.00	0.00
Unsecured Subordinated Term-Net	220300000000000000	0.00	0.00
Repurchase Agreements-Maturing	220400000000000000	0.00	0.00
Special Time Deposit	220500000000000000	0.00	0.00
Overnight Bankable Securities	220600000000000000	0.00	0.00
Other Financial Liabilities	220700000000000000	0.00	0.00
Other Liabilities	220800000000000000	1,076,218.27	4,947,816.34
Net Due to Head Office/Branches/Agencies (P2) (same branch of a foreign bank)	255300000000000000	0.00	0.00
Capital Accounts			
Capital Accounts			
Other Liabilities			
Net Due to Head Office/Branches/Agencies (P3) (same branch of a foreign bank)			
ADDITIONAL INFORMATION			
Gross Total Loan portfolio (TLP)	490000000000000000	290,724,260.91	262,684,966.24
Specific allowance for credit losses on the TLP	490000000000000000	5,361,267.43	6,487,026.31
Non-Performing Loans (NPL)			
a. Gross NPL	490100000000000000	3,068,481.00	3,286,120.31
b. Ratio of gross NPL to gross TLP (%)	490100000000000000	1.06%	1.25%
c. Net NPL	490200000000000000	8,233,675.89	5,553,724.49
d. Ratio of Net NPL to gross TLP (%)	490200000000000000	2.83%	2.11%
e. Ratio of total allowance for credit losses to gross NPL (%)	490300000000000000	268.53%	168.09%
f. Ratio of specific allowance for credit losses on the gross TLP to gross NPL (%)	490400000000000000	27.13%	17.19%
Capital Adequacy Ratio (CAR) on bank basis, as prescribed under existing regulations		22.00%	20.20%
a. Total CAR (%)	490500000000000000	22.00%	20.20%
b. Tier 1 Ratio (%)	490600000000000000	17.13%	15.19%
c. Common Tier 1 Ratio (%) ¹⁷	490700000000000000	16.82%	14.92%

I hereby certify that all matters set forth in this Published Balance Sheet are true and correct, to the best of my knowledge and belief.

ROSANNE S. LEUA
President

AI could enable accurate screening for atrial fibrillation

A new Mayo Clinic research study shows that artificial intelligence (AI) can detect the signs of an irregular heart rhythm — atrial fibrillation (AF) — in a 12-lead electrocardiogram (EKG), even if the heart is in normal rhythm at the time of a test. In other words, the AI-enabled EKG can detect recent atrial fibrillation that occurred without symptoms or that is impending, potentially improving treatment options. This research could improve the efficiency of the EKG, a noninvasive and widely available method of heart disease screening. The findings and an accompanying commentary are published in *The Lancet*.

While common,

atrial fibrillation often is fleeting. Therefore, it is challenging to diagnose. Atrial fibrillation may not occur during a standard 16-second, 12-lead EKG, and people are often unaware of its presence. Prolonged monitoring methods, such as a loop recorder, require a procedure and are expensive.

Accuracy and timeliness are important in making an atrial fibrillation diagnosis. Left undetected, atrial fibrillation can cause stroke, heart failure and other cardiovascular disease. Knowing that a patient has atrial fibrillation helps direct treatment with blood thinners, notes Paul Friedman, M.D., chair of the Department of Cardiovascular Med-

icine at Mayo Clinic. Dr. Friedman, who is a cardiac electrophysiologist, is the study's senior author.

"When people come in with a stroke, we really want to know if they had AF in the days before the stroke, because it guides the treatment," says Dr. Friedman. "Blood thinners are very effective for preventing another stroke in people with AF. But for those without AF, using blood thinners increases the risk of bleeding without substantial benefit. That's important knowledge. We want to know if a patient has AF."

Using approximately 450,000 EKGs of the over 7 million EKGs in the Mayo Clinic dig-

ital data vault, researchers trained AI to identify subtle differences in a normal EKG that would indicate changes in heart structure caused by atrial fibrillation. These changes are not detectable without the use of AI.

Researchers then tested the AI on normal-rhythm EKGs from a group of 86,286 patients, of whom 3,051 were known to have atrial fibrillation. The AI-enabled EKG correctly identified the subtle patterns of atrial fibrillation with 90% accuracy.

Dr. Friedman says that he is surprised by the findings of this research. If proven out, he said, AI-guided EKGs could direct the right treatment for dis-

ease caused by atrial fibrillation, even without symptoms. Moreover, this technology can be processed using a smartphone or watch, making it readily available on a large scale.

"An EKG will always show the heart's electrical activity at the time of the test, but this is like looking at the ocean now and being able to tell that there were big waves yesterday," says Dr. Friedman. "AI can provide powerful information about the invisible electrical signals that our bodies give off with each heartbeat — signals that have been hidden in plain sight."

"Rather than finding the needles in the haystack by prolonged monitoring, authors

basically suggest that AI will be able to judge by looking at the haystack if it has a needle hidden in it," notes Jemien Hendriks, Ph.D., of the University of Adelaide in Australia, who wrote the study's commentary with Larissa Fabritz, M.D., of the University of Birmingham in the U.K.

Zach L. Aron and Peter Noseworthy, M.D., are equal first authors of the study. Other authors are Francisco Lopes-Jensen, M.D.; Samuel Asirvatham, M.D.; Anshul Deshmukh, M.B.B.S.; Bernard Gersh, M.B., Ch.B., D.Phil.; Rickey Carter, Ph.D.; Xiaoni Yao, Ph.D.; Alejandro Sabatstein, M.D.; Bradley Erickson, M.D., Ph.D.

