

New study on gene role in liver **functioning**

A new study published to handle energy: store it recently reveals that a single gene plays a big role in how the liver stores energy, a process that's critical for overall health and for managing diseases like type 2 diabetes. Led by Penn Nursing's Kate Townsend Creasy, PhD, assistant professor of Nutrition Science in the Department of Biobehavioral Health Sciences, the research focuses on

the PPP1R3B gene. This

gene tells the liver how

as glycogen (a form of sugar) or triglycerides (a type of fat).

The research team found that when the PPP1R3B gene is more active, the liver tends to store more energy as glycogen. The liver stores more energy as fat when the gene is less active.

This shift between glycogen and fat storage is crucial because it affects how the body manages blood sugar and fat levels.

Large scale genomics studies in humans have reported that mutations in the PPP1R3B gene are associated with several metabolic conditions, including type 2 diabetes and fatty liver disease.

clear how the gene was involved in these condi-"Our research shows that PPP1R3B is like

However, it was un-

a control switch in the liver," said Creasy.

"It directs whether the

liver stores energy for quick use in the form of glycogen or for longerterm storage as fat. We also saw changes in how efficiently mice and cells with genetic manipulations of PPP1R3B could use either glucose or fat for energy. This discovery could help us find new ways to help people with metabolic diseases with precision nutrition approaches, based on their

Targetting brain to treat type 2 diabetes

Successfully treating type 2 diabetes may involve focusing on brain neurons, rather than simply concentrating on obesity or insulin resistance, according to a study published recently.

For several years, researchers have known that hyperactivity of a subset of neurons located in the hypothalamus, called AgRP neurons, is common in mice with diabetes.

"These neurons are playing an outsized role in hyperglycemia and type 2 diabetes," said UW Medicine endocrinologist Dr. Michael Schwartz, corresponding author of the paper.

To determine if these neurons contribute to elevated blood sugar in diabetic mice, researchers employed a widely used viral genetics approach to make AgRP neurons express tetanus toxin, which prevents the neurons from communicating with other neurons.

Unexpectedly, this intervention normalized months, despite having

While Alzheimer's disease is

mostly considered a disorder of the

brain, emerging evidence suggests

that the condition also affects other

organs of the body. Working with

the laboratory fruit fly, researchers

at Baylor College of Medicine, the

Jan and Dan Duncan Neurological

Research Institute at Texas Chil-

dren's Hospital (Duncan NRI) and

collaborating institutions provide

a new understanding of how Al-

zheimer's disease affects different

tissues across the entire body. The

findings, published recently, reveal

new insights into brain-body com-

munication in neurodegeneration

and pave the way for identifying

novel biomarkers and therapeutic

"Alzheimer's disease is a neuro-

degenerative disorder characterised

of amyloid plaques containing the

Aβ42 protein and tangles of thread-

like structures of the Tau protein.

To better understand how the dis-

order affects other organs in the

body, we created an Alzheimer's

Disease Fly Cell Atlas, which profiles the genes expressed by single

cells of 219 cell types in the heads

and bodies of Alzheimer's disease

fruit flies," said co-corresponding

author Dr. Hongjie Li, assistant

professor of molecular and human

genetics and the Huffington Centre

on Aging at Baylor. He also is a

member of Baylor's Dan L Duncan

Comprehensive Cancer Centre. The

researchers created Alzheimer's

disease fruit flies by expressing

Aβ42 or Tau only in the neurons

of adult flies. This approach avoids

developmental effects and focuses

on adult characteristics. Then, they

assessed the presence of changes

in the brains and other organs of

targets for Alzheimer's disease.



no effect on body weight or food consumption.

Conventional wisdom is that diabetes, particularly type 2 diabetes, stems from a combination of genetic predisposition and lifestyle factors, including obesity, lack of physical activity and poor diet. This mix of factors leads to insulin resistance or insufficient insulin pro-

Until now, scientists have traditionally thought the brain doesn't play a role in type 2 diabetes, according to Schwartz.

and is a "departure from report. high blood sugar for the conventional wisdom of what causes diabetes," ing these neurons may

he said.

The new findings align with studies published by the same scientists showing that injection of a peptide called FGF1 directly into the brain also causes diabetes remission in mice. This effect was subsequently shown to involve sustained inhibition of AgRP neurons.

Together, the data suggest that, while these neurons are important for controlling blood sugar in diabetes, they don't play a major role in causing obesity in these mice, the he paper challenges this researchers noted in their

In other words, target-

Study unveils impact of

not reverse obesity, even as it causes diabetes to go into remission, Schwartz explained.

More research is needed on how to regulate activity in these neurons, and how they become hyperactive in the first place, he said. Once these questions are answered, Schwartz said that a therapeutic approach might then be developed to calm them down.

