

SPOTTED

Wi-Fi flap; obsessive-compulsive link; brain catalog and more

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Wi-Fi flap

When a May 2017 review in *Child Development* linked **Wi-Fi exposure** to features of autism, the resulting widespread media coverage **alarmed some researchers**, *BuzzFeed* reported 23 October. Two investigators published a **highly critical response** on 19 October in *PeerJ*, calling claims of an association “devoid of merit.”

Dorothy Bishop and **David Robert Grimes**, the two University of Oxford academics who took the original publication to task, do not mince words in their editorial, saying that the review should not be conferred “a scientific veneer of legitimacy.” A note in their editorial says that *Child Development* will publish a shorter version of their commentary in 2018.

SOURCES:

BuzzFeed / 23 Oct 2017

A study claiming wi-fi is linked to autism has been accused of pseudoscience

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www.buzzfeed.com/tomchivers/a-study-claiming-wifi-is-linked-to-autism-has-been-accused**PeerJ** / 19 Oct 2017

Distinguishing polemic from commentary in science: some guidelines illustrated with the case of Sage and Burgio, 2017

<https://peerj.com/preprints/3355/>

Obsessive-compulsive link

The autism gene candidate **NRXN1** may have a crossover role in obsessive-compulsive disorder (OCD). Changes in the sequences of NRXN1 (along with other genes involved in neuron communication) are linked to **features of OCD** in people, mice and dogs. Researchers published their cross-species findings 17 October in *Nature Communications*.

SOURCES:

Nature Communications / 17 Oct 2017

Integrating evolutionary and regulatory information with a multispecies approach implicates genes and pathways in obsessive-compulsive disorder

<http://nature.com/articles/doi:10.1038/s41467-017-00831-x>

Motor neuron risk

Amyotrophic lateral sclerosis involves the destruction of motor neurons, which is not a feature of autism. Yet people with the motor neuron condition are **10 times more likely** to have a relative with autism than are those in the general population, researchers reported 16 October in *JAMA Neurology*. An accompanying editorial speculates that **neural network disruption** might be the common factor.

SOURCES:

JAMA Neurology / 16 Oct 2017

Clustering of neuropsychiatric disease in first-degree and second-degree relatives of patients with amyotrophic lateral sclerosis

<https://jamanetwork.com/journals/jamaneurology/fullarticle/2657325>**JAMA Neurology** / 16 Oct 2017

Increasing evidence for an association between amyotrophic lateral sclerosis and psychiatric disorders

<https://jamanetwork.com/journals/jamaneurology/fullarticle/2657320>

Cell contamination

Researchers who work with cell lines — taken from a starter cell of a specific tissue type — may already know that **contamination is a problem**. What has remained unclear is how big the problem is. Investigators reported 12 October in *PLOS ONE* that 32,755 published studies have relied on **misidentified cell lines**, a number that balloons to an estimated half million with the inclusion of papers that have cited these studies.

SOURCES:

PLOS ONE / 12 Oct 2017

The ghosts of HeLa: How cell line misidentification contaminates the scientific literature

<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0186281>

DNA database

Mutations associated with autism often arise in noncoding regions of DNA — those that do not code for protein. Many of these regions regulate gene expression. A new database, **EpiDenovo**, offers a **searchable catalog** of changes in these regulatory regions, with a special focus on the embryonic brain, the catalog's creators reported 10 October in *Nucleic Acids Research*.

SOURCES:

Nucleic Acids Research / 10 Oct 2017

EpiDenovo: a platform for linking regulatory de novo mutations to developmental epigenetics and diseases

<https://academic.oup.com/nar/article-lookup/doi/10.1093/nar/gkx918>

Emotional surprise

Teens with autism have surprised researchers by reacting more expressively to funny or disgusting videos than do their typically developing peers. In contrast to researcher expectations, adolescents on the spectrum watching the videos alone in a room **unleashed big grins** and grossed-out faces, whereas typically developing teens reacted far less obviously. The results appeared 10 October in the *Journal of Abnormal Child Psychology*.

The investigators speculate that even though all of the teens watched the videos alone in a room, the typical adolescents likely were still aware of being monitored and may have restrained their reactions accordingly.

SOURCES:

Journal of Abnormal Child Psychology / 10 Oct 2017

I think we're alone now: Solitary social behaviors in adolescents with autism spectrum disorder

<https://link.springer.com/article/10.1007%2Fs10802-017-0351-0>

Brain catalog

The National Institutes of Health is creating a parts catalog for the brain. With 11 grants funding a network of collaborating centers and laboratories, the goal is to tease out cell types in mouse, human and monkey brains. The research community **will have access** to all of this cell census data, the institute announced 23 October.

The collaboration aims to build a digital 3-D mouse brain that includes the molecular, anatomical and functional features of the real thing. Creating a similar reference human brain is also on the list of goals for the project, which is part of the ambitious **BRAIN Initiative**.

SOURCES:

National Institutes of Health / 23 Oct 2017

NIH BRAIN Initiative launches cell census

<https://www.nih.gov/news-events/news-releases/nih-brain-initiative-launches-cell-census>

Anxiety art

Why does a James Joyce novel have a heartbeat? The book and its steady rhythm appear in an installation by **Dawn-joy Leong**. Leong is one of many artists with autism exhibiting in “Neurodiverse-City,” part of **The Big Anxiety** art festival in Sydney, Australia. The book’s beat is a recording from the heart of Leong’s **rescue greyhound**, honoring the dog’s ability to relax, anxiety-free, in unusual places, *The Conversation* reported on 22 October.

SOURCES:

The Conversation / 22 Oct 2017

Autism and the arts: making a space for different minds

<https://theconversation.com/autism-and-the-arts-making-a-space-for-different-minds-84768>

Auditory weakness

Mutations in the 22q13 chromosomal region affect the **SHANK3** gene, which is associated with **Phelan-McDermid syndrome**. People with this syndrome, many of whom also have autism, struggle with understanding and producing spoken language. Now researchers have shown that rats with one nonfunctional SHANK3 copy have a reduced ability to detect **sounds in general**, not only those related to speech. The findings were published 20 October in *Autism Research*.

SOURCES:

Autism Research / 20 Oct 2017

SHANK3-deficient rats exhibit degraded cortical responses to sound

<http://onlinelibrary.wiley.com/doi/10.1002/aur.1883/abstract>

Out in the open

To disclose or not to disclose? Many an adult with autism has struggled with that question. New findings suggest that neurotypical people have a more **favorable first impression** of a person with autism if they know that person's diagnosis than if they do not. Neurotypical participants also made more favorable first impressions on their peers if they were mislabeled as having autism, researchers reported 17 October in *Autism*.

How much an observer knows about autism also makes a difference: The more informed a study participant was, the more positive his initial reactions were to people whose autism diagnosis had been disclosed.

SOURCES:

Autism / 17 Oct 2017

First impressions of adults with autism improve with diagnostic disclosure and increased autism knowledge of peers

<http://journals.sagepub.com/doi/abs/10.1177/1362361317729526>

News tips

Do you have a new paper coming out? Are you making a career move? Did you see a study or news story that you want to share? Send your news tips to news@spectrumnews.org.
