

## Health

## US OKs Amgen copycat

## Genetic 'finding' may help in hunt for Alz's therapies

NEW YORK, Nov 6, (RTRS): Being born with two copies of a rare genetic mutation may have staved off Alzheimer's disease for three decades in a woman at risk for an inherited early-onset form of the mind-robbing disease, US researchers reported Monday, in a paper that could lead to new approaches to treatment.

The report in Nature Medicine describes a woman from a Colombian family whose members carry a gene called presenilin-1 that predisposes them to develop early-onset Alzheimer's, typically in their 40s, said study coauthor Dr Eric Reiman, executive director of the Banner Alzheimer's Institute in Phoenix, Arizona.

"In this case, the person didn't develop cognitive impairment for nearly 30 years after that," Reiman said.

The difference, scientists believe, is that the woman also carried two copies of a rare mutation in the APOE3 gene called APOE3 Christchurch. Scientists believe these mutations helped delay signs of cognitive decline until the woman was in her 70s.

It's well known that abnormal versions of two proteins, amyloid and tau, are involved in Alzheimer's disease. Amyloid forms plaques outside of brain cells, while tau forms tangles within the cells. Many drugs being studied to prevent dementia focus on removing amyloid, but this woman's case suggests tau might be the real culprit.

## Clogging

Presenilin-1 increases accumulation of amyloid, which was present in abundance in the brain of the woman in the study. "This is a person who has been overproducing amyloid since birth," Reiman said. But she had little tau clogging her neurons and she has remained cognitively intact far longer than other members of her family.

The two copies of APOE3 Christchurch apparently protected her mental abilities despite all the amyloid plaques, the researchers say.

The data suggest that APOE3 Christchurch blocks a crucial step that's thought to trigger tau accumulation and other toxic events leading to neuro-degeneration and cognitive impairment, said coauthor Yakeel Quiroz, director of the familial dementia neuro-imaging lab at Massachusetts General Hospital and Harvard Medical School in Boston, in an email.

The findings turn some of the Alzheimer's dogma on its head, said Dr Samuel Gandy, associate director of the Alzheimer's Disease Research Center at the Icahn School of Medicine at Mount Sinai in New York City.

Those dogmas are: amyloid is the protein harming the brain and the importance of the APOE gene is in the APOE4 variation, which seems to speed the disease, Gandy said.

"This paper will cause an earthquake among those of us spending our lives trying to match up clinical manifestations with genetic mistakes," Gandy said in an email. "It's back to the drawing board for us."

Earlier studies had suggested tau protein might be the primary perpetrator in dementia, said Tamar

Devora Gefen, a neuro-psychologist and associate director of the clinical core of the Northwestern Alzheimer's Disease Center in Chicago.

Most trials so far "focused on the obliteration of amyloid," Gefen said in an email. "This study, like many others, shifted its focus onto tau, which is a necessary step towards intervention discovery."

The study "is yet another example of the power of 'one' - a single case study that has the potential to impact many," Gefen said.

## Also:

ZURICH: Novartis won Tuesday US approval for its long-delayed version of Amgen's \$4 billion seller Neulasta drug, helping the Swiss drugmaker in its uphill battle to sell copies of rivals' blockbuster in the world's top drug market.

Novartis's biosimilar, called Ziextenzo, is aimed at helping cancer patients boost infection-fighting white blood cells during chemotherapy.

Ziextenzo was knocked back in 2016 when the US Food and Drug Administration rejected Novartis's submission. That underscored challenges makers of cheaper copies of blockbuster biological medicines face in the United States, compared to the positive reception they have got in Europe.

The FDA's 2016 rejection allowed Coherus BioSciences and Mylan to beat Novartis to the US market with their own Neulasta copies. Novartis now hopes to launch Ziextenzo this year.

"The approval of Ziextenzo expands our oncology portfolio, providing physicians with a long-acting supportive oncology biosimilar option," Carol Lynch, president of Novartis's Sandoz generics division that makes biosimilars, said in a statement.

Biosimilars are near-copies of brand-name medicines. Because they are biological drugs, they cannot be exactly replicated, but studies show they have the same efficacy for patients as the originals.

Novartis has not said why the FDA blocked its first submission, but resubmitted the application in April.

Ziextenzo's US approval also marks yet another example of drugmakers using the letters "Z" and "X" in drug names to grab attention.

The arrival of Coherus's and Mylan's Neulasta copies, priced initially at discounts of some 33%, has made a dent in Amgen's business: Neulasta sales in the third quarter of 2019 fell 32%, a trend Novartis hopes will accelerate now that it has joined the fray.

Novartis markets eight biosimilars in Europe, including Ziextenzo, but so far has just four US approvals, illustrating stark differences in the two markets.

In Europe, biosimilars have made significant headway as governments and insurers switch to them in order to save money.

