

Progress Toward an HIV Vaccine, and Other Science News

Research briefs from Columbia.

Spring/Summer 2025



raker / Shutterstock

Columbia biologist Peter Kwong '95GSAS has successfully [trained](#) the immune systems of animals to generate HIV-neutralizing antibodies, a major breakthrough in the quest to develop an HIV vaccine.

AI reads the room

An AI-based [system](#) developed by Columbia nursing professor [Sarah Rossetti '09NRS](#) and data scientist [Kenrick Cato](#) can predict which hospital patients will require urgent intervention in the coming days simply by monitoring the numbers of times nurses attend to them. A [study](#) recently conducted in the intensive-care units of two major medical centers found that the system increased patients' chances of survival by 35 percent.

Cancer's electric lifeline

A team of medical researchers led by [Timothy Wang '83VPS](#) has observed stomach-cancer cells forming electrical connections with nearby sensory nerves in order to stimulate their own growth. The [discovery](#), which marks one of the first times tumors outside the brain have been found to hijack neural pathways, could open new avenues for treatment.

Start talking politics

Contrary to popular belief, Americans who engage in political debates with friends and family often come away from the discussions feeling more positive and hopeful, [finds Modupe Akinola](#) of Columbia Business School. She says that face-to-face conversations, rather than online debates, lead to better outcomes.

Sound unbound

Columbia biomedical engineers led by [Elizabeth Olson '81BC](#) have developed a tiny implantable microphone that could lead to the first fully internal cochlear implants for people with hearing loss. The researchers say that the [innovation](#) could provide improved sound quality and convenience, allowing users to bathe, sleep, and play sports without the need to remove their device.

A starry newborn

Columbia astrophysicist [Karthik Iyer](#) has [discovered](#) a new galaxy that formed in the early years of the universe and resembles an infant Milky Way. He and his colleagues have named it “Firefly Sparkle” for its clusters of flickering newborn stars.



[Guide to school abbreviations](#)

TAKE THE COLUMBIA ALL-ALUMNI SURVEY

Complete the survey
by June 5.

50 randomly selected
survey participants
will receive a
Columbia sweatshirt!

Shape the alumni
experience.

alumni.columbia.edu/survey2026

 COLUMBIA UNIVERSITY
IN THE CITY OF NEW YORK

[All categories >](#)