

## SPOTTED

# Spotted around the web: Synaptic vesicle recycling; telehealth diagnoses; registered reports

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## Research roundup

- Propagation of cortical activity follows a hierarchy, which becomes more top-down than bottom-up as young people mature. *Neuron*
- Autistic children in the United States tend to have underlying conditions that put them at increased risk of severe illness from COVID-19. *Autism*
- Nearly half of clinical trials funded by the U.S. National Institutes of Health that involve children fail to submit trial results to ClinicalTrials.gov within a four-year period after the funding ends, according to a database review. *JAMA*
- Synaptic vesicle recycling is disrupted in the hippocampus in rats missing the gene CDKL5, which in people causes epileptic encephalopathy. *Journal of Neuroscience*
- A machine-learning tool tracks the subtle behavioral signs of seizures and epilepsy drugs in mice. This same lab has developed a similar system for **tracking the effects** of different drugs in mice with autism-linked mutations, *Spectrum* previously reported. *Neuron*
- A telehealth system that relies on parents' videotapes of their children's behavior to screen for autism shows good predictive reliability, a new study suggests. *Spectrum* wrote about the **promise of telehealth** for diagnosing autism in February. *Journal of Autism and Developmental Disorders*
- Immature cortical astrocytes integrate and develop typical features and connections in the developing cortex of young mice, but not in the developing cerebellum or mature cortex. *Journal of Neuroscience*
- Genetic variants linked to epilepsy share much overlap with those tied to a suite of psychiatric conditions, including autism and attention-deficit/hyperactivity disorder. *Brain*
- Deletion size in the 22q13 chromosomal region affects the clinical features of Phelan-

- McDermid syndrome; many of the region's genes, including SHANK3, are associated with neurodevelopmental conditions and epilepsy. *European Journal of Medical Genetics*
- Researchers have developed a technique for recording brain activity from freely moving octopuses. *Spectrum* has reported on using these **unusual animals in autism research**. *Current Biology*

**Good enough:** A portable MRI scanner (left) shows the same hemorrhage as a conventional machine (right).

- Monkeys' sensory representations in the lateral intraparietal area of their brains differ depending on the tasks the animals were previously trained to perform. *Nature Communications*
- Autistic people who are lesbian, gay, bisexual, transgender or queer are more likely than autistic people who are cisgender and straight to have co-occurring health conditions and unmet health needs, according to a small study. *Autism in Adulthood*
- Autistic people who were diagnosed in adulthood have nuanced and sometimes conflicting views about genetic research on autism, according to a preprint. *PsyArXiv*

## Science and society

- Gabriele Lignani of University College London has won the Michael Prize, which recognizes young researchers in epilepsy research. *Spectrum* covered **Lignani's work** in January. *University College London*
- The journal *Nature* has committed to publishing registered reports — studies that have passed peer review of their research questions and methods before experiments are done. *Nature*
- The Federation of American Societies of Experimental Biology and the U.S. National Institutes of Health have joined forces to create the DataWorks! Prize to recognize excellence in data-sharing by researchers. *FASEB.org*
- A portable magnetic resonance imaging scanner called the Swoop enables doctors to capture low-resolution images at the bedside. *Science*
- An autistic professor of sociology of education is the youngest Black faculty member ever at the University of Cambridge in England. *Essence*
- The U.S. National Science Foundation is considering a new way for grant review panels to encourage unconventional research ideas: Individual reviewers can veto a panel decision on funding. *Nature*
- A group of employers known as the Health Transformation Alliance intends to offer Canvas Dx, the first diagnostic device to earn U.S. Food and Drug Administration authorization, to its members. *Spectrum* covered **concerns about the tool** in 2021. *Cision*

- Although an association between acetaminophen use during pregnancy and having an autistic child has been noted in some studies, there is not sufficient evidence to support a causal relationship. *Spectrum* reported on [the link](#) most recently in 2019. [FactCheck.org](#)

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