

RMRC, Bhubaneswar

(Laxmi Narayan Memorial Library)

Weekly Current Awareness Service

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WITH A LIBRARY YOU ARE FREE, NOT CONFINED BY TEMPORARY POLITICAL CLIMATES. IT IS THE MOST DEMOCRATIC OF INSTITUTIONS BECAUSE NO ONE - BUT NO ONE AT ALL - CAN TELL YOU WHAT TO READ AND WHEN AND HOW.

- DORIS LESSING

Monday morning team requests you to visit the library regularly.

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 21st 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)

Cannabis extract to keep brain intact

Scientists demonstrate THC's potential of cognitive clock-reversal via experiment on mice

BERLIN: A low-dose treatment with a marijuana compound can reverse the brain's ageing processes, such as memory loss and cognitive decline, according to a study that paves the way for novel treatments for dementia.

Scientists at the University of Bonn in Germany and Hebrew University of Jerusalem in Israel, found that old mice were able to regress to the state of two-month-old mice with a prolonged treatment with a cannabis-active ingredient. Cognitive ability decreases with increasing age. Although this process is normal, it can also promote dementia.

Researchers have long been looking for ways to slow down or even reverse this process. Scientists have now achieved this in mice. Mice have a relatively short life expectancy in nature and display pronounced cognitive deficits even at twelve months of age.

The researchers administered a small quantity of THC, the active ingredient in cannabis, to mice aged two, twelve and 18 months over four weeks.

Afterwards, they tested learning capacity and memory performance in the animals — including orientation skills and the recognition of other mice.

Mice who were only given a placebo displayed natural age-dependent learning and memory losses. In contrast, the cognitive functions of the animals treated with cannabis were just as good as the two-month-old control animals. "The treatment completely reversed the loss of performance in the old animals," said



Good substitute

THC imitates the effect of cannabinoids that are produced naturally in the body, which are a prerequisite for fulfilling important functions in the brain.

Andreas Zimmer at the University of Bonn. The researchers had earlier discovered that the brain ages much faster

when mice do not possess any functional receptors for THC. These cannabinoid 1 (CB1) receptors are proteins to which the substances dock and thus trigger a signal chain. CB1 is also the reason for the intoxicating effect of THC in cannabis products, such as hashish or marijuana, which accumulate at the receptor.

THC imitates the effect of cannabinoids that are produced naturally in the body, which fulfil important functions in the brain. "With increasing age, the quantity of the cannabinoids naturally formed in the brain reduces," said Zimmer.

1. Iron Man molecule restores balance to cells.

Iron Man may have the cool moniker and that whole flying suit of armor thing, but we all depend on iron for some pretty special abilities. Our bodies rely on the metal to ferry oxygen in our blood and convert blood sugar to cellular energy, among other jobs. Still, too much or too little iron can wreak havoc, and problems moving the element in and out of cells cause dozens of different diseases including anemia and cystic fibrosis. Now, researchers have found a molecule that can correct some of those iron delivery problems in animals. The new compound could help scientists better understand those conditions, and may one day lead to new compounds to treat them. For more details click on the below link.

<http://www.sciencemag.org/news/2017/05/iron-man-molecule-restores-balance-cells>

2. Century-old tumours offer rare cancer clues.

Deep in the basement archives of London's Great Ormond Street Hospital for Children reside the patient records that cancer researcher Sam Behjati hopes will put the hospital's past to work for the future. On 2 May, he and his colleagues published the result: DNA sequences from the genomes of three childhood tumour samples collected at the facility almost a century ago. For more details click on the below link.

<http://www.nature.com/news/century-old-tumours-offer-rare-cancer-clues-1.21975>

3. Severe mental illness linked to much higher risk for cardiovascular disease.

An international study of more than 3.2 million people with severe mental illness reveals a substantially increased risk for developing cardiovascular disease compared to the general population. For more details click on the below link.

https://www.eurekalert.org/pub_releases/2017-05/kcl-smi051117.php

4. WHO Weekly epidemiological record.

Human papillomavirus vaccines: WHO position paper, May 2017. For more details click on the below link.

<http://apps.who.int/iris/bitstream/10665/255353/1/WER9219.pdf?ua=1>



E- CAS (Current Awareness Service)

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