Progress of the cheaper copies in the United States - despite public outrage over high drug prices - has been much slower as projects face delays from patent lawsuits and regulatory issues, as well as tactics by makers of the originals trying to preserve their market share.



Photos from the event

## FAIPS Primary School holds Annual Day

"Every child is encouraged to fly high and touch the stars of success". That was the theme of class 2 Annual Day - "There is a star in you".

The programme held on Oct 24 in Primary School was graced by the Chief Guests Abdul Aziz, Head of Department, Ms Bushra, Senior Inspector, Ms Taiba and Ms Walaa, Inspectors, Ministry of Private Education, Mahmoud Aljuwaied, Public

Relationship Manager, Al Rayan Holding Co.

After formally welcoming the chief guests and parents, the programme commenced with a medley of songs in three languages, English, Hindi and French. Other items which kept the audience enthralled included vibrant dance form; a colorful drill display and a well synchronized aerobic dance which brought out the students' versatile

talents.

The chief guest, guests of honour and the principal congratulated the young performers on their scintillating performance. The Principal, Ravi Ayanoli, in his welcome address stated that time is the best gift that parents can give to their children. He also requested them to have a healthy interaction with teachers and to help the school to improve their children's academic

and co-curricular prowess.

The tremendous effort by all the teachers and cooperation from parents made the programme an event to remember. The function received all round appreciation from the distinguished guests and parent community for its improved quality and performance.

The programme concluded with vote of thanks by the Headmistress, Mrs Seema Bhatnagar.

## Women experience different types of stressors than men

## Chronic stress ups high blood pressure risk

NEW YORK, Nov 6, (RTRS): Living with moderate or high stress levels year after year may increase the risk of high blood pressure, suggests US research focused on African Americans.

Among more than 1,800 participants in a large, long-term health study in Jackson, Mississippi, researchers found that nearly half developed high blood pressure, or hypertension, over an average seven-year follow-up. About 30% of new diagnoses happened after a period of low stress, about 35% after years of moderate stress and almost 40% after a period of chronic high stress.

"African Americans who reported high levels of perceived stress over time were more likely to develop hypertension compared to those who consistently reported low stress," said Tanya Spruill of the departments of population health and medicine at the NYU School of Medicine in New York City, who led the study.

And this was independent of traditional risk factors, including age, obesity and smoking, Spruill said in an email.

The African American community already faces a high burden of hypertension, and also of chronic stressors like discrimination and low socioeconomic status, Spruill's team notes in the Journal of the American Heart Association.

When the 1,829 participants in the current analysis attended the first of three assessments, all had normal blood pressure. At that first visit, between 2000 and 2004, participants had physical exams and answered interview questions about their lives.

## Soldiers heal trauma with yoga

## An extra 15 minute daily walk could boost economy

LONDON, Nov 6, (RTRS): The world economy could be boosted by as much as \$100 billion a year if employers successfully encouraged their staff to meet World Health Organization guidelines on exercise, according to an analysis of the economic impact of activity.

Adding an extra 15 minutes of daily walking, or jogging a steady one kilometre each day, would improve productivity and extend life expectancy - leading to more economic growth, the study by the health insurance group Vitality and the think tank RAND Europe found.

The economic boost would come from lower mortality rates - in other words keeping more people alive, working and contributing to the economy for longer, the study's authors said, and from employees taking fewer days off sick.

Hans Pung, RAND Europe's President, said the study highlighted "a significant relationship

between inactivity and productivity loss" and should give policymakers and employers "new perspectives on how to enhance the productivity of their populations".

The WHO recommends that all adults should take at least 150 minutes of moderate exercise, or 75 minutes of vigorous exercise, a week. In a study last year it found that around 40 percent of adults in the United States, 36 percent in Britain and 14 percent in China did too little exercise to stay healthy.

The RAND/Vitality study was based on part on data from about 120,000 people across seven countries. It then modelled and projected the potential economic benefits of increased physical activity globally and for 23 individual countries.

It found that if all adults aged between 18 and 64 walked 15 more minutes a day, it could increase world economic output by some

\$100 billion (£77 billion) year on year.

It also found that physically inactive 40-year-olds could increase their life expectancy, on average, by 3.2 years, by introducing 20 minutes of jogging a day.

## Also:

FREETOWN: Sergeant Felixon Musa stands tall, arms raised in front of a group of 100 Sierra Leonean soldiers, taking them through a yoga routine he thinks is as important as any arms drill.

He learned the moves from a yoga teacher who died in West Africa's Ebola epidemic in 2014.

Determined to keep his teacher's skills alive, he persuaded his superiors in the army to hold regular training sessions to help troops deal with trauma left over from the deadly outbreak, and from other disasters, including the 1991-2002 civil war.

Spruill said.

This could be because women have pivotal roles as caregivers and heads of households in African-American society, said Dr George E. Matthews, the SUNY assistant professor of medicine at Jacobs School of Medicine and Biomedical Sciences at the University at Buffalo in New York.

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