

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 [that the SARS-CoV-2 spike protein activates human](#)

[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 [a new insect species](#) they named Neuroterus Valhalla. It is a type of non-stinging wasp.

In technology news, a group at Technical University of Denmark invented [a new, ultra-fast 3D printer](#) 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 [first-ever laparoscopic surgery](#) without human help on a pig. Also, a team at TCS Research developed [a model that can create realistic animations of talking faces](#). 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 [a new language for quantum computing](#).

In other news, a team at the University of Michigan Health Rogel Cancer Center found that [pancreatic cancer cells feed on hyaluronic acid](#), possibly leading to improved treatments for one of the deadliest forms of cancer. And Michael Simkin, a Harvard mathematician, [answered a 150-year-old chess problem](#). He found that there are approximately $0.143n^n$ 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 [taking vitamin D supplements, whether containing Omega-3s or not, decreased the risk of autoimmune disease](#).

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