

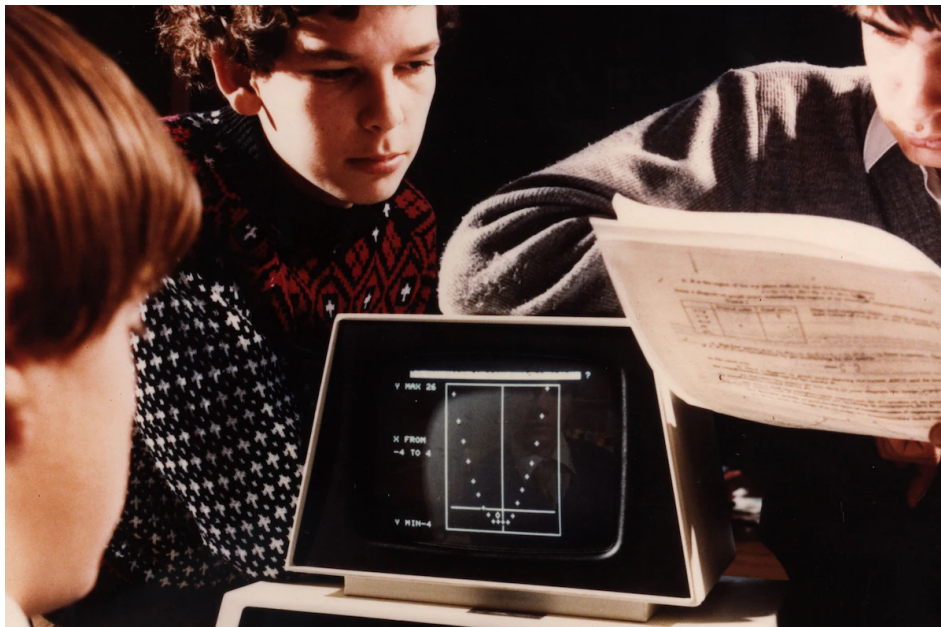
📅 Thursday, December 12, 2019 1:30 PM

## New study finds that too much screen time can alter children's brains

*WHO guidelines state that children between 3-4 years old should spend no more than one hour per day looking at a screen*



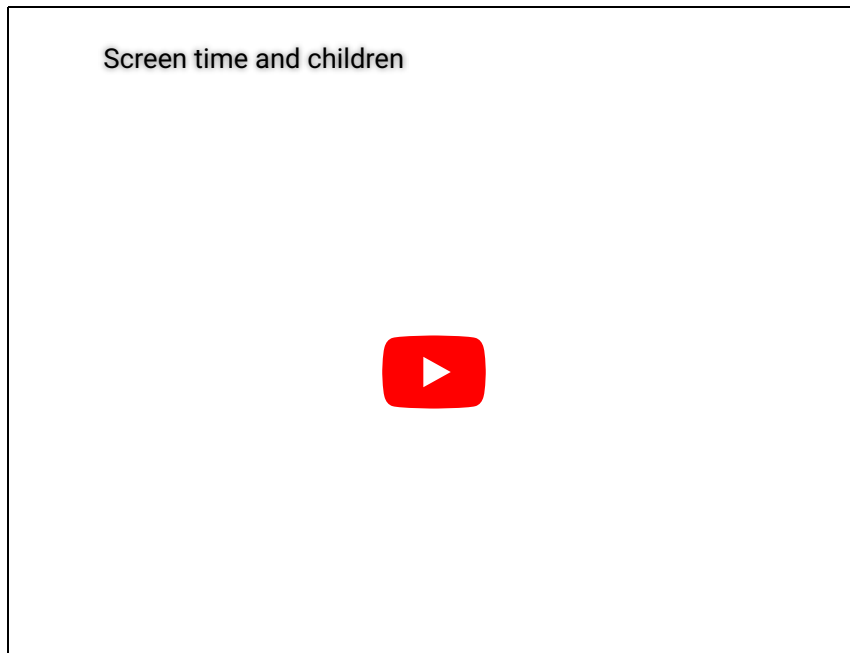
**Lily Toomey**  
Neuroscience  
Curtin University



Work and Industry, via Flickr  
Washington Heritage Collection -

Young children these days are exposed to more screen time than any generation previously. Not only are they exposed to traditional media technology such as the television, but access to newer technologies such as hand-held tablet devices means

that screen time has become an integral part of growing up in today's society.



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It is recommended that children between the ages of 3-4 years old should have no more than 1 hour of sedentary screen time per day. Now, emerging evidence is suggesting that excessive screen time can have detrimental neurological effects on young children. A recent study published in [JAMA Pediatrics](#) utilized an MRI technique called [diffusion tensor imaging](#) alongside a survey to assess a child's screen time.

