

SCIENCE THIS WEEK

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A new study has indicated that multiple ancestral groups from across Africa contributed to the emergence of *Homo sapiens* in a patchwork manner. | Photo Credit: AP

From detecting an Earth-sized planet that is covered in volcanoes to a pathbreaking discovery that could improve the lives of brain cancer patients, a lot of things have happened this week in the field of science. Here are the top science stories of the week.

Scientists have detected an Earth-sized planet that is covered in [volcanoes](#) — similar to Jupiter's moon Io, the most volcanically active body in our solar system. Located 86 light-years away, the planet's volcanism was not directly observed but rather inferred due to its significant gravitational interaction with the larger of the two other planets orbiting the dim star. The gravitational tug from the larger planet may squeeze and flex the newly identified one, heating up its interior and causing surface volcanic activity, similar to Io.

Jeff Bezos' rocket company has [won a NASA contract](#) to land astronauts on the moon, two years after it lost out to SpaceX. Blue Origin received a \$3.4 billion contract Friday to lead a team to develop a lunar lander named Blue Moon. It will be used to transport astronauts to the lunar surface as early as 2029, following a pair of crew landings by Elon Musk's SpaceX. NASA will get astronauts to lunar orbit using its own rockets and capsules, but wants private companies to take over from there.

A new study has indicated that multiple ancestral groups from across Africa contributed to the [emergence of *Homo sapiens*](#) in a patchwork manner, migrating from one region to another and mixing with one another over hundreds of thousands of years. It also found that everyone alive today can trace their ancestry to at least two distinct populations that were present in Africa dating back about a million years.

Researchers have [discovered](#) that the cancerous cells link up with healthy brain cells to become hyperactive and cause speedy cognitive loss and death in patients. The team, led by Saritha Krishna, an Indian, also found out that a commonly used anti-seizure drug was effective in reducing the hyperactivity of the tumour cells and even halting their growth. Additionally, the communication between healthy brain cells and cancerous cells could be manipulated to slow down or even halt the growth of the tumour. These findings will be more beneficial to patients with glioblastoma, considered the most fatal among adult brain cancers

New [bionic technology](#) has been developed by scientists where amputees can feel the

temperature of a substance. With thermal electrodes placed on the skin of their residual arm, amputees reported feeling hot or cold sensations in their phantom hand and fingers, as well as directly on the arm. Eventually, the scientists hope it could lead to a more natural feeling of loved ones when one is wearing the prosthetic. The trial was conducted on 27 people of whom 17 reported successful test.

Nearly 337 million life years were lost in the [two first years](#) of the Covid-19 pandemic, as millions of people died prematurely, the World Health Organisation has said. The pandemic has officially killed nearly seven million people, with the true figure believed to be closer to 20 million. While the WHO officially registered 5.4 million Covid deaths in 2020 and 2021, its excess mortality data shows around 14.9 million people actually likely died due to the crisis over that period. Moreover, during those two years alone, Covid resulted in a loss globally of 336.8 million years that otherwise would have been lived.

Researchers have shown through a [review](#) that only around 13% of global methane emissions are regulated, despite methane emissions causing at least 25% of current global warming. After reviewing the literature systematically looked at all major man-made emission sources, agriculture, energy and waste. The researchers focused on 281 policies worldwide, 255 of them currently in force, that aim to monitor and reduce methane emissions examining the geographical coverage, strength and effectiveness of the policies. 90% of identified national policies have been adopted in three regions: North America (39%), Europe (30%) and Asia Pacific (21%).

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