

SPOTTED

Cannabis candidate; omega add-on; oxytocin control and more

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Cannabis candidate

Following on **interest from parents**, pharmaceutical companies have begun testing cannabis-derived products for people with autism or **epilepsy**. One company, **Zynerba Pharmaceuticals**, reports that a trial of a **cannabis-based gel** for **fragile X syndrome** has yielded some promising preliminary results. The gel appears to have eased anxiety, hyperactivity and depression among the children in the study, *Fortune* reported on 28 September.

SOURCES:

Fortune / 28 Sep 2017

This marijuana-based gel could help kids with a rare autism spectrum disorder
<http://fortune.com/2017/09/28/zynerba-pharmaceuticals-autism-fragile-x/>

Head examined

The 18th century British philosopher Jeremy Bentham was an unusual fellow, and some researchers have retroactively placed him on the autism spectrum. Bentham, who died in 1832, willed that his body be preserved, and his head is now set to go on public display at University College London. Investigators are seizing the opportunity to analyze Bentham's DNA for **genetic hints of autism**, *The Telegraph* reported 2 October.

Speculation about Bentham's spectrum status stems in part from his reclusiveness and a penchant for giving inanimate objects pet names (he named his walking stick 'Dapple'). One of the reasons he wanted his body preserved was so it could be wheeled out at parties in case his friends missed him, according to *The Telegraph*.

SOURCES:

The Telegraph / 02 Oct 2017

Severed head of eccentric Jeremy Bentham to go on display as scientists test DNA to see if he was autistic

<http://www.telegraph.co.uk/science/2017/10/02/severed-head-eccentric-jeremy-bentham-go-display-scientists/>

Omega add-on

Two randomized trials of omega fatty acid therapy for children with autism have yielded intriguing results. A small study of 31 toddlers with autism found that **omega-3 and -6 supplementation** improves autism-related sensory features. The results were published 20 September in *Early Human Development*. The second study, published 19 September in *European Neuropsychopharmacology*, found hints of **social-communication benefits** with omega-3 supplementation and increased omega-3 in red blood cell membranes, which the authors argue is a marker of treatment effectiveness.

SOURCES:

Early Human Development / 20 Sep 2017

Omega-3 and -6 fatty acid supplementation and sensory processing in toddlers with ASD symptomatology born preterm: A randomized controlled trial

<http://www.sciencedirect.com/science/article/pii/S0378378217300737>**European**

Neuropsychopharmacology / 19 Sep 2017

Randomized trial of omega-3 for autism spectrum disorders: Effect on cell membrane composition and behavior

<http://www.sciencedirect.com/science/article/pii/S0924977X17308933>

Oxytocin control

Oxytocin, a hormone that facilitates social bonding, has been tested as an autism therapy, with **mixed results**. Research published 29 September in *Science* unveils a link among oxytocin, social behaviors and the brain's reward pathways, which are mediated by dopamine. Artificially activating a region of the reward circuitry **triggers oxytocin release** in mice, in turn increasing the animals' social behaviors, investigators report.

SOURCES:

Science / 29 Sep 2017

Gating of social reward by oxytocin in the ventral tegmental area

<http://science.sciencemag.org/content/357/6358/1406>

Brain size effect

Zebrafish missing a copy of LAT, an immune gene, **have enlarged heads**, whereas fish with an extra copy of the gene have unusually small heads, a new study suggests. LAT is in the chromosomal region **16p11.2**. In people, deletions and duplications of DNA in this region are associated with autism and other neurodevelopmental conditions. Deletions are linked to larger head size and duplications to smaller head size. Mice missing the gene also have enlarged brains. The findings, published 28 September in the *American Journal of Human Genetics*, suggest LAT contributes to the changes in brain volume associated with 16p11.2 deletions and duplications.

