

Best of Last Week—Royal mystery solved, eavesdropping on HDMI cables, new diagnostic test for Alzheimer's

August 5 2024, by Bob Yirka

Portrait of Kaspar Hauser by Johann Friedrich Carl Kreul. Credit: Wikimedia Commons

It was a good week for biology research as researchers at the Laboratory of Medical Sciences in London and the Laboratory of Molecular Biology

in Cambridge [solved a decades-old mystery](#) that could pave the way to better cancer treatments in the future—the basic mechanism of how one of our most vital DNA repair systems recognizes DNA damage and initiates repair. Also, an international collaboration involving use of a new genetic analysis technique helped bust a popular 200-year-old myth surrounding [Kaspar Hauser](#), whose identity became one of the most mysterious riddles in German history. And a team of researchers at the Chicago Field Museum's Keller Science Action Center found that even [tiny city gardens](#) attract monarch butterflies and become a home to caterpillars, helping to increase their numbers.

In technology news, an international team of infectious disease researchers with the World Mosquito Program, working with colleagues from WeRobotics, developed a way to [release large numbers of mosquitoes](#) infected with a mosquito-killing bacteria into the wild much more efficiently than current methods. And a team of engineers at the School of Engineering of the Hong Kong University of Science and Technology cracked the code to [boosting solar cell efficiency and durability](#). They used a molecular treatment that significantly enhances the efficiency and durability of perovskite solar cells. Also, a team of engineers and scientists from Saudi Arabia and China demonstrated a system that [uses solar energy](#) to extract as much as three liters of water per square meter per day from the air in a purely passive way, requiring no maintenance or human operators. And a trio of computer security researchers at Universidad de la República Montevideo, in Uruguay, found that it is possible to reproduce text on a computer screen by [eavesdropping on its HDMI cable](#).

In other news, a team of researchers at UC San Francisco found a link between following a diet rich in vitamins and minerals, especially one without much added sugar, and [having a younger biological age](#) at the cellular level. Also, a team of business analysts and psychologists from Reichman University's Arison School of Business and Hebrew

University found evidence that [people alter their appearance](#) to suit their names. And finally, a team led by Sebastian Palmquist of Skane University Hospital and Lund University in Malmo, Sweden, developed a [diagnostic test for Alzheimer's disease](#) that has thus far proven to be 91% accurate.

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