

Best of Last Week – Violating Bell's inequality, oldest evidence of life on land and possibility of a cure for baldness

May 15 2017, by Bob Yirka

An infographic of NIST technique for quantum control of molecules. Credit: Hanacek/NIST

It was another good week for physics as a team at the National Institute of Standards and Technology found [a way to control charged](#)

[molecules—with quantum logic](#)—by using the same type of logic that is behind experimental atomic clocks. Also, a group at the University of Basel's Swiss Nanoscience Institute reported that through analyzing their strength, [hydrogen bonds were directly detected for the first time](#) using an atomic force microscope. And a team at the Hong Kong University of Science and Technology demonstrated [a violation of Bell's inequality on frequency-bin entangled photon pairs](#)—by reducing the velocity of light used in their experiment. Also, an international team of researchers found a way to solve [the 400-year-old mystery of Prince Rupert's drops](#) by looking at stress distribution in the drops using a transmission polariscope.

It was also big week for researchers studying the past as a team with members from the Royal Ontario Museum and the University of Toronto discovered [a nearly pristine ankylosaur fossil in Montana](#)—it represents one of the most complete ankylosaur fossilized skeletal remains ever found. Also, an international team of researchers reported that [Homo naledi's surprisingly young age opened up more questions on where we come from](#)—the group found evidence that suggests the hominin lived alongside Homo sapiens for a period of time. And a team from the University of New South Wales reported that they had found [the oldest evidence of life on land in 3.48-billion-year-old Australian rocks](#)—making them approximately half a billion years older than the prior record holder.

In other news, four postgraduate students entered a lunar-like laboratory recently as [China began testing its "Lunar Palace"](#) in preparation for an eventual moon landing. The volunteers will remain in the lab for approximately 200 days. Also, a combined team of researchers from the University of Bonn and The Hebrew University of Jerusalem reported that they had found that [cannabis reverses aging processes in the brain](#)—at least in test mice.

And finally, if you have been fretting about your hair going gray or lost your hair altogether, you might be interested in a study by a team at the University of Texas, Southwestern Medical Center—[they found the skin cells that cause balding and gray hair](#), which, they suggest, means it might be possible in the near future to reverse both problems with a special type of skin cream.

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