

CANCER DRUGS MAY WORK IN RANGE OF TUMOR TYPES

CHICAGO: Early results from a clinical trial of Roche Holding AG cancer drugs released yesterday suggest some promise in matching treatments based on abnormalities found in a patient's tumor rather than the organ in which the cancer was originally detected. The findings, presented at the annual meeting of the American Society of Clinical Oncology in Chicago, showed that 29 out of 129 patients with 12 different types of advanced cancers responded to drugs targeting genetically driven abnormalities.

The drugs were administered outside of indications currently approved by the U.S. Food and Drug Administration, which generally reviews drugs using

studies based on the type of organ where the cancer was found. The trial, which received funding from Roche's Genentech unit, is designed to eventually enroll up to 500 patients. The most promising results to date were seen in patients with tumor abnormalities linked to a protein called HER2.

Seven of 20 patients with colorectal cancer, three of eight with bladder cancer, and three of six with biliary cancer saw tumor shrinkage of 30 percent or more after treatment with a combination of Roche drugs Herceptin and Perjeta, which target HER2 and are typically used to treat breast cancer. The researchers said the trial will expand those groups of

patients, as well as a separate group with BRAF mutations in lung cancer who were treated with Zelboraf, which is approved for melanoma.

"With genomic testing of tumors becoming increasingly available, studies such as ours will help more patients benefit from precision medicine approaches," lead study author Dr John Hainsworth, senior investigator at Sarah Cannon Research Institute in Nashville, Tennessee, said in a statement. The study also included Roche's Everidge, a basal cell carcinoma drug that targets the a cancer-related signaling pathway known as Hedgehog and Tarceva, a lung cancer drug that targets a cell-surface recep-

tor known as epidermal growth factor, or EGFR. Such targeted drugs are seen as a type of personalized medical therapy designed to treat cancer by interrupting unique molecular abnormalities that drive cancer growth. The targeted drugs are designed to interfere with a specific biochemical pathway central to the development, growth, and spread of that particular cancer. During the trial, 14 patients who initially responded to treatment saw their cancer eventually worsen. The researchers said they plan to study other drugs, including Roche's Cotellic, an MEK inhibitor, currently approved for advanced melanoma. — Reuters

JAPANESE MAN, 96, BECOMES OLDEST EVER COLLEGE GRADUATE

TOKYO: A 96-year-old Japanese man is potty at the prospect of breaking more records after being recognized as the world's oldest university graduate with his degree in ceramic arts. Spritely senior Shigemi Hirata received his Guinness World Records certificate on Friday after earning a Bachelor of Arts degree from Kyoto University of Art and Design earlier this year, local media reported Saturday.

Born on a Hiroshima farm in 1919 — the year the Allies and Germany signed the Treaty of Versailles-Hirata is something of a celebrity on campus. "Students whose name I don't even know call out to greet me," he told Japan's Yomiuri newspaper. "That gives me a lot of energy."

Hirata, who took 11 years to complete his ceramic arts course after taking up pottery as a pensioner, insisted he was not done setting records. "My goal is to live until I'm 100," he said. "If I'm fit enough it might be rather fun to go to graduate school." Hirata, who served in

the navy during World War II and has four great-grandchildren, added: "I'm so happy. At my age it's fun to be able to learn new things."

Japan's perky pensioners regularly set eye-popping records as the silver-haired generation enjoy longer and healthier lives. Last year, 100-year-old Mieko Nagaoka became the world's first centenarian to complete a 1,500-metre freestyle swim, 20 years after she took up the sport. Many elderly Japanese remain physically active long after other people have given up the ghost.

Twinkle-toed sprinter Hidekichi Miyazaki, dubbed "Golden Bolt" after Jamaican superstar Usain Bolt, also set a world record last year, clocking 42.22 seconds for the 100 meters in the over-105 category a day after reaching the milestone age. There were nearly 59,000 centenarians in Japan in 2015, according to government figures-which means 46 out of every 100,000 people is 100 or over. — AFP



This image provided by NASA shows a barred spiral galaxy 130 million light-years away and is one of the measurements that astronomers used to come up with a faster rate of expansion of the universe. And if that new rate is correct, then scientists have to refigure some basic assumptions about the cosmos. — AP

A COSMIC CURVEBALL: IS THE UNIVERSE EXPANDING FASTER?

"AN END-TO-END TEST THE UNIVERSE GIVES US"

WASHINGTON: Astronomers thought they had a handle on how the universe ticks, but the cosmos may be toying with them. A team of astronomers has calculated that the universe seems to be expanding faster than what scientists previously figured. If the new research is right, then science's basic understanding of what's been happening to the universe in the past 13.8 billion years after the Big Bang could be just a bit off kilter.

