NEWS

Community Newsletter: Reconsidering rodent models, rethinking early interventions

BY **SPECTRUM**

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Autism research tweets this week sounded multiple notes of caution — about mouse models, early interventions, genetic associations and leaky recruitment pipelines.

First among the tempered tweets, the field needs to **reconsider rodent models**, according to a new review from **Jill Silverman**, associate professor of psychiatry and behavioral sciences at the University of California, Davis. The paper sprang from a workshop for behavioral science experts and reiterates the idea that **mice may successfully recapitulate** some underlying neurodevelopmental issues but do not — and never could — perfectly model an actual condition, such as autism.

"I hope this makes #autism science go, go, go!" Silverman tweeted.

https://twitter.com/jill_silverman_/status/1504167106383732736?ref_src=twsrc%5Etfw

"You will want to read this," tweeted the Autism Science Foundation, adding that its chief science officer, **Alycia Halladay**, who co-authored the review, previews the work in the foundation's weekly science podcast.

https://twitter.com/AutismScienceFd/status/1505923272743002113?ref_src=twsrc%5Etfw

Autism researchers also need to **rethink how well some early interventions** translate across delivery methods and contexts, according to a "sobering (disappointing)" trial, tweeted **Tony Charman**, chair of clinical child psychology at King's College London in the United Kingdom. Although an intervention called Paediatric Autism Communication Therapy (PACT) appears to benefit children when administered in the clinic, it has no effect whatsoever when delivered in both

home and education settings, the new trial found.

https://twitter.com/TonyASDorAFC/status/1504722637569810460?ref_src=twsrc%5Etfw

Andrew Whitehouse, professor of autism research at the Telethon Kids Institute in Perth, Australia, offered "**huge kudos** to the study team" in a tweet, adding, "this is what knowledge gain and scientific progress looks like."

https://twitter.com/AJOWhitehouse/status/1504797718413152259?ref_src=twsrc%5Etfw

Matthew Hurles, head of human genetics at the Wellcome Sanger Institute in Hinxton, U.K., cautioned against misinterpreting his latest findings, which he took pains to explain in a 17-tweet thread. He and his colleagues turned to UK Biobank to assess **damaging genetic variants in constrained genes**, known to cause neurodevelopmental conditions. They found that a high overall burden of such variants is associated with an increased chance of being childless, especially in men, and that the link is not mediated by infertility but rather by cognitive and behavioral factors.

"Very important to note that a high genetic burden is not at all predictive of childlessness at an individual level, personal choice and social factors are much more important," Hurles wrote. "We have not discovered a 'gene for childlessness.'"

https://twitter.com/mehurles/status/1506678428132642819?ref_src=twsrc%5Etfw

Jonathan Sebat, professor of psychiatry and cellular and molecular medicine at the University of California, San Diego, called it a great paper that "shows that reproductive fitness is linked to effects of variants on development, and behavior in particular."

https://twitter.com/sebatlab/status/1506691735220482053?ref_src=twsrc%5Etfw

"This is super cool!" tweeted **Tuuli Lappalainen's lab** at the New York Genome Center in New York City.

https://twitter.com/tuuliel_lab/status/1506680106437296133?ref_src=twsrc%5Etfw

And a preprint this week, tweeted out by PsyArXiv-bot, cautioned against **confirming autism diagnoses** for studies that want to recruit more women with the condition. The preprint from **John Gabrieli**, professor of health sciences and technology at the Massachusetts Institute of Technology, and his colleagues argues that "reliance on community diagnosis rather than confirmatory diagnostic assessments resulted in significantly more equal sex ratios," results that "provide evidence for a 'leaky' recruitment-to-research pipeline for females in autism research."

That's it for this week's Community Newsletter! If you have any suggestions for interesting social posts you saw in the autism research sphere, feel free to send an email to **news@spectrumnews.org**.

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