

# RMRC, Bhubaneswar

## (Laxmi Narayan Memorial Library)

### Weekly Current Awareness Service

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A HOUSE WITHOUT BOOKS IS LIKE A ROOM WITHOUT WINDOWS. NO MAN HAS A RIGHT TO BRING UP CHILDREN WITHOUT SURROUNDING THEM WITH BOOKS... CHILDREN LEARN TO READ BEING IN THE PRESENCE OF BOOKS.

— HORACE MANN

#### About Monday Morning

Monday morning is a weekly E- CAS (Electronic Current Awareness Service) of RMRC Library, Bhubaneswar which carries one Biomedical & health science news item and some useful current medical research links so that the scientists can access the articles. This E- Bulletin starts its journey from 21<sup>st</sup> Nov. 2016. In this maiden attempt we cordially invite your inputs and suggestions to improve in future.

Dr. Banamber Sahoo, Lib & Inf. Officer  
Satyajit Nayak & Twinkle Rout (Lib. Trainee)

#### CHEW ON THIS

## Ancestors took 'aspirin' for teeth?

Plaque, salicylic acid found in Neanderthal remains; point to 'treating' of dental abscess

PARIS: Nearly 50,000 years before the invention of penicillin, a young Neanderthal tormented by a dental abscess ate greenery containing a natural antibiotic and painkiller, analysis of his teeth revealed on Wednesday.

The male, who lived in El Sidron in what is now Spain, ate an antibiotic fungus called *Penicillium* and chewed on bits of poplar tree containing salicylic acid — the active ingredient of modern-day aspirin.

The youngster's fossilised jawbone reveals the ravages of an abscess, and his dental plaque contained the remnants of an intestinal parasite that causes acute diarrhoea, "so clearly he was quite sick," they wrote in the journal *Nature*.

"Apparently, Neanderthals possessed a good knowledge of medicinal plants and their various anti-inflammatory and pain-relieving properties, and seem



#### Methodology

Genetic analysis of dental plaque from four Neanderthals (two from Spy Cave, Belgium, and El Sidron) helped scientists reveal their findings.

to be self-medicating," said study co-author Alan Cooper of the University of Adelaide's Australian Centre for Ancient DNA (ACAD). "Certainly, our findings contrast markedly with the rather simplistic view of our ancient relatives in popular imagination," he added.

The study is the latest to recast our long-extinct cousins,

long thought of as thick-skulled and slow-witted, in a more positive light. Other findings have started to paint a picture of sophisticated beings who made cave art, took care of the elderly, buried their dead and may have been the first jewellers.

In 2012, a study in journal *Naturwissenschaften* said Neanderthals appeared to have used medicinal herbs like yarrow and chamomile. Neanderthals lived in parts of Europe, Central Asia and the Middle East for up to 300,000 years but appear to have vanished some 40,000 years ago.

This coincided more or less with the arrival of homo sapiens out of Africa, where modern humans emerged some 200,000 years ago. Neanderthals and homo sapiens interbred, leaving a small contribution of less than two percent to the DNA of all humans except for people from Africa.



## 1 'Supersteel' modeled on human bone is resistant to cracks.

Our bones are light, tough, and fracture resistant. That's because of the hierarchical way in which they are built. On the nanoscale, tiny collagen fibers have a laminatelike arrangement, with different layers of fibers oriented in different directions. On larger scales, bones have a latticelike structure and different patterns of voids that make them light and strong. For more details click on the below link.

<http://www.sciencemag.org/news/2017/03/supersteel-modeled-human-bone-resistant-cracks>

## 2 Synthetic yeast chromosomes help probe mysteries of evolution.

Evolutionary biologist Stephen Jay Gould once pondered what would happen if the cassette "tape of life" were rewound and played again. Synthetic biologists have tested one aspect of this notion by engineering chromosomes from scratch, sticking them into yeast and seeing whether the modified organisms can still function normally. For more details click on the below link.

<http://www.nature.com/news/synthetic-yeast-chromosomes-help-probe-mysteries-of-evolution-1.21615>

## 3 Detailed chemical structure of P22 virus resolved.

Scientists at Baylor College of Medicine, the Lawrence Berkeley National Laboratory, Massachusetts Institute of Technology and Purdue University have completed a model of unprecedented near-atomic resolution of the chemical structure of the P22 virus. For more details click on the below link.

[https://eurekalert.org/pub\\_releases/2017-03/bcom-dcs030717.php](https://eurekalert.org/pub_releases/2017-03/bcom-dcs030717.php)

## 4 Emerging field of tardigrades and their stress tolerance.

A couple of years ago, Japanese scientists thawed a frozen moss sample from Antarctica collected 30 years earlier. They observed two minute creatures crawling back to life from three decades of 'cryo-sleep' inside the moss sample. For more details click on the below link.

<http://www.currentscience.ac.in/Volumes/112/05/0902.pdf>



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