"This is really an end-to-end test the universe gives us; it's sort of our final exam," said Nobel laureate and study lead author Adam Riess of the Space Telescope Science Institute. "We get a D-plus probably because things don't match up."

Astronomers used the Hubble Space Telescope to measure the distance of 2,400 stars to calculate the rate the universe is expanding. The number they came up with is 5 to 9 percent faster than other scientifically accepted measurements that calculate the expansion rate based on cosmic background radiation from

380,000 years after the Big Bang. The new study was released Thursday by NASA and is to be published in The Astrophysical Journal.

Many explanations

Either one set of calculations is wrong - which outside scientists say is the most likely possibility, though they can't find something wrong yet - or the expansion rate has speeded up since 13.8 billion years ago. And if that's the case, as Riess advocates, then our understanding of the universe is not quite right.

It's as if we're looking for someone and we're in the right room, but looking at the wrong wall, said Riess, who won the 2011 Nobel in physics for proving in 1998 that the universe is accelerating. So now Riess and many of the same scientists are trying to figure just where astronomy made a wrong turn.

Riess and co-author Alex Filippenko of Berkeley said there are many possible explanations for why the universe is expanding faster now: It could be that there's a mystery particle,

what scientists call a sterile neutrino, which hasn't been seen but could change calculations to make the cosmic calculations balance out. It could be that dark energy is increasing. It could be the universe is more curved than theorized. And it could be that Einstein's General Relativity just isn't quite right when we look at the whole universe. Or it could be the measurements are off.

"There's potentially something very exciting, very interesting that the data are trying to tell us about the universe," Filippenko said. NASA astrophysicist John Mather, Princeton astrophysicist David Spergel and California Institute of Technology physicist Sean Carroll say while it's possible that we have to go back to the cosmological drawing board, it's far more likely that one of the two expansion rate measurements was calculated wrong somehow. "It's far too early to jump up and down to say the universe is messing with us," Carroll said, but then he added that both measurements were by solid and careful scientists. — AP

MAGMA BUILDUP DISCOVERED UNDER NEW ZEALAND TOWN

WELLINGTON: Scientists say they've discovered a magma buildup near a New Zealand town that explains a spate of recent earthquakes and could signal the beginnings of a new volcano - although they're not expecting an eruption anytime soon. Geophysicist Ian Hamling said that since 1950, enough magma to fill 80,000 Olympic-size swimming pools has squeezed up beneath the surface near the coastal town of Matata, about 200 kilometers south-east of Auckland.

A paper published yesterday in the online journal Science Advances outlines the findings. Hamling, the paper's lead author, said that while other parts of New Zealand have active volcanoes, there have been none near Matata for at least 400,000 years. "It was quite a big surprise," he said in an interview with The Associated Press.

Using GPS data and satellite images, the scientists say they discovered an area of land about 400 square kilometers has risen by 40 centimeters since 1950. Hamling said a period of quick uplift between 2004 and 2011 likely triggered thousands of small earthquakes. Scientists had previously thought tectonic shifts caused the quakes.

Hamling said the magma remained

about 10 kilometers below the surface, deep enough that he didn't expect a volcano to develop within his lifetime. He said a volcano could develop over hundreds or thousands of years, or the magma could eventually cool and harden.

Matata is home to about 650 people. Hamling said he hoped further study would allow scientists to develop a warning system for earthquakes in the area. He said the quakes are likely triggered by magma stressing and breaking rock. Hamling said it was unusual worldwide to discover magma buildup in an area with no volcanoes. He said modern equipment allowed them to accurately measure tiny horizontal and vertical changes in the coastal land.

Just over half of the area studied is offshore, however, and Hamling said the scientists needed to rely on inferences from what happened on the land to gauge the changes underwater. Victoria Miller, a volcanologist with Geoscience Australia who was not involved in the research, said the location was of interest because it was outside of an active volcanic area. "The scientific analysis seems robust and notes the limitations of modeling an offshore source," Miller wrote in an email. — AP

CLINIC PAGE



Kuwait Times
248 33 199

Dr. Fahad Al-Mukhaizeem
مؤيد علي المخيزيم

استشاري أطفال
M.B. Bch. FRCPC. FAAP. PEM

Al-Jabriya - Block 1A - St. 1 - Mazaya Building - 15th Floor - Clinic B - Tel.: 22269369 - Fax: 22269368