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

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

2 dead, 7 hurt in LPG blast in Dasma

Two people were killed while seven others were injured after a liquefied petroleum gas refilling station inside a residential area exploded in Dasmariñas City, Cavite on April 16 morning.

Reports said several houses and vehicles were damaged after the blast that happened inside a house in Barangay Salawag at around 9 a.m.

The fire was put out after nearly an hour at 9:55 a.m.

Soldier victim of robbery in Kawit

KAWIT, Cavite – A soldier was robbed in this town after being tricked by two men pretending to ask for help along Toclong-San Sebastian Road in Barangay Toclong at around 3 a.m. on April 13.

The victim was riding a motorcycle when he passed two men parked by the roadside beside a black Yamaha NMAX.

The suspects reportedly asked for help, claiming they had run out of fuel. When the victim stopped to assist them, he was suddenly threatened with a short firearm and declared as a robbery victim.

The suspects took his sling bag and motorcycle key before escaping quickly.

Stolen items included a firearm, extra magazines, wallet, cellphone, identification cards including a military ID, ATM cards, and important documents.

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ARNULFO BARCO
(May 14, 1951 - September 2, 2024)
Founder

GENER BARCO
Publisher-Editor

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Maintaining Mental Activity Throughout Life May Reduce Alzheimer's Risk by 38%

Participating in intellectually challenging pursuits across your lifespan, such as perusing literature, composing written work, and acquiring new languages, may correlate with decreased likelihood of Alzheimer's disease and gradual mental decline. This represents the findings of research recently published in Neurology, the official periodical of the American Academy of Neurology. Researchers note that their results indicate a correlation, not confirmation that continuous intellectual development directly shields against Alzheimer's.

The investigation revealed that individuals who maintained greater mental engagement during their lives were diagnosed with Alzheimer's approximately five years after those exhibiting minimal cognitive stimulation. Similarly, they exhibited mild cognitive deterioration seven years later on average.

"Our investigation examined mental enrichment spanning childhood through advanced age, emphasizing pursuits and instruments that invigorate the intellect," explained lead researcher Andrea Zammit, PhD, from Rush University Medical Center in Chicago. "Our conclusions indicate that cerebral wellness in advanced years is substantially shaped by prolonged contact with intellectually demanding settings."

Researchers observed 1,939 older adults with a mean age of 80 who showed no indication of dementia initially. Individuals participated in monitoring lasting roughly eight years.

To gain deeper comprehension of continuous education, the team analyzed mental enrichment across three periods of existence. Formative years, preceding age 18, encompassed frequency of being read aloud to, regularity of book consumption, availability of periodicals and geographical references in the residence, and whether they pursued foreign language instruction exceeding five years.

Middle-years engagement encompassed financial standing at age 40, availability of materials including periodical subscriptions, reference materials, and library memberships, and recurrence of attendance at institutions such as cultural centers or archives. Mature years engagement, commencing near age 80, concentrated on pursuits including perusing, composing, and recreational gaming, supplemented by compensation from retirement benefits and additional income sources.

Scientists formulated enrichment rankings for all individuals.

Throughout the research period, 551 individuals were identified with Alzheimer's disease, whereas 816 exhibited mild cognitive deterioration.

When investigators contrasted the uppermost decile of participants demonstrating the greatest enrichment measurements against the lowermost decile, notable contrasts surfaced. Within the uppermost category, 21% acquired Alzheimer's, relative to 34% among those in the lowermost category.

Following modification for variables including chronological age, biological sex, and scholastic attainment, heightened lifetime enrichment demonstrated correlation with a 38% diminished probability of Alzheimer's disease and a 36% diminished probability of mild cognitive deterioration. The commencement of illness manifestation also demonstrated substantial variation. Persons demonstrating the greatest enrichment manifested Alzheimer's at a typical age of 94, versus age 88 for those exhibiting the least enrichment, signifying a five-year postponement.

Regarding mild cognitive deterioration, those demonstrating heightened enrichment exhibited symptoms at a median age of 85, relative to age 78 for those with reduced enrichment, equating to a seven-year postponement.