The [study authors found](#) that in healthy children between the ages of 3-5, children who had greater than one hour of screen time per day had decreased integrity of their white matter in tracts that support language, literacy and executive functioning. These trends persisted even after controlling for child age and household income. This suggests that early screen use may impair early brain function and development, and supports the recommendations made by the World Health Organization earlier this year.

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Monday, November 29, 2021 8:20 AM

### A newly discovered cryosphere-dwelling yeast stays alive by making ethanol

*Rhodotorula frigidialcoholis* was isolated from 150,000-year-old permafrost in the McMurdo Dry Valleys of Antarctica



**Mitra Kashani**  
 Microbial Ecology  
 Centers for Disease Control and Prevention

Photo by USGS on Unsplash

Most of the Earth's biosphere is permanently cold and contains environments below 0° C, known as the cryosphere. Microorganisms like bacteria and fungi call the cryosphere home, despite the seemingly inhospitable conditions. Some can even stick around in the ice for thousands of years.

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Monday, November 29, 2021 8:06 AM

## El sur de Inglaterra alberga a una pequeña, pero prospera población de walabíes de cuello rojo

*Los walabíes fueron introducidos al país al principio del siglo XX*



**Maria Gatta**

Ecology and Conservation Biology  
University of the Witwatersrand, Johannesburg

Walabíes: son muy monos, relativamente pequeños, y para los europeos, tienen una apariencia inédita. Esto es lo que llevó a la introducción del walabí de cuello rojo, una especie australiana, a principios del siglo XX a países como Inglaterra, Irlanda, y Francia. En aquellos tiempos, los walabíes se

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Tuesday, November 16, 2021 8:10 AM

## Research demonstrates speech-in-noise training helps children with auditory processing disorder

*Children with APD have difficulty perceiving speech when*

Image by pen\_ash from Pixabay

*there is background noise and may have trouble on cognitive tests*

**Stephanie Santo**  
Psychology

Photo by MI PHAM on Unsplash

Central auditory processing disorder (APD), a hearing disability, can impact cognitive functioning and academic performance in those who experience it. It is typically diagnosed in childhood. Children with APD have difficulty perceiving speech when there is background noise, called *speech-in-noise perception*, and may have trouble on

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Wednesday, November 10, 2021 8:22 AM

### **Deep sea bacteria use selfishness to their advantage**

*Some bathypelagic bacteria have found a way to maximize their energy intake by taking food into their cells before breaking it down*

**Sarah Brown**  
Marine Science  
University of North Carolina - Chapel Hill

Unsplash  
Photo by Cristian Palmer on

The bathypelagic zone of the ocean, which spans depths between 1,000 and 4,000 meters (3,300 – 13,100 feet) below the ocean's surface, is characterized by permanent darkness, low temperatures, and high pressure. In this hostile environment, slow-growing bacteria survive by relying on sinking organic matter, including proteins and carbohydrates called

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 Tuesday, November 9, 2021 7:45 AM

## The screen you are reading this on is probably emitting volatile organic compounds

*A new study demonstrates that, in addition to a variety of other household products, LCD screens also emit these compounds*

**Kay McCallum**

Atmospheric Chemistry  
McMaster University

Photo by Jorge Ramirez on Unsplash

We spend a lot of time indoors - so it's important that we know what's in indoor air. Indoor chemists are especially concerned with volatile organic compounds (VOCs, a class of molecules that includes benzene, formaldehyde, and more), which can be harmful to human health and are highly reactive.

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Monday, November 8, 2021 8:22 AM

## Getting vaccinated against COVID-19 improves mental health

*People who received the COVID-19 vaccine experienced less depression and anxiety compared to unvaccinated individuals*

**Danielle Llaneza**

Health and Medicine

Hunter College and MD Anderson Cancer Center

Photo by Erin Aguis c

Vaccine hesitancy remains a pressing issue during the COVID-19 pandemic. About 69 percent of people in the US who are 12 years or older have received the full vaccine dosage, thus protecting them from COVID-19. Yet, a portion of the remaining population remains reluctant to get the vaccine. This group's decision is based on their concern about the


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📅 Friday, November 5, 2021 8:43 AM

## Don't bank those seeds – some oaks can be “cryopreserved”

*Acorns can't be frozen, but tips of oak tree shoots can*


**Christina Del Greco**  
 Genetics and Genomics  
 University of Michigan

Due largely in part to human-induced climate change, up to 40 percent of all species of plants are at risk of extinction. In response, conservationists have developed seed banks, where seeds of at-risk plants are frozen and stored in case of



emergency.