This approach could represent a shift in how clinicians understand and treat this chronic disease, Schwartz said. He noted, for instance, that Ozempic and other new drugs used to treat type 2 diabetes are also able to inhibit AgRP neurons.

The extent to which this effect contributes to the antidiabetic action of these drugs is unknown. Further research might help scientists to better understand the role of AgRP neurons in how the body normally controls blood sugar, and to ultimately translate these findings into human clini-

Alzheimer's on whole body disease that may lead to a better understanding of the condition and im-

proved treatments

these modified flies "We found that expressing A\beta 42 or Tau in neurons affected both neurons and other tissues in the fruit fly body," said co-first author Ye-Jin Park, a graduate student co-mentored by Li and Dr. Hugo Bellen. "Aβ42 expression primarily affected the nervous system. Sensory neurons involved in vision, audition and olfaction were particularly vulnerable. A decline in the sense of smell can be an

by the accumulation in the brain neurons affected by Aβ42 in fruit flies." "On the other hand, Tau expression in neurons led to significant changes, mostly in peripheral tissues, for instance altered fat metabolism and digestion and reduced fecundity. These alterations mimic age-associated changes, suggesting that Tau expression accelerates aging," said co-first author Dr. Tzu-Chiao Lu, a postdoctoral associate in the Li lab. "We found that neuronal connectivity and other factors that mediate brain-body

early symptom of Alzheimer's disease, and

in this study we identified specific olfactory

communication were disrupted in Tau flies? "These and other findings described in the Alzheimer's Disease Fly Cell Atlas improve our understanding of how Alzheimer's disease-associated proteins, Aβ42 and Tau, affect an organism as a whole," said Bellen, co-corresponding author of the work. Bellen is a Distinguished Service Professor of Molecular and Human Genetics at Baylor and chair in neurogenetics in the Duncan NRI.

This comprehensive resource serves as a valuable tool for the neurodegeneration research community. The Alzheimer's Disease Fly Cell Atlas enables further exploration of whole-body changes and brain-body in**SHIVALIK** SMALL FINANCE BANK LTD

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Auction date is 29-May-2025 @ 11:00 am.

S. NO	Branch	Account No.	Actt Holder name
1	CHENNAI	104142511592	KARTHICK GUNASEKAR
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4	CHENNAI	104142511611	SHIVAVIGNESHWAR .
5	CHENNAI	104142511306	GOPU K R
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7	CHENNAI	104142511591	M A SULFEENA
8	CHENNAI	104142511594	SHALINI V
9	CHENNAI	104142511614	JACOB K
10	CHENNAI	104142511637	PONNIYAMMAL .
11	CHENNAI	104142511660	RAMYA KANNAN
12	CHENNAI	104142511659	MANIKANDAN .
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17	Chennai	104142512090	KARTHIK .D
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without any prior notice.

'HIV vaccine trials show positive outcomes'

A decades-long scientific challenge in HIV vaccine development has been finding a way to train the immune system to produce antibodies that can target many variants of the virus. Traditional approaches haven't worked - largely because HIV mutates rapidly and hides key parts of itself from the immune system.

Now, a new study combining data from two separate phase 1 clinical trials shows that a targeted vaccine strategy can successfully activate early immune responses relevant to HIV, and, in one trial, further advance them - a key step toward a long-sought goal in vaccine development. Conducted by an international team led by scientists at IAVI and Scripps Research, the trials included nearly 80 participants from both North America and Africa, laying essential groundwork for a future HIV vaccine

study was published in Science on May 15, 2025.

One of the trials tested a stepwise vaccination strategy, in which a priming dose and a distinct booster dose were given sequentially to guide the immune system through stages of antibody development. That trial demonstrated that administering this combination - a technique known as heterologous boosting -- could further advance the immune response in humans. The second trial focused on the priming stage and showed that an initial vaccine dose could successfully activate the desired immune cells in African participants, supporting the use of this approach in regions most affected by HIV. In both trials, the vaccines were delivered using an mRNA-based vaccine platform -- similar to

with global potential. The - which enabled faster production and clinical testing, and provided strong immune responses.

"We've now shown in humans that we can initiate the desired immune response with one shot and then drive the response further forward with a different second shot. We've also shown that the first shot can work well in African populations," says senior author William Schief, a professor of immunology and microbiology at Scripps Research; vice president for protein design in infectious disease research at Moderna, Inc.; and executive director of vaccine design at IAVI's Neutralising Antibody Centre. "These trials provide proof of concept for a stepwise approach to elicit custom-tailored responses - not just for our vaccine, but for the vaccine field at large, the technology used in including non-HIV vacthe COVID-19 vaccines cines."