Within a restricted population of contributors who passed away throughout the research and underwent post-mortem analysis, those demonstrating greater enrichment exhibited more robust recollection and reasoning proficiencies and decelerated mental decline preceding expiration. Such advantages persisted even subsequent to accounting for preliminary neurological modifications associated with Alzheimer's, encompassing the accumulation of substances termed amyloid and tau.

"Our conclusions are optimistic, recommending that recurrently participating in assorted mentally demanding pursuits throughout existence may yield meaningful consequences for mental function," expressed Zammit. "Community expenditures enlarging availability to enriching contexts, including archives and formative instruction programs

Turn to page 3

EXTRA-JUDICIAL SETTLEMENT OF ESTATE WITH WAIVER OF RIGHTS

NOTICE is hereby given that the estate of the late **MARIANITO L. CLAMOSA,** a resident of Barangay Punta I, Tanza, Cavite, who died intestate on October 14, 2022 at 014 Punta 1, Tanza, Cavite, consisting of a house under National Housing Authority with I.N.L.A. No: 728-20018-05, situated at Ph. 2 Stg. 23 Blk. 05 Lot 013 Bahay Katuparan, Barangay Bagtas, Tanza, **Cavite** has been adjudicated and extra-judicially settled by and among his heirs with waiver of rights and interests over the above-described house in favor of JOSEPHINE C. REYES on January 17, 2026 in the Municipality of Tanza, Province of Cavite, Philippines before Notary Public Atty. Jason Almond P. De Guzman and entered in his Notarial Register as Doc. No. 39; Page No. 8; Book No. III; Series of 2026.

(Sgd.) **Heirs / Affiants**

Publication : DIYARYO KABITENYO News Publishing Service
Dates : April 6, 13 & 20, 2026

EXTRAJUDICIAL SETTLEMENT OF THE ESTATE OF THE LATE GREGORIO OBISPO IGNACO WITH WAIVER OF RIGHTS

NOTICE is hereby given that the estate of the late **GREGORIO O. IGNACO** who died intestate on 24 June 2013 at Trece Martires City, Cavite, and at the time of his death, his residence was at Sitio Niugan, Brgy. San Francisco, General Trias City, Cavite, consisting of his one-half portion pertaining to his ½ conjugal share in a parcel of agricultural land situated in the Bo. of Buenavista, Municipality of General Trias, Province of **Cavite** with an area of FOURTEEN THOUSAND TWO HUNDRED FIVE (14,205) SQUARE METERS, covered by Transfer Certificate of Title No. EP-344 under Tax Declaration No. 242-0015-10462 has been adjudicated and extrajudicially settled by and among his heirs in pro-indiviso equal shares with waiver of rights, interest and participation over their shares in the estate of the late Gregorio O. Ignaco in favor of AMPARO PAGKALIWANGAN IGNACO on April 6, 2026 at Dasmariñas City, Cavite, Philippines before Notary Public Atty. Miriam S. Clorina and entered in her Notarial Register as Doc. No. 344; Page No. 69; Book No. 350; Series of 2026.

Signed and Thumbmarked by Heirs

Publication : DIYARYO KABITENYO News Publishing Service
Dates : April 13, 20 & 27, 2026

RA Form No. 10.0 (LCRO)

Republic of the Philippines
Office of the Municipal Civil Registrar
Rosario, Cavite

NOTICE FOR PUBLICATION

CFN-0005-2026

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 **MARIBEL LUNA CANTOS** has filed in this office, a petition for ***Change of First Name*** from **MA. BELLA** to **MARIBEL** in the Certificate of Live Birth of **MA. BELLA PANGANIBAN LUNA** at Rosario, Cavite and whose parents are ***Bienvenido C. Luna*** and ***Maria W. Panganiban***.

Any person adversely affected by said petition may file his written opposition with this office not later than **04 May 2026**.

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

Publication : DIYARYO KABITENYO News Publishing Service
Dates : April 20 & 27, 2026

RA Form No. 10.0 (LCRO)

Republic of the Philippines
Office of the Municipal Civil Registrar
Rosario, Cavite

NOTICE FOR PUBLICATION

CCE0025-2026 / R.A. 10172
CCE0026-2026

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 **BENEDICTO D. HOLASCA** has filed in this office, ***Correction of Entry in the Month and Date of the date of Birth*** from **December 12, 1972** to **December 09, 1972** in the Certificate of Live Birth of **BENEDICTO D. HOLASCO** at Rosario, Cavite and whose parents are **Bienvenido I. Holasco** and **Leonora C. Diego**.