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Thursday, November 4, 2021 7:50 AM

## Male and female mice form memories of fearful events differently

*A drug that blocks memory forming in male mice has a different effect in females*

**Rita Ponce**

Evolutionary Biology

Polytechnic Institute of Setúbal

Memory is the process of encoding, storing and retrieving information by the brain. Several studies indicate that fear memories are processed differently in male and female animals, but the basis of these differences are still mostly unknown. [A study](#) published in *Nature Communications* has brought new information to the table: a drug known to reduce

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Wednesday, November 3, 2021 9:13 AM

## Psilocybin reduced depression symptoms as much as a leading antidepressant

*New research compared the “magic mushrooms” component to Lexapro*

**Soren Emerson**  
Neuroscience  
Vanderbilt University

Photo by Önder Örtel on Unsplash

Since their introduction in the late 1980s, selective-serotonin reuptake inhibitors (SSRIs) have become the go-to treatment for major depression. SSRIs, however, have a number of limitations: they take several weeks to start working, can cause a variety of side-effects, and do not help some people with depression. A series of recent clinical investigations

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Wednesday, October 20, 2021 9:39 AM

## Cocaine use slices and dices RNA in mouse brain cells

*The analysis of epigenetic changes caused by cocaine use adds to the evidence that substance use disorders are rooted in biology*

**Anna Rogers**  
Molecular Biology  
UC Berkeley

Photo by Omar Flores on Unsplash

Neuroscientists are known for doing some strange things to mice in their pursuit of learning about the brain. One such strange thing is training mice to self-administer cocaine, but it's all for a good cause: Self-administration can help us understand the biological underpinnings of substance use disorders

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Tuesday, October 19, 2021 8:00 AM

**Your gut bacteria may be hoarding your medication**

*Researchers have observed this effect in petri dishes and nematodes*

**Madeline Barron**  
Microbiology  
University of Michigan

Unsplash  
Photo by Towfiq Barhuiya on

When we take medications, we generally do two things: first, we swallow some pills, then we wait for them to kick in. Whether or not they do, however, may be tied to our gut microbes.

Intestinal bacteria influence the availability and activity of

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Saturday, October 16, 2021 10:45 AM

## Meet the springhare: the first glow-in-the-dark African mammal known to science

*Researchers discovered the springhare's fluorescent abilities entirely by accident*

**Shakira Browne**  
Zoology  
University College Dublin

Fluorescence is caused by an animal absorbing light and bouncing it back out again, and in nature, it's not a new thing. Fluorescence occurs across only a handful of mammals but they span three different continents and inhabit entirely different ecosystems. The platypus is one such animal, whose glow-in-the-dark abilities were only discovered in 2020

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Friday, October 15, 2021 8:45 AM

### For the first time ever, researchers have “housebroken” cows

*Controlling where cow waste ends up could lead to cleaner air and water and decreased greenhouse gas emissions*

**Fernanda Ruiz Fadel**  
Animal Behavior and Behavioral Genetics  
Advanced Identification Methods GmbH

In a strange triumph of science, researchers have now successfully potty trained 11 cows. The study, done by research groups in Germany and New Zealand, included 16 calves, which they trained by giving the calves a reward when they urinated in a latrine and later by adding an unpleasant stimulus (three-second water spray) when they began

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Thursday, October 14, 2021 7:50 AM

### Feeding extra amino acids to cells with a mutated enzyme makes them grow faster

*This new finding could lead to advances in treatment of diseases caused by ARS mutations*

**Christina Del Greco**  
Genetics and Genomics  
University of Michigan

Our cells require proteins, which are composed of individual amino acids connected in a long chain, to perform important functions. These amino acids are delivered to protein-building machinery by another molecule called a tRNA. Amino acids and tRNAs are attached together, or charged, by an enzyme

Photo by David Clode on Unsplash

colloquially known as ΔRS

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Wednesday, October 13, 2021 7:20 AM

## White pine blister rust's habitat range is changing with the climate

*New study in Sequoia and Kings Canyon National Parks demonstrates the complexity of changing plant-pathogen interactions*

**Ornob Alam**

Population Genetics  
New York University

A rapidly changing climate is expected to shift where species live. This will also alter human activities like agriculture and forest conservation, as the ranges of plant pathogens change.

Scientists have been predicted that climate change will both increase and decrease the prevalence of a pathogen across its

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Marek Argent on Wikimedia

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Tuesday, October 12, 2021 7:25 AM

### These uses of poop for protection are stranger than fiction

*Defense by dung doesn't always elicit disgust in predators to repel them*

 **Simon Spichak**  
Neuroscience

To some animals, their own excretion isn't just waste. They may use their fecal matter to ward off predators. Here are several examples of fecal prowess.

**Doon ink?**

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Monday, October 11, 2021 8:30 AM

### Distance and our eyes distort the true colors of stars

Judy Gallagher via Flickr (CC BY 2.0)



*New research calculates the colors of stars based on their actual energy distributions*



**Briley Lewis**  
Astronomy and Astrophysics  
University of California, Los Angeles

SM4 ERO Team  
Hubble / NASA, ESA, and the Hubble

From our perspective on Earth, most stars look like tiny, twinkling dots. But what color would a star be if you could actually see it up close?

