SPOTTED

Edited human embryos; prenatal antidepressants; gut thinking and more

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Edited human embryos

An Oregon group has created the **first CRISPR-modified human embryos** in the United States. Using “many tens” of embryos from *in vitro* fertilization, **Shoukhrat Mitalipov** and his colleagues altered each embryo’s DNA at the single-cell stage, reports *MIT Technology Review*, which broke the story on 26 July. The results are unpublished, but the investigators reportedly avoided **worrisome pitfalls** previously associated with the gene-editing technique.

The precise disease-associated sequence they targeted is not yet known, and the embryos developed only for a few days. But *MIT Technology Review* calls the findings “a milestone on what may prove to be an inevitable journey” toward fully developed genetically modified humans.

SOURCES:

MIT Technology Review / 26 Jul 2017
First human embryos edited in U.S.
https://www.technologyreview.com/s/608350/first-human-embryos-edited-in-us/

Prenatal antidepressants

The potential link between prenatal antidepressant use and autism risk has **long been a nagging conundrum**, especially because maternal depression may muddy the association. A study published 19 July in the *British Medical Journal* tackles the issue using **three methods to triangulate the risk**. The results? The mother’s depression may not fully explain the link, so antidepressants could play a role.

In an accompanying editorial, **Diana Schendel** of Aarhus University in Denmark says that the results “should be viewed through the kaleidoscope of possible causes of autism.” Schendel also notes that **antidepressants raise the risk** of having a child with autism but not intellectual disability more than that of having a child with both conditions. And she calls the findings “reassuring” because they show that almost all women — 95 percent — taking antidepressants during pregnancy do not have a child with autism.

SOURCES:

British Medical Journal / 19 Jul 2017
Antidepressants during pregnancy and autism in offspring: population based cohort study
http://www.bmj.com/content/358/bmj.j2811**British Medical Journal** / 19 Jul 2017
Prenatal antidepressant use and risk of autism
http://www.bmj.com/content/358/bmj.j3388

Gut thinking

A potential **connection between the gut and brain** has intrigued autism researchers for years. New findings suggest an association between **gut microbiota and cognition in toddlerhood**. The results, published 27 June in *Biological Psychiatry*, have potential implications for developmental conditions, such as autism, that can involve language or cognitive delays.

SOURCES:

Biological Psychiatry / 27 Jun 2017
Infant gut microbiome associated with cognitive development
http://www.biologicalpsychiatryjournal.com/article/S0006-3223(17)31720-1/pdf

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Friendly DNA

Autism and Williams syndrome **share some features** but tend to diverge when it comes to sociability — children with Williams syndrome are unusually social. Now researchers have found a genetic overlap between people with Williams syndrome and dogs, which also are known for their friendliness. The DNA sequence shows a lot of individual variation in both **people with Williams syndrome and trusting canines**, *Science* reported on 19 July.

SOURCES:

Science / 19 Jul 2017

What makes dogs so friendly? Study finds genetic link to super-outgoing people
http://www.sciencemag.org/news/2017/07/what-makes-dogs-so-friendly-study-finds-genetic-link-super-outgoing-people

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Midi-chlorian sting

If you recognize ‘midi-chlorian’ as a made-up life form that exists only in “Star Wars” movies, congratulations. You’re more alert than the four ‘predatory’ journals that accepted a Star Wars-themed hoax paper claiming that “midichlorial disorders often erupt as brain diseases, such as autism.” Neuroskeptic, the nom de web of the blogger **who perpetrated the sting**, described it in a 22 July post.

Three of the four journals even published the hoax paper, although Neuroskeptic declined to pay them the fee they’d requested. All three journals have since removed the published version from their sites.

In addition to the autism quote above, other gems include “midichloria perform functions such as Force sensitivity” and “midichloria DNA (mtDNRey),” a reference to Rey, the lead female character in “Star Wars: The Force Awakens.”

