

Anthropology Case Studies

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Sept 2024

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LONGEVITY BREAKTHROUGH

Source: <https://studyfinds.org/>

Dated: Sep 04, 2024

Area of Focus:

Human Growth and Development



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*To learn about the social
aspects of Ageing,
scan the code*



Zhiquan Li et.al., Cell Reports, Sept 2024

- The researchers say the gene in question is called OSER1, and it encodes a protein that the team has dubbed a “novel pro-longevity factor.”
- The researchers arrived at this discovery by studying a larger group of proteins regulated by the FOXO transcription factor, which is known as a key regulator of longevity.
- “We found 10 genes that, when – we manipulated their expression – longevity changed. We decided to focus on one of these genes that affected longevity most, called the OSER1 gene”,
- The researchers are optimistic that the identification and characterization of OSER1 will lead to the development of new drug targets for a variety of age-related conditions, such as metabolic diseases, cardiovascular diseases, and neurodegenerative disorders.
- As the world’s population continues to age, the implications of this groundbreaking research cannot be overstated. The potential to extend lifespan and delay the onset of age-related diseases could have a profound impact on global health and quality of life.

INCREASED HOMOZYGOSITY LEADS TO NEGATIVE EFFECTS ON FERTILITY IN HUMAN POPULATION

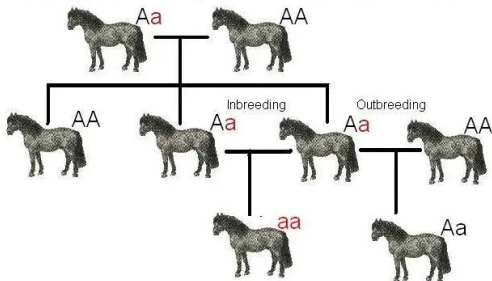
Source: www.news-medical.net/

Dated: Oct 25, 2023

Area of Focus:

Inbreeding, Consanguineous mating

A= Dominant allele a= Recessive deleterious allele



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Is Inbreeding really harmful?
To learn more, *scan the code.*



- Namibia's Himba community, an isolated, agro-pastoralist population in which marriage between people with the same ancestor occurs. **Natalie Swinford et. al., PNAS, 2023**
- The team gathered genetic data from 681 individuals from the Himba population. Genetic analyses revealed that the Himba have genetic markers that show higher levels of inbreeding.
- The Himba population has historically exhibited a preference for consanguinity.
- The Himba are a pronatalist community, meaning they encourage their members to have many children. Typically, there are short intervals between births, roughly between one and three years, researchers said.
- "This means that a woman who has parents who are more related is more likely to have fewer children throughout her lifetime than a woman who has parents who are less related," said Swinford.

THE OLDEST EVIDENCE OF HUMAN CANNIBALISM AS A FUNERARY PRACTICE IN EUROPE

Source: <https://arkeonews.net/>

Dated: Oct 3, 2023

Area of Focus:

Fossil Evidence & Archeology



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To learn how to select the relevant news for archeology, *scan the code*



- According to a new study, cannibalism was a common funerary practice in northern Europe around 15,000 years ago, with people eating their dead not out of necessity but rather as part of their culture.
- Gough's Cave is a well-known paleolithic site in south-eastern England. Nestled in the Cheddar Gorge
- The cave is perhaps best known for the discovery of 15,000 years old human skulls shaped into what are believed to have been cups and bones that had been gnawed by other humans.

Tip: Always focus on the most relevant information in news article; for eg: in a news related to archeology, focus on researcher and time span of area under research

NEW TECHNOLOGY COULD SAFELY TREAT HUNDREDS OF GENETIC DISEASES

Source: Nucleic Acids Research

Dated: Sept 2024

Area of Focus:

Human Genetics, DNA Technologies



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To understand basic terminology of Evolution & Genetics, *scan the code*



Dr. Jesse Owens et. al.