Most astronomy textbooks will clearly say hot stars are blue, and colder stars are red. These colors come from an idealized

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📅 Friday, October 8, 2021 8:05 AM

**Zebrafish without “love hormone” neurons show no desire to socialize with each other**

*New research shows the importance of oxytocin for social affiliation and isolation*



**Kareem Clark**  
Neuroscience  
Virginia Polytechnic Institute and State University

Whether you're a social butterfly or a lone wolf, the brain circuits that define social behaviors begin forming early in life and mature over a lifetime. But *how* the social brain develops has remained unclear, and new research explores oxytocin – often referred to as the “love hormone” – for answers.

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 Thursday, October 7, 2021 8:51 AM

## Wild Goffin's cockatoos can use tools, too

*Scientists have observed captive cockatoos making tools before, but this is the first documented instance of tool use in wild cockatoos*

**Fernanda Ruiz Fadel**

Animal Behavior and Behavioral Genetics  
Advanced Identification Methods GmbH

Tool making is a complex behavior that, until recently, had only been confirmed in three species of primates (including humans), and in some birds, including captive Goffin's cockatoos. Now, a research group at the University of Vienna that has studied Goffin's cockatoos for decades has also observed the behavior in wild cockatoos

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Wednesday, October 6, 2021 8:12 AM

## Giant clams are growing faster than ever. That's not a good thing

*This supercharged growth is likely due to nitrate aerosols in our modern atmosphere*


 **Sarah Heidmann**  
Fish Ecology  
University of the Virgin Islands

Photo by NOAA on Unsplash

The growth of modern giant clams is supercharged compared to growth measured from fossil clams. A [recent study](#) from the Red Sea has shown this, finding that growth lines from modern species are larger than those of fossils from similar animals dated to the Holocene and Pleistocene.

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Tuesday, October 5, 2021 8:20 AM

## Skeletons' broken clavicles tell a centuries-old tale of humans and horses

*Clavicle fractures can be used to identify horse riders from their bones*

**Katie East**  
Biological Anthropology  
SNA International

One thousand years ago, archers rode horses across the landscape of Hungary. They were probably intimidating, possibly threatening, and definitely adventurous, but just like equestrians today, they also fell a lot.

Unsplash  
Photo by Tim Mossholder on

These horse riders remain a mystery. Who were they? Where

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Monday, October 4, 2021 7:53 AM

### Researchers observe a boar releasing two caged younglings in a impassioned rescue

*The act sheds light on the prosocial behavior and empathy of wild boars, thought to be rare among animals*

 **Simon Spichak**  
Neuroscience

Humans aren't the only animals that step up to help others out of difficult situations. In a study recently published in the journal *Scientific Reports*, Michaela Masilkova of the Czech University of Life Sciences and her colleagues described a boar's daring rescue of two young wild boars stuck in a trap.

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Oliver Völker from Pixabay

📅 Friday, October 1, 2021 9:06 AM

## Roe deer pause development of their embryos for months, and researchers just learned how

*An embryonic phenomenon discovered over 150 years ago may finally have an explanation*

— **Charlotte Douglas**  
Genetics  
— Institut Curie Paris

Photo by Bob Brewer on Unsplash

In many species, not long after fertilization, the embryo implants into the uterus wall, preparing it for further development. In humans this implantation occurs at around day eight to nine after conception. However, in European roe deer, instead of implanting, the embryo stops developing, hovering in a period of dormancy.

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📅 Thursday, September 30, 2021 8:09 AM

## Female jumping spiders favor the most aggressive males

*A new study provides evidence for sexual selection in these spiders*



**Hayden Waller**  
 Evolutionary Biology  
 Cornell University

Photo by Timothy Dykes on Unsplash

If you've ever witnessed an overly aggressive guy get bounced from a bar, you probably found yourself internally judging him. But [new research](#) published in the journal *Animal Behaviour* suggests that the opposite may be true for spiders: the more aggressive a male jumping spider is, the sexier his female counterparts find him


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 Wednesday, September 29, 2021 8:15 AM

## People with sickle cell disease are less likely to get kidney transplants than those without

*Sickle cell disease predominantly affects Black populations, and kidney transplants can save their lives*


**Danielle Llaneza**  
 Health and Medicine  
 Hunter College and MD Anderson Cancer Center

People with sickle cell disease encounter significant health issues such as kidney failure. Sickle cell disease, found predominantly in Black and African American populations, is when red blood cells are shaped like crescent moons (or “sickle-shaped”) instead of round and disc-like. This shape, which may have had evolutionary benefits during previous

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