Any person adversely affected by said petition may file his written opposition with this office not later than **04 May 2026**.

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

Publication : DIYARYO KABITENYO News Publishing Service
Dates : April 20 & 27, 2026

REPUBLIC OF THE PHILIPPINES
PROVINCE OF CAVITE
MUNICIPALITY OF TANZA
LOCAL CIVIL REGISTRY OFFICE

NOTICE OF PUBLICATION

In compliance with Sec. 5 of Rep. Act No. 9048, a notice is hereby served to the public that **LOURDES M. PAREJA** has filed with this office a petition for **CHANGE OF FIRST NAME** from **"MAXIMA"** to **"LOURDES"** in the Certificate of Live Birth of one, MAXIMA VILLALUZ MASANGCAY, who was born on October 20, 1959 at Tanza, Cavite and whose parents were FRANCISCO LIBO MASANGCAY & TEOFISTA ABUTIN VILLALUZ.

Any person adversely affected by said petition may file his written opposition with this Office not later than **29th April 2026**.

(Sgd.) **OFELIA U. ARGUSON**
OIC-Municipal Civil Registrar

Publication : DIYARYO KABITENYO News Publishing Service
Dates : April 20 & 27, 2026

REPUBLIC OF THE PHILIPPINES
PROVINCE OF CAVITE
MUNICIPALITY OF TANZA
LOCAL CIVIL REGISTRY OFFICE

NOTICE OF PUBLICATION

In compliance with Sec. 5 of Rep. Act No. 9048, a notice is hereby served to the public that **MARILOU DELA CRUZ VALENCIA** has filed with this office a petition for **CHANGE OF FIRST NAME** from **"MA. LUZ"** to **"MARILOU"** in the Certificate of Live Birth of one, MA. LUZ R. DELA CRUZ, who was born on March 5, 1967 at Tanza, Cavite and whose parents were GREGORIO DELA CRUZ & TEODELA RECENTES.

Any person adversely affected by said petition may file his written opposition with this Office not later than **29th April 2026**.

(Sgd.) **OFELIA U. ARGUSON**
OIC-Municipal Civil Registrar

Publication : DIYARYO KABITENYO News Publishing Service
Dates : April 20 & 27, 2026

(MAINTAINING...from page 2)

conceived to nurture perpetual intellectual curiosity, could contribute to mitigating dementia prevalence."

A constraint involves that contributors recalled specifics regarding their formative and middle-aged intervals subsequently, which may have compromised the dependability of their recollections.

• A current investigation proposes that preserving cerebral vitality during one's existence, through pursuits including perusing, composition, and acquiring fresh linguistic abilities, demonstrates correlation with diminished likelihood of Alzheimer's disease and retarded mental decline.

• It merits emphasis that the investigation demonstrates a relationship, not verified confirmation that perpetual education prevents Alzheimer's.

• Scientists examined 1,939 older participants and investigated how intellectual activation spanning disparate life intervals, encompassing availability of reading materials, periodicals, and archives, may affect neurological wellness in subsequent periods.

• The conclusions demonstrated remarkable outcomes. Individuals positioned in the uppermost decile regarding perpetual mental enrichment exhibited a 38% minimized probability of Alzheimer's and a 36% minimized probability of mild cognitive deterioration versus those in the lowermost decile.

• Heightened degrees of cognitive participation were additionally correlated with consequential deferrals in symptom manifestation, ranging to five years subsequent for Alzheimer's and nine years subsequent for mild cognitive deterioration.

• The conclusions underscore an encouraging realization. Broadening availability to intellectual pursuits, mentally stimulating surroundings, and contemplative endeavors might demonstrate substantial importance in advancing neurological robustness throughout maturation.

Isolated individuals show poorer memory but not faster deterioration, research reveals

Experiencing loneliness might influence how well seniors recall information, yet it does not seem to accelerate the rate at which memory fades over time. This conclusion stems from a major European study tracking over 10,000 individuals across a seven-year span.

