

NEWS

Community Newsletter: Autism and the thalamus, recreational drug use in autistic people, new IACC members

BY CHELSEY B. COOMBS

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Hello, and welcome to this week's Community Newsletter! I'm your host, **Chelsey B. Coombs**, *Spectrum's* engagement editor.

Our first tweet comes from **Dheeraj Roy**, a postdoctoral fellow at the Massachusetts Institute of Technology in Cambridge, who highlighted his new study in *Neuron* on the role of the thalamus **in autism and schizophrenia**.

Many disorders lead to memory deficits. We report in **@NeuroCellPress** that different disorders lead to a common defect in anterior thalamus (ATN). Targeting ATN can rescue these deficits! Co-led with **@Ying65611871**. Press: <https://t.co/huskQ816zi> Paper: <https://t.co/xDiqZEP1Jd> [pic.twitter.com/frJBjDx528](https://t.co/frJBjDx528)

— Dheeraj Roy (@dheerajroy7) **June 30, 2021**

The thalamus is important in memory and learning, and previous studies have shown that genes linked to autism and schizophrenia are highly expressed in this brain region. Knocking down several of these genes in the thalamus in mice led to neuron hyperexcitability and memory problems, Roy and his colleagues found.

Specifically, a circuit between the anterodorsal region of the thalamus and another brain area called the retrosplenial cortex is necessary for memory encoding, the team showed. And a circuit

between the anteroventral thalamus and retrosplenial cortex regulates memory specificity. Normalizing the hyperexcitability of the neurons in the thalamus eased the mice's memory problems.

Chen Sun, a postdoctoral fellow at the University of Montreal in Canada, said the paper was a tour de force.

Wonderful tour-de-force paper from my friend **@dheerajroy7** on a brain region (thalamus) that is seriously understudied!

TLDR thalamus isn't just a simple "relay station" but rather, has memory/cognitive roles and is implicated in autism and schizophrenia!

Check it out below: <https://t.co/fmiEVLAd3d>

— Chen Sun (@ChenSun92) **June 30, 2021**

Next up, we have a paper from *The Lancet Psychiatry* that examined tobacco smoking and substance use in autistic people ages 16 and older. Study author **Elizabeth Weir**, a Ph.D. candidate at the University of Cambridge in the United Kingdom, described the results in a thread.

Thrilled to share our new study showing that autistic adults are less likely to use substances but more likely to report self-medicating for mental health and behavior (including autism symptoms) when they use. Work done with **@sbaroncohen** and Carrie Allison (not on Twitter) <https://t.co/ddWq0yLe4h>

— Elizabeth Weir (@Eweir21) **July 2, 2021**

Her team used data from an online survey that included a mix of quantitative questions and open-ended, qualitative ones, such as: "Please list any recreational substances/drugs you have used and how long you used them for. Please provide any information that you think may be relevant."

Autistic people were almost nine times more likely than non-autistic people to say they used drugs to manage behavioral traits; some even indirectly referenced using drugs to 'camouflage' or mask

their autism.

In findings that the authors describe as a first, autistic men were less likely to report smoking or using recreational drugs than non-autistic men, but there was no significant difference between autistic women and non-autistic women.

Some autistic people also reported being tricked into using or forced to use drugs.

Autistic adolescents and adults were also more likely to report vulnerability associated with drug use, including two new areas of vulnerability not previously reported: childhood use of drugs (at age 12 or younger) and being forced, tricked, or mistakenly taking drugs

— Elizabeth Weir (@Eweir21) **July 2, 2021**

“Clinicians should be aware of possible vulnerability related to substance use . . . and should work cooperatively with patients to provide effective means of managing autistic patients’ behavioural, mental health, and physical health symptoms,” they wrote.

Robin van Kessel, assistant professor of international health at Maastricht University in the Netherlands, wrote that it was a “thorough, beautifully-written, well-deserved publication.”

Such a wonderful study lead by **@Eweir21** and **@sbaroncohen**! Congratulations on a thorough, beautifully-written, well-deserved publication that will surely spur future action in the cross-section between the research fields of autism and substance use!

<https://t.co/GFtPtpfcr5>

— Robin van Kessel, PhD (@robinvankessel) **July 2, 2021**

Finally, I want to call out a *Spectrum* article by Laura Dattaro, “**Federal autism committee names new members**,” that is generating buzz on social media. The United States’ **Interagency Autism Coordinating Committee** (IACC) — the group tasked with setting priorities for government-funded autism research and services — announced its newest cohort of members on 7 July. Seven of the public members are autistic, a “dramatic change” from past iterations of the IACC, says **Sam Crane**, legal director of the Autistic Self Advocacy Network (ASAN) and a returning IACC member.

The IACC plans to meet virtually later this month.

That's it for this week's *Spectrum* 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 me at chelsey@spectrumnews.org. See you next week!

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