Best of Last Week – Theory to explain LHC excess, new antibiotic and link between circadian clock disruption and cancer

August 1 2016, by Bob Yirka



The Large Hadron Collider, courtesy of CERN.

(ScienceX)—It was another good week for physics as Kyoungchul Kong, an associate professor of physics and astronomy at the University of Kansas offered <u>a leading theory about the mysterious Large Hadron</u> <u>Collider excess</u>—he said the anomaly might suggest something that goes beyond the Standard Model. And a pair of researchers with Virginia Tech studying the results of neutrino experiments asked whether they represented <u>CP violations or new physics</u>. They propose that experimenters using current methods of studying charge parity violations would have no way to tell the difference.

It was also a very big week for biology news, as various sources reported on rumors that <u>a huge</u>, once-hated fish is now seen as a weapon against the Asian carp—the alligator gar, which survives mostly in southern states, today might serve as a predator for the intrusive carp. Also, a team at Heinrich Heine University reported on a study they conducted tracing ancestor microorganisms that suggested that life started in a hydrothermal environment—as part of an effort to uncover the last universal common ancestor of all living things. And an international team of researchers announced that they had discovered <u>evidence for</u> cancer and bony tumors in human fossils with early people who lived 1.7 million years ago. A team of researchers with the University of Tuebingen in Germany announced that they had found <u>a new antibiotic</u> right under our noses—staphylococcus lugdunensis, which appears to produce an antibiotic of its own.

And in other news, a team of researchers at the University of Illinois announced <u>a breakthrough in solar cell technology that captures carbon</u> <u>dioxide and sunlight and produces burnable fuel</u> by emulating plants. Also, a team at the University of Maryland School of Medicine announced that <u>they had seen</u>, for the first time ever, the structure that <u>allows brain cells to communicate</u>. And a combined team of researchers with MIT, Argonne National Laboratory and Peking University announced <u>a new lithium-oxygen battery that greatly improves energy</u> <u>efficiency and longevity</u>.

And finally, if you are one of the millions of people who work erratic shifts, you might be interested in a study by a team of biologists at MIT; they revealed a link between circadian clock disruption and tumor

<u>growth</u>—working odd hours, they found, actually increases the likelihood of developing cancer.

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