At the study's outset, participants reporting greater loneliness achieved lower scores on memory assessments. Yet, as years passed, their memory loss occurred at roughly the same pace as those who did not feel isolated.

The results appeared in the peer-reviewed journal Aging & Mental Health, drawing on data from the Survey of Health, Ageing and Retirement in Europe (SHARE). This ongoing project involved 10,217 adults aged 65 to 94 from 12 European nations.

Loneliness is increasingly viewed as a critical public health issue due to its connections with longevity, physical well-being, mental health, and general quality of life. These outcomes reinforce evidence linking loneliness to brain function in seniors, while also implying that isolation might not directly heighten dementia risk. The investigators propose that regular screening for loneliness could become standard in cognitive health evaluations for older adults. The research team comprised specialists from the Universidad del Rosario in Colombia, Clínica Universitaria de Navarra and Universitat de Valencia in Spain, and the Karolinska Institute in Sweden. They argue that tackling loneliness could be one of several strategies to promote healthier aging.

"The discovery that loneliness significantly affected memory, yet not the speed of memory decline over time, was an unexpected result," states lead author Dr. Luis Carlos Venegas-Sanabria from the School of Medicine and Health Sciences at the Universidad del Rosario.

"It indicates that loneliness may play a more significant role in the baseline state of memory than in its gradual deterioration.

"The research highlights the need to address loneliness as a key factor regarding cognitive performance in older adults."

Loneliness and social isolation are frequently regarded as major risk factors for dementia. Nevertheless, research findings have varied. Some investigations suggest loneliness accelerates cognitive decline, while others found no clear link.

This study sought to clarify how loneliness affects memory changes over time, examining both immediate and delayed recall across seven years.

The analysis utilized data gathered between 2012 and 2019 from SHARE, a long-term initiative launched in 2002 that monitors the health and aging of individuals aged 50 and above throughout Europe.

Participants hailed from nations including Germany, Spain, Sweden, and Slovenia. The 12 countries were categorized into four zones: Central, South, North, and Eastern Europe. Individuals with a history of dementia, including Alzheimer's disease, were omitted. Researchers also excluded those whose daily living activities were 'compromised' (defined as having any disability in tasks like walking, eating, or bathing).

Memory was assessed by testing how well participants could retrieve information both immediately and after a pause. One exercise required them to recall as many words as possible from a list of 10 read aloud within one minute.

Loneliness was defined as 'feeling alone'. Participants responded to three questions used to categorize their loneliness as low, average, or high.

The questions were: How often do you feel you lack companionship?, How often do you feel left out?, and How often do you feel isolated from others?

Researchers also accounted for other variables that could impact memory, such as physical activity, social interaction, depression levels, diabetes, and other health issues.

The highest loneliness levels were reported in Southern European nations (12%), followed by the Eastern region (9%), Central (6%), and Northern (9%) regions.

Most participants (92%) reported low or average loneliness at the study's start. Those in the high loneliness group (8%) tended to be older, more frequently female, and reported worse overall health. They also exhibited higher rates of depression, high blood pressure, and diabetes.

Participants with high loneliness scored lower on both immediate and delayed memory tests initially compared to those with lower loneliness levels. Despite beginning at a disadvantage, individuals with higher loneliness did not suffer faster memory loss. Their decline rate matched those in the low and average loneliness groups. A steeper drop in memory performance was observed across all groups between year three and year seven.

Researchers note that loneliness was treated as a static trait in this study. In reality, feelings of loneliness can shift over time 'in response to changes in personal or environmental circumstances across the lifespan'.

Men and women with obesity encounter distinct concealed health dangers

Fresh results unveiled at this year's European Congress on Obesity (ECO) in Istanbul, Turkey (May 12-15) underscore distinct variations in how obesity impacts males and females. The study indicates that hazards tied to cardiac health, metabolism, and inflammation do not emerge identically across genders. These revelations could assist physicians in crafting more tailored treatment approaches.

A research group from Dokuz Eylul University in Turkey discovered that males with obesity are more prone to building up abdominal (visceral) fat. This fat type encases internal organs and is strongly connected to severe heart and metabolic disorders. Males in the study also displayed elevated liver enzyme levels, which might indicate liver injury. Females with obesity, conversely, were more apt to suffer from systemic inflammation and raised cholesterol levels, both of which increase the danger of heart disease and type 2 diabetes.