"These remarkable results validate the rational vaccine design that underpins this approach," adds Mark Feinberg, President and CEO of IAVI. "A vaccine would be a tremendous step forward for global health and could help bring an end to the HIV pandemic. This effort has been made possible by a phenomenal collaboration of scientific research institutions, funders, private sector and government - and is a testament to the power of partnership-driven scientific inquiry."

Broadly neutralising antibodies, or bnAbs, are a rare type of immune defense that can recognize and block a wide range of HIV variants. Unlike standard antibodies, which often only recognise a specific variant of the virus, bnAbs target parts of HIV that stay the same even as the virus mutates.

Carb quality counts in healthy aging

Intakes of dietary fibre, (unrefined) carbohydrates. high-quality and total carbohydrates in midlife were favorably linked to healthy aging and other positive health outcomes in older women, according to a new study by researchers from the Jean Mayer USDA Human Nutrition Research Center on Aging (HNRCA) at Tufts University and Harvard T.H. Chan School of Public Health.

"We've all heard that different carbohydrates can affect health differently, whether for weight, energy, or blood sugar levels. But rather than just look at the immediate effects of these macronutrients, we wanted to understand what they might mean for good health 30 years later. Our findings suggest that carbohydrate quality may be an important factor in healthy aging," said Andres Ardisson Korat, a scientist at the HNRCA and lead author of the study.

The researchers analysed data from Nurses' Health Study questionnaires collected every four years between 1984 and 2016 to examine the midlife diets and eventual health outcomes of more than 47,000 women who were between the ages of 70 and 93 in 2016. Intakes of total carbohydrates, refined carbohydrates, high-quality

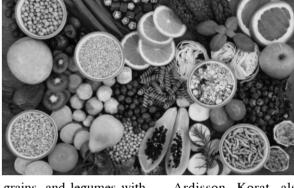
carbohydrates from whole grains, fruits, vegetables, and legumes, dietary fiber, and the dietary glycemic index and glycemic load were derived from the validated foodfrequency questionnaires. The researchers defined healthy aging as the absence of 11 major chronic diseases, lack of cognitive and physical function impairments, and having good mental health, as self-reported in the Nurses' Health Study questionnaires. In the new study, 3,706 participants met the healthy aging definition.

The analysis showed intakes of total carbohydrates, high-quality carbohydrates from whole grains, fruits, vegetables, and legumes, and total

dietary fiber in midlife were linked to 6 to 37% greater likelihood of healthy aging and to replicate these findings several areas of positive in more diverse cohorts. health. In Branch Office: Balamurali Theatre Complex - 91, First Floor. Poonamalle High Road. Nerkundram. Chennai-600107. Tamil Nadu the other direction, intakes of refined

carbohydrates (carbohydrates from added sugars, refined grains. and potatoes) and starchy vegetables were associated with 13% lower odds of healthy aging.

"Our results are consistent with other evidence linking consumption o f fruits and vegetables. w h o l e



grains, and legumes with lower risks of chronic diseases, and now we see the association with physical and cognitive function outcomes," said senior author Qi Sun, associate professor in the departments of nutrition and epidemiology at Harvard Chan School.

The authors note as a limitation that the study population was composed mostly of white health professionals; future research will be necessary

Ardisson Korat also noted that additional work is needed to understand the potential mechanisms linking dietary fiber and high-quality carbohydrates to healthy aging. "Studies are starting to find an association between food choices in midlife and quality of life in later years. The more we can understand about healthy aging, the more science can help people live healthier for longer," added Ardisson

mental and physical IndiaShelter INDIA SHELTER FINANCE CORPORATION LTD. Home Loans Registered Office: Plot-15,6th Floor, Sec-44, Institutional Area, Gurugram, Haryana-122002

> SALE NOTICE FOR SALE OF IMMOVABLE PROPERTY Auction Sale Notice for Sale of Immovable Assets under the Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest Act. 2002 (hereinafter referred to as "the Act") read with Rule 8(6) of the Security Interest (Enforcement) Rules, 2002 (hereinafter referred to as "the Rules")

> Notice is hereby given to the public in general and in particular to the Borrower(s), Co Borrower(s) and Guarantor(s) or their lega Notice is referred to the public in general and in particular to the borrower(s), co borrower(s) and Sudaratic(s) of their legic in heir(s) or representative(s) that the below described immovable property(s) mortgaged/charged to India Shelter Finance Corporation Limited (hereinafter referred to the Secured Creditor), the possession of which has been taken by the Authorized Officer of the Secured Creditor having its Registered Office at PLOT-15,6TH FLOOR, SEC-44, INSTITUTIONAL AREA, GURUGRAM, HARYANA-122002, Branch Office: Balamurali Theatre Complex - 91, First Floor, Poonamalle High Road Nerkundram, Chennai-600107, Tamil Nadu. will be sold on "As is Where is", "As is What is" and "Whatever there is" basis on the dates mentioned below for realization of the amount due to the Secured Creditor from the borrowers, co borrowers and guarantors. The sale will be done by the Authorized Officer at the place mentioned below.