Hepatitis B: Unusual virus discovered in shrews

The discovery of an unusual hepatitis B virus from shrews offers new opportunities of better understanding the chronic progression of the disease. International research teams were able to demonstrate that an important protein which is essential for the development of a chronic course of infection is not present in this virus. DZIF scientists at the Charité – Universitätsmedizin Berlin and the University of Giessen are leading the research.

Infection with the hepatitis B virus (HBV) is one of the major global health problems. The high number of chronic cases is particularly problematic. More than 240 mil-

lion people around the world are chronically infected with this virus and over 887,000 of those infected die each year of the long-term consequences such as liver cirrhosis and liver cancer. The chronicity of HBV infection that often goes undetected for decades is one of the fundamental characteristics of this virus. "Discovering this unusual HBV in shrews gives us an opportunity to better understand the pathogenesis of this chronic illness," explains lead author of the study Andrea Rasche, scientist at the Charité – University Medicine Berlin and DZIF scholarship holder of the 'Maternity Leive' programme.

An important pro-

tein that is required for the chronification of the infection is not present in the virus in shrews. "Without this immunomodulator, HBeAg, the disease could not become chronic," emphasises Prof. Dr. Jan Felix Drexler, DZIF scientist at the Charité – University Medicine Berlin and DZIF researcher in the research field "Emerging Infections." And this applies to all known HBVs in mammals. They form this protein during the infection. This immunomodulator suppresses the body's specific immune response to HBV so that the infection cannot heal and becomes chronic – often with very high viral concentrations in the

blood. When this viral protein is not present, the body's immune system can successfully fight the infection.

This is not the case with the newly discovered HBV in shrews. The researchers examined almost 700 shrew samples from Europe and Africa and despite the absence of HBeAg, those animals that were infected still showed high concentrations of HBV in the blood. "This indicates a very successful but unusual characteristic of the infection and the transmission of shrew HBV in its host," explains Prof. Dr. Dieter Glebe, head of the National Reference Centre for Hepatitis B and D viruses at the Justus Liebig University of Giessen

(JLU) and DZIF scientist in the research field "Hepatitis." "Since the virus cannot infect human liver cells, it is highly unlikely that the virus can infect people."

Therefore, it can be reasonably concluded that there is no risk for humans if they come into contact with shrews infected with HBV.

Another characteristic of the newly discovered virus is that it does not use the liver bile acid transporter to enter the liver cells as is the case with HBV in humans and apes, but takes an unknown path into the cell. "This shows that we still do not know all HBV receptor molecules," explains Prof. Drexler. In addition to these important findings about the HBV

infection, the shrew virus gives us new insight into the genealogy of HBV. "Our evolutionary studies show that HBV exists in mammals for millions of years, probably around 40 million years," says Prof. Drexler.

The scientists now want to further examine the unusual infection pattern of shrew HBV that develops without the central immunomodulator HBeAg. Despite intensive international efforts, an effective treatment for chronic hepatitis B has yet to be developed. One reason for this is that there are no suitable animal models that can be used to examine the complex interactions of the virus infection.

3D printing the human heart

A team of researchers from Carnegie Mellon University has published a paper in *Science* that details a new technique allowing anyone to 3D bioprint tissue scaffolds out of collagen, the major structural protein in the human body. This first-of-its-kind method brings the field of tissue engineering one step closer to being able to 3D print a full-sized, adult human heart.

The technique, known as Freeform Reversible Embedding of Suspended Hydrogels (FRESH), has allowed the researchers to overcome many challenges associated with existing 3D bioprinting methods, and to achieve unprecedented resolution

and fidelity using soft and living materials.

Each of the organs in the human body, such as the heart, is built from specialized cells that are held together by a biological scaffold called the extracellular matrix (ECM). This network of ECM proteins provides the structure and biochemical signals that cells need to carry out their normal function. However, until now it has not been possible to rebuild this complex ECM architecture using traditional biofabrication methods.

"What we've shown is that we can print pieces of the heart out of cells and collagen into parts that truly function, like a heart valve or a small beating ventricle," says Adam Feinberg, a profes-

sor of biomedical engineering (BME) and materials science & engineering at Carnegie Mellon, whose lab performed this work.

"By using MRI data of a human heart, we were able to accurately reproduce patient-specific anatomical structure and 3D bioprint collagen and human heart cells."

Over 4000 patients in the United States are waiting for a heart transplant, while millions of others worldwide need hearts but are ineligible for the waitlist. The need for replacement organs is immense, and new approaches are needed to engineer artificial organs that are capable of repairing

Dizziness of unknown cause may be perception disorder

Many patients with functional dizziness look back on a long odyssey to numerous doctors, because no organic causes could be found. Now for the first time, an experiment at the Technical University of Munich (TUM) has identified possible causes of the disorder: problems with the processing of sensory motor signals in the brain that

assemble these associated with dizziness due to organic causes.

The Munich researchers had already postulated several years ago that functional disorders may be caused by faulty processing of sensory stimuli. The team, headed by Prof. Nadine Lehnen, senior physician for psychosomatic medicine at the TUM University Hos-

pital rechts der Isar, was able to bolster this hypothesis with the results of an experimental pilot study.

Eight patients with functional dizziness and eleven healthy subjects who served as a comparison group participated in the study. The researchers also used data from dizziness patients with organic de-

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