"Our results uncover fascinating distinctions in how males and females react to obesity," stated lead investigator Dr. Zeynep Pekel, from Dokuz Eylul University, Izmir, Turkey. "They demonstrate exactly why gender-focused research is vital. Not only are sex variations a major factor in the disease process and progression of obesity, but our outcomes suggest that such disparities could be a foundation for discovering targeted, sex-specific therapies to aid in managing individuals living with obesity."

In 2023, roughly 1.54 billion adults globally were living with metabolic syndrome (approximately 1 in 3 females and 1 in 4 males). This condition encompasses a cluster of significant risk factors for cardiovascular disease and type 2 diabetes, such as central obesity, high cholesterol, elevated blood pressure, and increased fasting plasma glucose.

Obesity itself is a complex chronic ailment that impacts the body in numerous ways. It entails alterations in metabolism and inflammation, and these shifts can differ greatly between individuals. Biological sex influences where fat is stored, how the liver handles nutrients, and how the immune system reacts. Yet, detailed comparisons of these distinctions between males and females with obesity have been scarce. To better grasp these trends, investigators analyzed data from 886 females (mean age 45 years) and 248 males (mean age 41 years) who received care at the Obesity Clinic in the Department of Internal Medicine at Dokuz Eylul University Faculty of Medicine between 2024 and 2025.

Participants underwent a series of assessments. Physical measurements included height, weight, body mass index (BMI), and blood pressure. Blood tests gauged lipid levels to evaluate cardiovascular risk, including total cholesterol, low-density lipoprotein (LDL), or "bad" cholesterol, high-density lipoprotein (HDL), or "good" cholesterol, triglycerides, and fasting blood glucose. Investigators also assessed markers linked to liver function (alanine aminotransferase (ALT) and gamma-glutamyl transferase (GGT) levels), kidney function (creatinine levels), and inflammation. Inflammatory signs included C-reactive protein, erythrocyte sedimentation rate, white blood cell count, and platelet count.

The outcomes revealed that males had a marginally higher body mass index (BMI) than females (37.5 vs 36 kg/m²). However, their waist measurement was substantially larger (120 vs 108cm), and their systolic blood pressure was also elevated (128 vs 122 mmHg), both of which are associated with heightened risk of cardiovascular disease and diabetes (see table in notes to editors).

Males also exhibited significantly greater levels of liver enzymes (ALT and GGT), triglycerides, and creatinine. These observations point to a higher probability of liver-related and metabolic complications. Females, in contrast, had elevated total cholesterol (215 vs 203 mg/dL) and LDL or "bad" cholesterol (130 vs 123 mg/dL). They also displayed higher concentrations of inflammatory markers, including erythrocyte sedimentation rate, C-reactive protein, and platelet count (see table in notes to editors). These patterns imply a more robust inflammatory reaction. According to Pekel, these distinctions are likely shaped by hormones, immune system activity, and how fat is distributed in the body. Hormones (particularly oestrogen) influence fat storage and the body's inflammatory response. Females typically store more fat under the skin and tend to exhibit higher levels of inflammation-related markers such as C-reactive protein and erythrocyte sedimentation rate. They also generally possess a more active immune response, partly due to genetic elements like the X chromosome.

Males are more prone to storing fat around internal organs. This visceral fat is tightly linked to metabolic disorders and raises the risk of serious health complications.

"It remains in the early stages and these results need validation in other patient groups, but they provide crucial insight into how obesity might impact males and females differently," said Pekel. "These variations are likely driven by biological elements such as hormones, immune responses, and fat distribution. Our upcoming steps are to verify these findings in larger populations, better comprehend the biological mechanisms behind these distinctions, and investigate how these patterns connect to clinical risk."

The investigators highlight several constraints. The study is cross-sectional, meaning it cannot establish cause and effect and may be affected by confounding variables or reverse causation. Furthermore, most participants were adults of Turkish ethnicity, so the results may not fully extend to other populations. Broader and more varied studies will be required to confirm and build upon these outcomes.