SOURCES:

Discover / 22 Jul 2017
Predatory journals hit by ‘Star Wars’ sting
http://blogs.discovermagazine.com/neuroskeptic/2017/07/22/predatory-journals-star-wars-sting/#.WXkxodPytPM

Autism in Africa

The first-ever Africa Regional International Meeting for Autism Research is set to take place as part of an international congress in South Africa. The Nurturing Our Future meeting will cover **three broad themes**: autism and associated conditions, families and children, and the mental health and well-being of adolescents. Invited speakers for the 7-9 September meeting, which *Spectrum* plans to cover, include **Roy Richard Grinker** and **Geraldine Dawson**.

SOURCES:

Africa Regional International Meeting for Autism Research / 26 Jul 2017

Nurturing our future
https://easternsun.eventsair.com/QuickEventWebsitePortal/saacapap-congress-2017/saacapap-2017

100 most-cited

Do you have an article among the 100 most-cited neuroscience papers published since 1945? To find out, **you'll have to check the list** published 21 July in *Frontiers in Human Neuroscience*. The list includes 78 papers, covering five areas of interest to autism researchers: neurological conditions, brain connectivity, brain mapping, the prefrontal cortex and studies of methodology.

The most-cited researcher on the list was Oxford University's **Stephen M. Smith**, with his name on six of the articles. Citation counts ranges from 2,138 to 7,326, with an average of about 3,000 per paper. Oddly enough, journal impact factor seemed to have no association with citation count, although *Science* was host to the most articles on the list, at 13.

The study researchers say that no one on the list has won a Nobel prize, but **Stanley Prusiner** is one of the 533 investigators on the most-cited papers. He received the Nobel Prize in Physiology or Medicine in 1997 for his **discovery of prions**.

SOURCES:

Frontiers in Human Neuroscience / 21 Jul 2017
At the leading front of neuroscience: A bibliometric study of the 100 most-cited articles
http://journal.frontiersin.org/article/10.3389/fnhum.2017.00363/full

Goldwater leeway?

A psychiatry association has given its members permission to set aside the 'Goldwater rule,' which prevents clinicians from discussing the psychiatric features of public figures they've never met. The American Psychoanalytic Association cited the "different" behavior of Donald Trump in **apprising its members of the change**, reported *STAT* on 25 July.

Harvard Medical School psychiatrist **Leonard Glass** publicly resigned from the American Psychiatric Association over its retention of the rule, *STAT* also reported. He called the rule "an unacceptable infringement" on his duty to talk about issues where a psychiatrist's perspective "could be very relevant and enlightening."

SOURCES:

STAT / 25 Jul 2017
Psychiatry group tells members they can ignore ‘Goldwater rule’ and comment on Trump’s mental health
https://www.statnews.com/2017/07/25/psychiatry-goldwater-rule-trump/

Psychiatric infections

Autism and the immune system may be linked, **at least in a subset of people**. Growing evidence suggests a role for immunity in other brain-related conditions that can look like Tourette syndrome, autism or obsessive-compulsive disorder. A *Discover* article, published online 25 July, digs into the shifting clinical picture of these conditions, **collectively known as pediatric acute-onset neuropsychiatric syndrome**, or PANS.

SOURCES:

Discover / 25 Jul 2017
Hidden invaders
http://discovermagazine.com/2017/april-2017/hidden-invaders

Job news

The Koegel Autism Center at the University of California, Santa Barbara **has a new director** and big plans, the center announced in a 19 July statement. Clinical psychologist **Ty Vernon** took over as director in early July, joined by **Anna Krasno**, who is the center’s new clinical director. Plans include an expanded focus on adults with autism and their needs.

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

SOURCES:

Koegel Autism Center / 19 Jul 2017
Ty Vernon appointed director of UC Santa Barbara’s Koegel Autism Center
https://education.ucsb.edu/news/2017/ty-vernon-appointed-director-uc-santa-barbara%E2%80%99s-koegel-autism-center