Best of Last Week – New insect species, an ultra-fast 3D printer, link between vitamin D and autoimmune disease

January 31 2022, by Bob Yirka



Neuroterus valhalla is a newly described species of cynipid gall wasp discovered in the branches of a live oak tree near the Rice University graduate student pub Valhalla. Credit: Miles Zhang/Smithsonian NMNH It was a good week for the biological sciences as an international team of researchers found <u>that the SARS-CoV-2 spike protein activates human</u> endogenous retroviruses in blood cells, possibly explaining many of the commonly observed pathogenic features of the virus. And a team with members from several institutions in the U.S. conducted a study that called into question the importance of meat eating in shaping human evolution—they suggest that evidence has been overstated. Also, a team at Rice University discovered <u>a new insect species</u> they named Neuroterus Valhalla. It is a type of non-stinging wasp.

In technology news, a group at Technical University of Denmark invented <u>a new</u>, <u>ultra-fast 3D printer</u> that works like a reverse scanner. It combines the principles of a CT scanner with light modeling of materials. And a team at Johns Hopkins University designed and built a smart tissue autonomous robot that performed the <u>first-ever laparoscopic</u> <u>surgery</u> without human help on a pig. Also, a team at TCS Research developed <u>a model that can create realistic animations of talking faces</u>. They suggest it could be used to create more convincing virtual avatars, digital assistants and animated movies. And a team from MIT's Computer Science and Artificial Intelligence group developed <u>a new</u> <u>language for quantum computing</u>.

In other news, a team at the University of Michigan Health Rogel Cancer Center found that <u>pancreatic cancer cells feed on hyaluronic acid</u>, possibly leading to improved treatments for one of the deadliest forms of cancer. And Michael Simkin, a Harvard mathematician, <u>answered a</u> <u>150-year-old chess problem</u>. He found that there are approximately 0.143nⁿ ways that queens can be placed so none are attacking each other on a giant n-by-n chessboard.

And finally, a combined team from Harvard T.H. Chan School of Public Health and Brigham and Women's Hospital, Harvard Medical School, found that <u>taking vitamin D supplements</u>, whether containing Omega-3s

or not, decreased the risk of autoimmune disease.

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