

Weekly Update

1. Why We Forget: New Insights into Everyday Memory

It sheds light on the brain's strategies to manage cognitive load, including prioritizing which memories to retain and which to discard, providing deeper insight into the mechanisms of everyday memory functioning.

Source: NeuroScience

<https://neurosciencenews.com/forgetting-memory-neuroscience-25957/>

2. Scientists may have pinpointed the true origin of the Hope Diamond and other pristine gemstones

The famous Golconda diamonds (a regional name in India), including the Omid diamond and the Koh Noor, may have originated from a volcanic rock about 300 kilometers away from where they were mined. In 1739, after the conquest of India, Nadir Shah Afsar took the Koh Noor diamond out of India as war booty. This rare and unique diamond finally came into the hands of Britain in the middle of the 19th century.

Source: LiveScience

<https://www.livescience.com/planet-earth/geology/scientists-may-have-pinpointed-the-true-origin-of-the-hope-diamond-and-other-pristine-gemstones>

3. For The First Time, Scientists Showed Structural, Brain-Wide Changes During Menstruation

The researchers measured the participants' hormone levels during each of these scans. The team took MRI scans of the participants in this study during three menstrual phases, including menstruation, ovulation, and the mid-luteal phase (the third and final phase of the ovarian cycle). The results showed that with hormone fluctuations, the volume of gray and white matter and the volume of cerebrospinal fluid also change.

Source: ScienceAlert

<https://www.sciencealert.com/for-the-first-time-scientists-showed-structural-brain-wide-changes-during-menstruation>

4. First AI Dogfights Focus on Safety, Building for CCA Applications

DARPA called the battle between AI-controlled aircraft and human-controlled aircraft a "milestone in history." The US Air Force has previously experienced several virtual air combat simulations as part of the Air Combat Evolution (ACE) program. The US military has been working on the production of military aircraft guided by artificial intelligence for several years.

Source: AirandSpaceforces

<https://www.airandspaceforces.com/usaf-first-ai-against-human-dogfights/>

5. NASA's Voyager 1 Resumes Sending Engineering Updates to Earth

Both Voyager 1 and 2 carry gold-plated copper discs designed to transmit general information from the human world to extraterrestrials.

Source: JPL.NASA

<https://www.jpl.nasa.gov/news/nasas-voyager-1-resumes-sending-engineering-updates-to-earth>

6. Astronomers find black hole 33 times more massive than our Sun – and it is near us

"This is a really rare case," said the paper's lead author, Pasquale Panuzzo of the French National Center for Scientific Research in Paris. At the farthest point of its orbit from Gaia-BH3, the star is at the same distance from the Sun as Neptune.

Source: Independent

<https://www.independent.co.uk/space/black-hole-earth-galaxy-milky-way-b2529481.html>

7. Odor-causing bacteria in armpits targeted using bacteriophage-derived lysin

The researchers produced the amino acid "lysine" from a bacteriophage that infects Staphylococcus hominis bacteria. During laboratory studies, it was found that lysine only targets Staphylococcus hominis bacteria, not other bacteria commonly found on the skin.

Source: ScienceDaily

<https://www.sciencedaily.com/releases/2024/04/240423113115.htm>

8. Plato's Exact Burial Place Revealed By Charred Papyrus Near Pompeii

Scholars already knew that Plato was buried on the grounds of the Academy, which was destroyed by the Roman dictator Sulla in 86 BC. This new discovery challenges previous beliefs about Plato, which said that his enslavement began on the island of Sicily in 387 BC.

Source: iflScience

<https://www.iflscience.com/platos-exact-burial-place-revealed-by-charred-papyrus-near-pompeii-73944>

9. Scientists discover tomatoes have their own 'parallel universe'

Scientists used CRISPR gene editing to remove the function of the ASAT1 and ASAT1-L genes. Remarkably, no detectable acylsugars were produced in the roots of tomato plants lacking the ASAT1-L gene, while shoot acylsugar levels were not affected.

Source: Studyfinds

<https://studyfinds.org/tomato-roots-parallel-universe/>

10. Mexico recovers the codices that narrate the rise and fall of Tenochtitlan

When studying history, scholars use ancient documents as keys to understanding the unknown and piecing together the puzzle of different cultures. Mexico has a large collection of cryptographic manuscripts, 200 of which are preserved in the National Library of Anthropology and History (BNAH).

*Source: **elpais***

<https://elpais.com/mexico/2024-03-21/mexico-recupera-los-codices-que-narran-el-auge-y-la-caida-de-tenochtitlan.html>