Science & Technology

Study Hall: Spring 2019

Research briefs from Columbia.

Spring 2019

Colleen Deng

Stop that superbug

Big-data researchers Sen Pei and Jeffrey Shaman ’03GSAS, both of the Mailman School of Public Health, have developed a computer model that could help to control outbreaks of the antibiotic-resistant infection MRSA by revealing the hidden dynamics of how the disease is transmitted throughout populations.

Confidentially speaking

Most teenagers in the US never see their doctors without their parents in the room, which may make them reluctant to discuss sensitive topics such as sexual activity or drug use, according to research by Stephanie Grilo ’13CC, a doctoral candidate at the Mailman School of Public Health.

Brain-cancer breakthrough

Although immunotherapy, which boosts the body’s natural defense system, has to date proved ineffective against brain cancers, a new study led by Columbia medical researchers Anna Lasorella and Antonio Iavarone finds that certain brain cancers caused by a hereditary condition called neuro-fibromatosis type 1, or NF1, may be vulnerable to the treatment strategy; clinical trials are now being planned.

Gone in a flash

A strange burst of light observed in deep space by NASA telescopes last summer was probably a supernova, or a dying star collapsing in on itself, according to a research team that includes Columbia astronomer Brian Metzger. The scientists say that the stellar implosion, named AT2018cow, is the first ever witnessed in real time.

He squirms, she squiggles

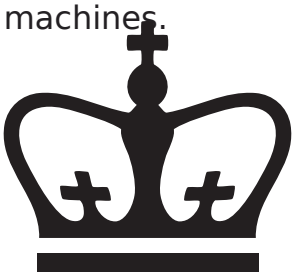
A team of researchers led by Columbia biologist Oliver Hobert has identified a group of genes that induce subtle differences in male and female roundworms’ brains, which, in turn, affect how they crawl. They say the discovery opens up new questions about whether behavioral differences between men and women are hardwired into our brains.

Give your butt a break

Middle-aged and older people who spend several hours a day sitting down can reduce their risk of early death by as much as 35 percent by exercising moderately to vigorously for thirty minutes a day, or by 17 percent simply by taking a half-hour leisurely walk, according to research by Keith Diaz, a Columbia assistant professor of behavioral medicine.

This mission is too important to jeopardize, Dave

Columbia engineers led by Hod Lipson have created a robotic arm that can figure out its own physical capabilities and teach itself to perform simple tasks like picking up a ball. They say the breakthrough is a major step toward building self-aware machines.



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