How a Vitamin Deficiency May Halt Cancer Cell Growth

Researchers at the University of Lausanne (Unil) have discovered a new biological mechanism that reveals a critical weakness in tumor cells when they are deprived of vitamin B7.

All cells must adapt to changes in nutrient availability to survive. However, some cells become particularly dependent on glutamine, an amino acid that plays a key role in metabolism. Glutamine supplies the essential building blocks needed to produce proteins and DNA, and without it, cells cannot continue to grow and divide.

Cancer cells are a clear example of this. Many tumors display what scientists call "glutamine addiction," meaning they rely heavily on this nutrient. While this dependency is seen as a vulnerability, many cancers manage to find ways around it. In a study published in the journal Molecular Cell, a team led by Alexis Jourdain, assistant professor in the Department of Immunobiology (DIB) at Unil's Faculty of Biology and Medicine (FBM), offers new insight into the cellular processes behind this adaptability.

The research, led by Dr. Miriam Lisci, a postdoctoral scientist in Prof. Jourdain's lab, focused on carbon-rich molecules, particularly pyruvate. These molecules can enable cells to keep dividing even when glutamine is in short supply.

The team discovered that this process depends on a mitochondrial enzyme called pyruvate carboxylase, which requires vitamin B7 (also known as biotin) to function. When vitamin B7 is absent, the enzyme stops working and cell growth halts. In this way, biotin acts as a "metabolic license," enabling pyruvate to enter the cell's energy system and compensate for the lack of glutamine.

The study also revealed a new role for FBXW7, a gene frequently associated with cancer. "When FBXW7 is mutated -- a situation that is frequent in certain cancers -- pyruvate carboxylase partially disappears, pyruvate can no longer be used efficiently, and cells become dependent on glutamine," explains Miriam Lisci, first author of the article.

The researchers showed that specific FBXW7 mutations found in patients can directly trigger this heightened dependence on glutamine. These findings were made possible through collaborations with the FBM's metabolomics and proteomics platforms, as well as with Prof. Owen Skinner's team at Northeastern University in the United States.

The results also help clarify why therapies designed to block glutamine do not always work, as cancer cells are capable of switching to alternative metabolic pathways to survive.

Brain Donation for Autism Research Awareness

Autism BrainNet has released new survey results highlighting a significant gap between public support for autism research and understanding of how that research is conducted. While 92% of Americans say studying the autistic brain is extremely or very important, 70% have never heard of brain donation. This disconnect suggests that many people support autism research without realizing the vital role postmortem brain tissue plays in advancing scientific discovery.

The survey, conducted February 26–March 2, 2026, with 1,007 respondents, reveals that while more than 80% are familiar with organ donation and over half are registered donors, only 15% know that brain donation is not included in standard organ donor agreements. Brain donation requires a separate process and must occur within hours after death—fewer than half of participants knew this critical detail. A small number even believed donation could occur while a person is still alive.

There are also widespread misconceptions. Nearly one-third of respondents incorrectly assumed that conditions like autism or epilepsy disqualify someone from donating. In reality, individuals with these conditions are among the most valuable contributors to research, as scientists rely on diverse brain samples to better understand neurodevelopmental disorders.

“Postmortem brain tissue is essential to autism research,” said David G. Amaral, Ph.D., Scientific Director of Autism BrainNet and UC Davis Distinguished Professor. “It can’t be replicated by AI, imaging, or animal models. Our mission is to enable high-quality research, provide accurate information about brain donation, and help families feel comfortable planning ahead.”

Kathy Stein, who donated her autistic brother Ed’s brain to Autism BrainNet, shared her experience: “My younger brother led a rich and happy life. When he passed, I donated his brain because it’s a positive way to honor what a wonderful person he was and to extend his legacy. Imagine what we can learn about the biological causes of autism and related disorders through his contribution.”

To improve awareness, Autism BrainNet will host an “Ask Me Anything” session on Reddit during Autism Acceptance Month. The event, scheduled for April 29 from 12–2 pm ET, will feature Dr. Amaral and Dr. Alycia Halladay, Chief Science Officer of the Autism Science Foundation, to answer questions about the brain donation process.

