SPOTTED

Relocation repercussions; gene editing first; oxytocin sensor and more

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Relocation repercussions

Europe's General Affairs Council has selected Amsterdam as the new location for the European Medicines Agency, which oversees the drug approval process on the continent. The agency is currently headquartered in London, but Britain's vote to exit the European Union forced the move to a new site. Operations at **the new location** must be up and running by March 2019, the agency said in a 20 November statement.

Ben Goldacre, a researcher who also writes about transparency in clinical trials, **took to Twitter** to lament the forced relocation. It will be "hugely harmful for patients, both in Europe and in the U.K.," he wrote, explaining that the move and the need to reboot a similar agency in the United Kingdom will delay the drug approvals process.

SOURCES:

European Medicines Agency / 20 Nov 2017
EMA to relocate to Amsterdam, the Netherlands
http://www.ema.europa.eu/ema/index.jsp?curl=pages/news_and_events/news/2017/11/news_detail_002857.jsp

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Uniquely human

Macaques **commonly serve** as the closest-to-human animal models in neuroscience, including in autism research. But differences in macaque and human brains also highlight what **makes people unique** primates, according to findings published 24 November in *Science*. Researchers comparing the brains of people, macaques and chimpanzees report that people have more

dopamine-producing connector neurons in two key regions involved in motor behaviors, learning and reward.

SOURCES:

Science / 24 Nov 2017
Molecular and cellular reorganization of neural circuits in the human lineage
http://science.sciencemag.org/cgi/doi/10.1126/science.aan3456

Gene editing first

A man lacking an enzyme that targets certain carbohydrates has received an infusion of billions of copies of the intact gene for the absent enzyme. The infusion **included a molecular scalpel** to cut his DNA where the corrective sequences will be inserted, the *Associated Press* reported 15 November. This is the first time doctors have used gene-editing technology to treat a genetic condition in a person. But the gene-editing tool isn't CRISPR — it's an enzyme that targets specific DNA configurations.

SOURCES:

Associated Press / 15 Nov 2017
AP Exclusive: US scientists try 1st gene editing in the body
https://apnews.com/4ae98919b52e43d8a8960e0e260feb0a/AP-Exclusive:-US-scientists-try-1st-gene-editing-in-the-body

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Oxytocin sensor

Trials of oxytocin as a treatment for autism have had **mixed success**. But the so-called 'trust' hormone also remains a candidate **biomarker** for autism because of hints that levels are low in some people on the spectrum. With this starting point, researchers have developed a **tiny chemical sensor** that can detect even a few molecules of oxytocin in a blood sample. Their findings are set to be published in the February issue of *Biosensors and Bioelectronics.*

SOURCES:

Biosensors and Bioelectronics / 09 Sep 2017
Synthesis and application of a "plastic antibody" in electrochemical microfluidic platform for oxytocin determination
http://www.sciencedirect.com/science/article/pii/S0956566317306164?via%3Dihub

Facebook freedom

For people with rare conditions or certain rare genetic variants, including those related to autism, social media **offers a virtual meeting place**. A study of participants in two online registries found that private groups on Facebook are the **least threatening online spaces** for people to share openly. The findings were published 13 November in the *Journal of Genetic Counseling.*

SOURCES:

Journal of Genetic Counseling / 13 Nov 2017
Incorporating social media into your support tool box: Points to consider from genetics-based communities
https://link.springer.com/article/10.1007%2Fs10897-017-0170-z

Reward recognition

How early do we understand the relationship between effort exerted and the value of a reward? Researchers showed 10-month-old babies animated characters striving for rewards that required **varying levels of effort**, such as climbing a high or low wall. In findings published 24 November in *Science*, infants gazed longer at characters that chose less labor-intensive rewards, an indicator of surprise at the choice of something less valuable.

SOURCES:

Science / 24 Nov 2017
Ten-month-old infants infer the value of goals from the costs of actions
http://science.sciencemag.org/cgi/doi/10.1126/science.aag2132

Little Prince

The title character in the 1943 book “The Little Prince” could be interpreted as **having autism**, a trio of researchers argue in paper published 14 November in the *Archives of Disease in Childhood*.

The Little Prince has social problems, restricted and **repetitive behaviors** and **anxiety**, the researchers write. They say **Antoine de Saint-Exupéry**, the book’s author, must have been familiar with this grouping of traits. To bolster their argument, they compare several passages from

the book with **Hans Asperger**'s descriptions of children with autism, published at about the same time.

SOURCES:

Archives of Disease in Childhood / 14 Nov 2017
The Little Prince: a glimpse into the world of autism?
http://adc.bmj.com/content/early/2017/11/14/archdischild-2017-313935.long

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Optogenetic insight

Neuroscience researchers have co-opted algal **light-activated proteins** to control how neurons use proteins. These tools of optogenetics have themselves been molecules of mystery, but algal channelrhodopsins are now **ready for their close-up**. In a study published 24 November in *Science*, investigators report capturing high-resolution images of normal and mutated channelrhodopsin structures, a critical step toward designing even more precise optogenetics tools.

SOURCES:

Science / 24 Nov 2017
Structural insights into ion conduction by channelrhodopsin 2
http://science.sciencemag.org/cgi/doi/10.1126/science.aan8862

Autism fellows

Autism researchers **Mark Zylka** and **Bernardo Sabatini** are among 396 new fellows of the American Association of the Advancement of Science. Zylka, who is at the University of North Carolina at Chapel Hill, is being **honored for his work** using high-throughput techniques to study autism-related genes, according to a 20 November statement from the university. Sabatini, who is at Harvard University, is being recognized for his role in uncovering how neurons form connections in the brain. **Joshua Gordon**, director of the National Institute of Mental Health, is also a newly appointed fellow.

SOURCES:

UNC-Chapel Hill News / 20 Nov 2017
Three UNC-Chapel Hill researchers named AAAS fellows
http://uncnews.unc.edu/2017/11/20/three-unc-chapel-hill-researchers-named-aaas-fellows/

News tips

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