

SPOTTED

Prenatal microbiome; standing by stereotypes; Common Rule delay and more

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Prenatal microbiome

The maternal microbiome is a **hot topic in autism research**. Now the debate over whether the **womb is a sterile environment** is warming up. Microbiologists get a little hot under their collars addressing the issue, according to a 17 January article in *Nature*. Some researchers have described signs of bacteria in amniotic fluid, meconium (fetal stool) and placental tissue, but others express a deep skepticism about this nontraditional view.

One argument for a microbiome in the womb holds that the human body has almost no sterile sites. Some microbiologists counter that the existence of bacteria-free lab mice means that a womb free of bacteria is not an impossibility. Those following U.S. politics won't be surprised that one researcher called it "a shame" that "people are stuck on the idea that the placental microbiome is 'fake news.'"

SOURCES:

Nature / 17 Jan 2018

Could baby's first bacteria take root before birth?

<https://www.nature.com/articles/d41586-018-00664-8>

Movement clues

Slightly **unusual arm movements** might be indicative of autism. Using sophisticated sensors,

researchers captured the motion of adults and children with and without autism as they reached for a screen. People on the spectrum show greater variability in their movements than those without autism. Having more intense autism features tracks with more movement variation, according to the study, published 12 January in *Scientific Reports*.

SOURCES:

Scientific Reports / 12 Jan 2018

A biomarker characterizing neurodevelopment with applications in autism

<https://www.nature.com/articles/s41598-017-18902-w>

Standing by stereotypes

A.V. Club film critic Mike D'Angelo is not impressed with the latest movie featuring a **main character with autism**. The film, "Please Stand By," stars Dakota Fanning playing a woman on the spectrum. The portrayal relies on all the usual stereotypes, D'Angelo writes, including the fact that Fanning's character identifies with *Star Trek's* Mr. Spock.

Calling it "just another instance of equating autism with kookiness," D'Angelo says that even though Fanning's character identifies with Spock, she's more like Captain Kirk: someone whose behavior is pretty typical but whose speaking style is unusual. "It's hard to be persuasive when your protagonist comes across as a collection of quirky tics rather than a credible human being," D'Angelo grouches in his 23 January review.

SOURCES:

A.V. Club / 23 Jan 2018

The cloying Please Stand By goes where feel-good movies about autism have gone before

<https://www.avclub.com/the-cloying-please-stand-by-goes-where-feel-good-movies-1822336773>

Bleach abuse

Despite the **obvious dangers**, some parents in the United Kingdom are forcing their children with autism, some as young as 2 years old, to drink bleach as a purported 'cure' for their condition. Introduced in the United States years ago and widely discredited, the 'bleach protocol' continues to filter into secret **parent communities on Facebook**, *Newsweek* reported 28 January.

SOURCES:

Newsweek / 28 Jan 2018

Parents are making their children drink bleach to 'cure' them of autism

<http://www.newsweek.com/parents-are-making-their-children-drink-bleach-cure-them-autism-793197>

Common Rule delay

The U.S. federal government has put the brakes on implementation of an updated **Common Rule**, the policy governing research involving people. The revisions were scheduled to go into effect on 19 January, but the government has **instituted a six-month delay**, *The Scientist* reported 23 January. The cited reason is to give more time for feedback and for institutions affected by the changes to prepare to implement them.

The revised policy includes more stringent informed-consent requirements, such as adding study summaries to consent forms, and a requirement to gain permission for the use of stored specimens. But it's not all added red tape. Some changes absolve multi-institutional studies from gaining ethics approval from boards at each participating site.

In perhaps the biggest change, pregnant women are no longer listed as a "vulnerable population" under the revised rules. The effects of many drugs in this population are practically unknown because of historical exclusion from studies.

SOURCES:

The Scientist / 23 Jan 2018

New federal policy for human research subjects delayed

<https://www.the-scientist.com/?articles.amp/articleNo/51439/title/New-Federal-Policy-for-Human-Research-Subjects-Delayed/>

Male Rett syndrome

Rett syndrome is relatively rare in boys. Journalist **Richard Engel**'s son **has the condition**, and Rett researchers see potential in the boy's cells, which all rely on a slightly functional variant of **MECP2**, the gene mutated in the syndrome. Investigators are studying the cells to come up with treatment strategies and to develop animal models, *NBC News* reported 30 January.

SOURCES:

NBC News / 30 Jan 2018

What is Rett Syndrome? Richard Engel's son has rare genetic disorder

<https://www.nbcnews.com/health/health-news/what-rett-syndrome-richard-engel-s-son-has-rare-genetic-n842826>

Autism drug

A candidate autism therapy, balovaptan, has taken **another step toward approval**, *Reuters* reported 29 January. The U.S. Food and Drug Administration gave the drug the agency's 'breakthrough therapy' designation, which could fast-track development and approval. Balovaptan's reported effects include improvements in communication and social interaction.

SOURCES:

Reuters / 29 Jan 2018

Roche wins FDA's breakthrough therapy label for autism drug

<https://www.reuters.com/article/us-roche-autism/roche-wins-fdas-breakthrough-therapy-label-for-autism-drug-idUSKBN1FI0HS>

Trump effects

Nature editors say that the first year of Donald Trump's presidency has been "as bad as feared" for science. In a 19 January commentary, the editors write that they erred in "trying to look on the bright side" in an editorial just after the November 2016 election. The most critical effect so far is the **sabotage of science** and scientific advice in the public sphere, the editors write, such as dissolving federal scientific advisory committees and scrubbing government websites of phrases like "climate change."

SOURCES:

Nature / 19 Jan 2018

Science after a year of President Trump

<https://www.nature.com/articles/d41586-018-01001-9>

Cannabis trial

In what looks like a first for the U.S. Department of Defense, the agency is funding a **cannabis-**

related clinical trial. The Montefiore Health System in New York City received \$1.3 million to **evaluate the effects of cannabidivarin**, a cannabis compound, on irritability and **repetitive behaviors** in children with autism, Montefiore said in a 10 January statement.

SOURCES:

Montefiore Health System / 10 Jan 2018

Department of Defense funds autism research at Montefiore to examine effect of cannabis compound on irritability and repetitive behaviors

<https://www.montefiore.org/body.cfm?id=1738&action=detail&ref=1375>

Career crystal ball

Want to know where you're going next in your science career? The U.S. National Institute of Environmental Health Sciences is working on a tool that will **peer into your future** for you. It's no Magic 8 Ball, though. The tool shows employment trends for different types of jobs in biomedical sciences, the National Institutes of Health said in a 24 January statement. Users can view possible outcomes for choices at critical decision points, such as going into academia or industry.

SOURCES:

National Institutes of Health / 24 Jan 2018

New tool visualizes employment trends in biomedical science

<https://www.nih.gov/news-events/news-releases/new-tool-visualizes-employment-trends-biomedical-science>

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.
