NEWS

Community Newsletter: Neuroimaging study size; fragile X RNA

BY **MICHAEL FERGENSON**

9 JULY 2023

Sneha Shah and **Jonathan Watts**, both of the University of Massachusetts Chan Medical School, shared their team's paper, "**Antisense oligonucleotide rescue of CGG expansion–dependent FMR1 mis-splicing in fragile X syndrome restores FMRP**," published in *PNAS* 26 June.

> Contrary to expectations, many patients with Fragile X syndrome express RNA from the FMR1 locus. The RNA is mis-spliced but can be corrected with an ASO. In PNAS today! Great collaboration with Joel Richter and Liz Berry-Kravis. **https://t.co/0P7iPFPlzW**
>
> — Jon Watts (@jwattsgroup) **June 26, 2023**

Abdel Abdellaoui of Amsterdam University Medical Centers linked to his team's paper, "**Replicable brain–phenotype associations require large-scale neuroimaging data**," published in *Nature Human Behaviour* 26 June. *Spectrum* **covered similar work** in 2022.

> Many small neuroimaging studies have probably reported false positive findings. Especially for traits related to cognition & mental health, thousands of subjects are required ????
>
> New paper from our talented PhD student Shu Liu in **@NatureHumBehav**:

https://t.co/QpyhazYyAC pic.twitter.com/AzKV59BQqb

— Abdel Abdellaoui (@dr_appie) **June 26, 2023**

Jeff Browndyke of Duke University, **Colin Hawco** of the Centre for Addiction and Mental Health, and **Nico Dosenbach** of Washington University School of Medicine in St. Louis replied to Abdellaoui.

Most harp on the neuroimaging aspect in these studies, but what about the test-retest reliability and construct validity of the measures used to capture complex traits, mental health and cognition?

— Jeff Browndyke (@Jeff_Browndyke) **June 27, 2023**

Related, UKB represents lower end for reliability. E.g. fluid cog based on short raven's mat, and 6:10 of resting state fMRI. And looks like the paper looks at individual features, but reliability ^ for broader features, e.g. networks. So this helps show us what to move beyond!

— Colin Hawco (@ColinHawco) **June 26, 2023**

This **#BWAS** finding (**https://t.co/rAcIJi4TiN**) replicated; need Ns in the thousands. … & BWAS ? fMRI. You can have n=1 brain behavior associations, just not with BWAS. **https://t.co/gvlVNJbPaK**

— Nico Dosenbach (@ndosenbach) **June 26, 2023**

Gemma Williams of the University of Brighton, **Keren MacLennan** of Durham University and **Catherine Manning** of the University of Reading linked to their editorial, "**Sensory-inclusive**

spaces for autistic people: We need to build the evidence base," published in *Autism* 3 July.

> ????NEW PAPER ALERT????
>
> What do we already know about making public spaces more sensory-inclusive for autistic people?
>
> What do we still need research to find out?
>
> A joy to join **@CManningPhD** and **@KerenMacLennan** for Cathy's first **@journalautism** editorial: **https://t.co/kgtA0BVGCP**
>
> — Dr Gemma L. Williams ???? (she/they) (@DjzemaLouiz) **July 4, 2023**

> A call to encourage more research to create sensory-inclusive spaces for autistic people! It was so wonderful to be invited to collaborate with **@DjzemaLouiz** and **@CManningPhD** for Cathy's first editorial for **@journalautism** ???????? **https://t.co/hp8LKnkSQk**
>
> — Dr Keren MacLennan (@KerenMacLennan) **July 4, 2023**

> My first Editorial for **@journalautism** in which I teamed up with the wonderful **@DjzemaLouiz** and **@KerenMacLennan** to consider how to make public spaces more sensory-inclusive, and what evidence is still needed. Relevant to our **@sensory_street** work **https://t.co/CU1j5LO9c9**
>
> — Catherine (Cathy) Manning (@CManningPhD) **July 4, 2023**

Jonathan Henninger of Carnegie Mellon University linked to his team's study, "**Transcription factors interact with RNA to regulate genes**," published in *Molecular Cell* 3 July.

> Delighted that our study on transcription factors binding **#RNA** is now out in **@MolecularCell**! We provide evidence that TF-RNA binding is pervasive, important for gene control, development, and disease.
>
> Free paper access here for a limited time! **https://t.co/LNNce2YAHO**
>
> A ????:
>
> — Jonathan Henninger (@jehenninger) **July 4, 2023**

Jungsu Kim of Indiana University commented on the study.

> ???? Time to revise textbooks ????
> Title: "Transcription factors interact with RNA to regulate genes"
>
> "at least half of TFs also bind RNA, doing so through a previously unrecognized domain"**https://t.co/Tql32vXfct**
>
> — Jungsu Kim (@jungsukim77) **July 4, 2023**

Guillaume Cabanac, creator of the **Problematic Paper Screener**, flagged more than 47 papers containing **tortured phrases**, **questionable references** and other anomalies.

> 47+ problematic papers flagged in **@PLOSONE** by the Problematic Paper Screener **https://t.co/fSmzEq49x9**. They contain tortured phrases, questioned references, and other anomalies ?????????. Retractions/corrections needed++ **@PLOS**. **https://t.co/UGq9E2wwit pic.twitter.com/bLzwEn57cy**
>
> — Guillaume Cabanac (@gcabanac@sciences.re) (@gcabanac) **July 3, 2023**

Mark Adams of the University of Edinburgh linked to his team's study, "**Polygenic risk prediction: Why and when out-of-sample prediction R2 can exceed SNP-based heritability**," published in the *American Journal of Human Genetics* 27 June.

Clinton Canal of Mercer University commented on "**Psychedelics give mice second chance to learn social rewards**," published on *Spectrum* 23 June.

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 **michael@spectrumnews.org**.

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