Brain donation is for research only and does not interfere with funeral plans. There is no cost to families, and Autism BrainNet coordinates all arrangements. Donations are accepted from people with autism, those with genetic conditions linked to autism, and neurotypical individuals.

Brain Research Uncovers Shared Neurological Foundation Between Autism and ADHD

A study published in Molecular Psychiatry proposes that autism and ADHD may be intertwined at a neurobiological level in ways that transcend conventional diagnostic frameworks. Although it is well established that the two disorders frequently co-occur, the fundamental processes they may share have stayed unclear.

Scientists from the Child Mind Institute and collaborating organizations discovered that the intensity of autism-related traits, rather than whether a child receives a formal diagnosis of autism or ADHD, corresponds to distinct configurations of brain connectivity and genetic expression. These configurations emerged in children diagnosed with either autism spectrum disorder (ASD) or attention-deficit/hyperactivity disorder (ADHD). The findings contribute to an expanding movement in neuroscience that examines neurodevelopmental disorders along a continuum rather than as isolated entities. The investigation was directed by Adriana Di Martino, MD, Founding Director of the Autism Center at the Child Mind Institute and Principal Research Scientist. The team evaluated brain connectivity through resting-state functional MRI in 166 verbal children between ages 6-12 diagnosed with autism or ADHD (without autism).

Children exhibiting more pronounced autism characteristics displayed heightened connections among critical brain systems, including the frontoparietal (FP) and default-mode (DM) networks. These systems are instrumental in interpersonal cognition and self-regulation. During typical maturation, connections among these systems ordinarily diminish progressively, permitting the brain to differentiate. Nevertheless, the investigation revealed that this decrease may not unfold uniformly in children with heightened autism attributes, suggesting disparities in neurological development. Significantly, these configurations surfaced irrespective of whether a child carried an autism or ADHD classification.

The team additionally identified that these brain connectivity configurations correspond with areas of genetic expression implicated in neuronal maturation. Numerous of these genetic sequences have formerly been implicated in both autism and ADHD. This convergence suggests that comparable biological mechanisms may underlie characteristics evident in both conditions.

"We observe in practice that certain children with ADHD demonstrate behavioral traits qualitatively comparable to those witnessed in autism, despite not entirely satisfying the diagnostic requirements for ASD," notes Dr. Adriana Di Martino. "By concentrating on overlapping brain-genetic patterns associated with autism characteristics in both ASD and ADHD, we can establish a common neurobiological foundation for these observed clinical phenomena. Our results furnish a more sophisticated, spectrum-based conceptualization of neurodevelopmental conditions."

To establish these associations, the group employed a multifaceted strategy integrating cutting-edge neuroimaging with computational spatial transcriptomic investigation—a mathematical methodology that correlates brain connectivity information with maps of genetic activity throughout the brain. This framework permitted scientists to establish direct associations between patterns of neurological signaling and fundamental genetic mechanisms.

Such methodologies might facilitate the discovery of biological indicators, or biomarkers, that strengthen how these conditions are identified and examined going forward.

• Autism symptom severity corresponds with comparable brain connectivity configurations in children with ASD and in certain children with ADHD lacking an autism classification • Disparities in connectivity correlate with zones where genetic material involved in neural maturation operates • Overlapping behavioral manifestations between autism and ADHD correlate with convergent hereditary processes • Brain network developmental progression may serve as a vital element in the emergence of autism-related characteristics in both populations • The results advocate employing both spectrum-based and categorical frameworks to conceptualize neurodevelopmental conditions • The investigation may direct subsequent endeavors to pinpoint biomarkers and deepen comprehension of susceptibility to autism characteristics

These results underscore the significance of emphasizing particular symptoms and their neurological underpinnings rather than depending exclusively on diagnostic classifications. This strategy might result in more tailored approaches to recognizing and managing neurodevelopmental conditions according to each person's distinct neurological composition.

The investigation further corroborates a comprehensive evolution in psychiatry toward spectrum-oriented and empirical systems that transcend established diagnostic boundaries. Projects including the Child Mind Institute's Healthy Brain Network exemplify this progression by delivering expansive neuroimaging and behavioral information, in addition to complimentary diagnostic assessments for families.