Loan Account Number/AP Number And	Demand Notice u/s 13(2) Date and Amount	Immovable Property/ Secured Asset	Date and Type of Possession	Reserve Price	Date and Time of Inspection of the property
Name of Borrower(s) / Co-Borrower (s) /Guarantor(s)	(Rupees Thirty	Residential Flat bearing Flat No.F I, of a Super Builtup area of about 981 Sq.ft., including common area in the First Floor, in premises bearing Valarmathi Nagar, Pudur, Ambattur Changai 600.053 Ambattur Taluk	07-04-2025 Symbolic Possession Total Outstanding as On Date 27-04-2025 Rs. 31,09,384.70 (Thirty One Lakhs Nine thousand Three Hundred	Rs. 29,72,400/- (Rupees Twenty Nine	15-06-2025 EMD Deposition
HL11CHLONS0 00005048666/A P-10109383 1. Mr./ Mrs. Prasilas 2. Mr./ Mrs. Sathish-Kan- Nandhar- Malingam	Lakh Three Thousand Seventy Only) Bid Increase Amount Multiples of Rs. 50,000 (Multiples of Rupees Fifty Thousand only)	Ambattur, Chennai-600 053, Ambattur Taluk, Thiruvallur District, comprised in Survey No.867, T.S.No.307, Block No.7, Ward-A of Oragadam village, Ambattur, Ambattur Taluk, Thiruvallur District, together with undivided Share of land of an extent of 349 Sq.ft, in the Total extent of 4262 Sq.ft, with one covered car park, including Electricity connection and Electricity Deposit Amount, water and sewerage connection, property tax also included and being, BOUNDARY:-		Lakhs seventy two thousand Four hundred Only) Earnest Money Deposit (EMD) Rs.2,97,240/- (Two Lakh	
East by: Landand Eastto Weston the North to Southon Situated within the Ambattur.	House, West by : 0 e Northern Side: 4 the Eastern Side:8 ne Registration Di	Common Pathway leadsto Panchayat Road, 3ajalakshmi Land and House, MEASURING: 6, Eastto Weston the Southern Side: 59',3', 1'9', Northto Southon the Western Side:80'3' strict of Chennai North and Sub Office of all Theatre Complex - 91, First Floor, Poonam	Eighty Four and seventy paise)	Ninety Seven Thousand two Hundred Forty Rupees Only)	

Mobile No.9500943603

Mode Of Payment: - All payment shall be made by demand draft in favour of India Shelter Finance Corporation Limited

For detailed terms and condition of the sale, please refer to the Secured Creditor's website www.indiashelter.in or contact Author

VASTU HOUSING FINANCE CORPORATION LTD Sewri (West), Mumbai 400015. Maharashtra. HOUSING FINANCE CIN No.: U65922MH2005PLC272501 **POSSESSION NOTICE**

Reconstruction of Financial Assets and Enforcement of Security Interest Act. 2002 and in exercise of powers conferred to him under section 13 (12) read with Rule 9 of the Security Interest (Enforcement) Rules 2002, issued a Demand Notice calling upon the borrowers mentioned herein below to repay the amount mentioned in therespective notice within 60 days from the date of receipt of the said notice. The borrowers having failed to repay the amount, undersigned has taken possession of the property described herein below in exercise of powers conferred on me under Section 13(4) of the said Act read with Rule 9 of the said rules on the date

The borrower and quarantor in particular and the public in general is hereby cautioned not to deal with the property and any dealings with the property will be subject to the charge of the Vastu Housing Finance Corporation Limited Branch for an amount metioned as

SN	Name of Borrower, Co-Borrower and LAN No.	Date & Amount of Demand Notice	Description of Property	Date & Type of Possession
1	S.Kalyana Kumar, Mageshwari . E LP0000000099131	Rs.2728360 as on 09-Oct-24	All that piece and parcel of House site measuring 2282 Sq.ft., comprised in Gramanatham Old Survey No. 127/4, New Survey No. 380/2D/Patta No.98), Situated at No.23, Thiruvidanthai Village, Thirupporur Taluk, Chengalpatu District, Tamil Nadu-603112. North: Kuttai, South: Gangan Land and 10 Feet pathway, East: Vacant Land, West: Narayana Land	Possession Taken on 16-May-25