SOURCES:

American Journal of Human Genetics / 28 Sep 2017

The immune signaling adaptor LAT contributes to the neuroanatomical phenotype of 16p11.2 BP2-BP3 CNVs

<http://www.sciencedirect.com/science/article/pii/S0002929717303385>

Neanderthal nexus

Several personal genomics services report the overlap between a person's DNA and that of our extinct Neanderthal cousins. Researchers using personal genomics data from one such company report that **adults with 'more Neanderthal' genomes** tend to have higher anxiety and "autistic tendencies." The results from a survey of 200 adults were published 30 September in *Human Ethology Bulletin*.

SOURCES:

Human Ethology Bulletin / 30 Sep 2017

Using personal genome technology and psychometrics to study the personality of the Neanderthals
<http://ishe.org/human-ethology-bulletin/2017-2/heb-323/using-personal-genome-technology-and-psychometrics-to-study-the-personality-of-the-neanderthals/>

Disability language

Writer **Jamie Davis Smith**, whose daughter has autism and other disabilities, is calling for a forthright use of the word ‘disabled’ to describe people like her child. In a 28 September essay in *The Washington Post*, Davis Smith cites **disabled advocate Lawrence Carter-Long** as arguing that whether people say ‘disabled person’ or ‘person with a disability’ is less important than ensuring that “‘disability’ is a part of the conversation.” There is debate in the autism community about whether to use **identity-first or person-first** language.

SOURCES:

The Washington Post / 28 Sep 2017

My daughter doesn't have 'special' needs. She's disabled

<https://www.washingtonpost.com/news/parenting/wp/2017/09/28/my-daughter-doesnt-have-special-needs-shes-disabled/>

Antivaccine act

Andrew Wakefield is in pursuit of a second act, *BuzzFeed* reported 1 October. The vehicle for his current recalibration attempt is a documentary **tracking fundraising efforts** for his legal battles. At one point in the film, titled “The Pathological Optimist,” Wakefield likens himself to Nelson Mandela.

SOURCES:

BuzzFeed / 01 Oct 2017

The world's most notorious anti-vaxxer wants a second act

<https://www.buzzfeed.com/azeenghorayshi/andrew-wakefield-wants-a-second-act>

Twitter power

Of 549,972 tweets sent in the United States between 2009 and 2015 that mention autism and vaccines, almost half **contain anti-vaccine sentiments**. In five states, including California and New York, the number of such tweets has been higher than the national average, according to a study published 1 September in *Social Science & Medicine*.

In addition to state of residency, other factors associated with tweeting anti-vaccine content include living in high-population areas, being a woman who recently gave birth, being a man with limited

college education and having a high household income.

The investigators call their findings “alarming” but add that “monitoring social media for anti-vaccine beliefs is beneficial for surveillance and intervention efforts to curtail” such beliefs.

SOURCES:

Social Science & Medicine / 04 Sep 2017

Geographic and demographic correlates of autism-related anti-vaccine beliefs on Twitter, 2009-15
<http://www.sciencedirect.com/science/article/pii/S0277953617305221>

Gut-brain partnership

Stanford University researchers have teamed up with a San Francisco-area pharmaceutical company to evaluate the **gut-brain link in autism**. Harnessing the power of a \$2.1 million National Institutes of Health grant, they plan to **recruit 100 sibling pairs** in which only one child has autism. Most participation in the study can be done remotely, the *San Francisco Chronicle* reported 3 October.

The pharmaceutical company, **Second Genome Inc.**, specializes in therapies based on links between gut bacteria and diseases.

Sibling participants need to live in the same environment and have similar diets, the newspaper reported. Families participating in the study would submit fecal and saliva samples and videos of the siblings’ behavior. The investigators expect to analyze the videos using machine-learning software to measure eye contact and other social behaviors, according to the newspaper.

SOURCES:

San Francisco Chronicle / 03 Oct 2017

Researchers explore link between gut bacteria and autism
<http://www.sfgate.com/business/article/Researchers-explore-link-between-gut-bacteria-and-12250299.php>

Job moves

Psychology professor **Mark Johnson** has been named **head of the psychology department** at the University of Cambridge in the United Kingdom. Johnson focuses on typical and atypical human brain development and cognition, the university said in a 3 October announcement.

News tips

Do you have a new paper coming out? 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.