In aggregate, these endeavors may help redefine how autism and ADHD are perceived, progressing toward a more accurate and scientifically grounded framework for treatment.

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Scientists underestimated the role of genetics in lifespan.

Your genes exert a far greater influence than previously believed.

What determines human longevity, and how much is encoded in our DNA? For decades, researchers held that heredity contributed only modestly—earlier estimates placed genetic influence at 20–25%, with some studies suggesting under 10%.

A new study from the Weizmann Institute of Science, published in *Science*, overturns this view. The team, led by Ben Shenhar in Prof. Uri Alon's lab, finds genetics may explain roughly half of lifespan variation—double prior estimates.

"For years, lifespan was ascribed largely to non-genetic causes, fostering doubt about genetic contributions to longevity."

The researchers analyzed three large twin datasets from Sweden and Denmark—including twins raised apart—for the first time in such studies. This enabled clearer separation of genetic from environmental effects.

They discovered earlier estimates were distorted by "extrinsic mortality"—deaths from accidents, infections, or environmental causes. Older datasets lacked cause-of-death detail, obscuring the distinction between aging-related and external deaths.

To address this, the team developed a novel analytical method: combining mathematical models with virtual twin simulations to isolate aging-related mortality. Filtering out external factors revealed a far stronger genetic signal—consistent with findings in other complex traits and animal models.

By age 80, dementia mortality shows ~70% heritability—higher than cancer or heart disease.

These findings may reshape aging research. If genetics plays a larger role, the search for longevity-associated genes gains renewed urgency.

"For many years, human lifespan was thought to be shaped almost entirely by non-genetic factors, which led to considerable skepticism about the role of genetics in aging and about the feasibility of identifying genetic determinants of longevity," says Shenhar. "By contrast, if heritability is high, as we have shown, this creates an incentive to search for gene variants that extend lifespan, in order to understand the biology of aging and, potentially, to address it therapeutically."

Discontinue daily pharmaceutical administration This injection demonstrates efficacy when conventional antihypertensive medications prove inadequate

A clinical trial conducted by researchers at Queen Mary University of London indicates that a single injection administered biannually may substantially reduce blood pressure progressively. The findings, published in JAMA, identify a prolonged therapeutic option that could enhance hypertension management protocols. The international study, designated KARDIA-2, enrolled 663 adults with inadequately controlled hypertension despite conventional pharmacological interventions.

Trial participants received an injection of the investigational agent zilebesiran in conjunction with their existing antihypertensive regimens. Researchers determined that patients administered the injection alongside standard therapy demonstrated greater blood pressure reductions compared to those continuing standard treatment exclusively.

These outcomes possess significant implications. Hypertension affects approximately one in three adults in the United Kingdom and constitutes a principal risk factor for severe complications, including myocardial infarction, cerebrovascular accidents, and mortality if inadequately managed.

Dr. Manish Saxena, Clinical Co-Director of the William Harvey Clinical Research Centre at Queen Mary University of London and hypertension specialist at Barts Health NHS Trust, directed the United Kingdom component of the study and serves as a senior publication author.

"Hypertension represents a global health challenge as blood pressure control rates remain suboptimal and constitutes a predominant cause of myocardial infarction and cerebrovascular events. This investigation demonstrates the efficacy and safety profile of zilebesiran when administered concurrently with conventional first-line antihypertensive agents. The distinctive advantage of this therapeutic approach is its extended duration; administering a single injection biannually could facilitate improved disease management for millions of patients." Zilebesiran is an investigational pharmaceutical employing RNA interference technology to reduce blood pressure. It functions by inhibiting hepatic production of angiotensinogen, a protein integral to blood pressure regulation. By diminishing this protein's concentration, vascular relaxation occurs, resulting in reduced blood pressure. The treatment is administered via subcutaneous injection.

Investigators are conducting supplementary evaluation of zilebesiran in the Phase 2 trial KARDIA-3. This investigation will assess whether the agent benefits individuals with concurrent hypertension and established cardiovascular disease or those at elevated cardiovascular risk.

Furthermore, a comprehensive international outcomes trial is scheduled for later this year. This investigation will evaluate whether the treatment reduces major cardiovascular event occurrence, including cerebrovascular accidents and cardiovascular mortality.