- Existing gene-editing techniques, while capable of rectifying errors in genes, potentially endanger the DNA by causing unintended breaks.
- The new method developed by Dr. Jesse Owens and his team overcomes these limitations by using a novel super-active integrase to insert therapeutic genes without breaking DNA, achieving success rates as high as 96 percent.
- “It uses specially engineered ‘integrases’ to carefully insert healthy genes into the exact location needed, without causing breaks in the DNA.,” said Dr. Owens.

The implications of the research extend beyond the scope of gene therapy and is set to significantly enhance our approach to treating genetic disorders.

DOMESTICATING HORSES HAD A HUGE IMPACT ON HUMAN SOCIETY

Source: theconversation.com/

Dated: Sept 3, 2024

Area of Focus:

Fossil Evidence & Archeology



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Struggling with Archeology,
start with definition of
PreHistory, *scan the code*



Earlier Understanding:

Horses were first domesticated in sites of the Botai culture in Kazakhstan, where scientists found large quantities of horse bones at sites dating to the fourth millennium BCE.

Findings of New Research:

- A detailed genomic study of early Eurasian horses, published in **June 2024 in the journal Nature**, shows that Yamnaya horses were not ancestors of the first domestic horses, known as the DOM2 lineage.
- And Yamnaya horses showed no genetic evidence of close control over reproduction, such as changes linked with inbreeding.
- Instead, the first DOM2 horses appear just before 2000 BCE, long after the Yamnaya migrations and just before the first burials of horses and chariots also show up in the archaeological record.

GENE THERAPY RESTORES VISION

Source: The Lancet

Dated: Sept 5, 2024

Area of Focus:

Human Genetics, DNA Technologies



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**Bombay Blood Group! Heard
about it? To learn more,
*scan the code***



A new gene therapy has restored vision in patients with Leber congenital amaurosis type I (LCA1), a rare genetic condition causing blindness.

The therapy, developed by researchers, uses a virus-based system to deliver a functioning gene into the retina's light-sensitive cells. The results show promise for expanding this treatment, with further trials planned to confirm safety and efficacy.

Key Facts:

- Gene therapy for LCA1 improved light sensitivity by up to 10,000-fold.
- Patients saw significant improvements in reading and navigating with the therapy.
- The treatment is expected to require just one dose per eye and last indefinitely.

FOSSIL HOTSPOTS IN AFRICA OBSCURE A MORE COMPLETE PICTURE OF HUMAN EVOLUTION

Source: Nature Ecology & Evolution

Dated: Aug, 2024

Area of Focus:

Human Evolution



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*To understand Geological
time of Fossil Evidence,
scan the code*



- Researchers show the extent to which the concentration of sites in hotspots like the East African Rift System biases our understanding of human evolution.
- They found that very few medium- and large-bodied mammals are “rift specialists,” and the rift environment, in fact, represents on average 1.6% of the total geographic range of modern mammal species.
- In a second analysis, Barr and Wood looked at how the skulls of modern primates collected in the rift valley compared with the skulls of the same primates from other parts of the continent.
- They found that skulls from the rift valley represented less than 50% of the total variation among primate skulls in Africa.

ODISHA ST LIST GETS TWO NEW ENTRANTS AND OFFERS RELIEF TO AT LEAST 50 SUB-TRIBES

Source: The Hindu

Dated: Feb 09, 2024

Area of Focus:

Tribal India



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To learn more about Tribals and Forest Rights, *scan the code*



- Two communities listed as SCs — Tamadia and Tamudia — will be removed from the SC list and included in the ST list under the Bhumij tribes.
- The inclusion helps bring similarity in the facilities available to tribal groups.
- For instance, as a noted researcher in tribal studies and anthropologist, **AB Ota** pointed out, the Konda Reddy community was recognised as ST in Andhra Pradesh, but treated as a socially and educationally backward class in the Malkangiri district of Odisha.
- “Same was the case of Muka Doras who were regarded as tribals in Andhra Pradesh, but not in Odisha,” said Ota. The inclusion of these groups in the ST list was long overdue, he added.