

**SPOTTED**

# Spotted around the web: Neuronal differentiation, vitamin D, Hollywood representation

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## Research roundup

- Neurons differentiate prematurely in human brain tissue with FOXP1 mutations, which lead to a syndrome characterized by intellectual disability and epilepsy, supporting findings in animals. *European Journal of Medical Genetics*
- Mice carrying mutations in the TSC1 gene, which has been associated with autism traits, show altered development of inhibitory neurons and impaired social behavior. *Nature Communications*
- Autistic adults who say their work ability is poor also tend to have social anxiety and problems switching among tasks. *Autism*
- Postmortem studies of autism typically find alterations in the brain's frontal cortex and cerebellum. *Neuroscience & Biobehavioral Reviews*
- Gene variants that alter histone function — and thereby the regulation of cellular DNA — are linked to autism; confirming the association, mice missing the SUV39H2 gene are hyperactive and show inflexibility on a complex learning task. *Molecular Psychiatry*
- Children with more autism traits tend to have smaller brain volumes and, in some regions, thinner cortical layers and less gyration than children with fewer autism traits. *Autism Research*
- Neonatal oxytocin administration appears to alter hippocampal development and improve social behavior. *Molecular Psychiatry*
- Advances in precision medicine put new and better treatments for autism in reach, according to a new commentary. *Neuron*
- Two new publicly available algorithms can accurately predict protein structures from DNA

- sequences. *Nature*
- Genetic characterizations of autism have far outpaced phenotypic ones; however, synthesizing the two may be necessary to understand autism, argues **Isaac Kohane**. *Neuron*
  - Repetitive behaviors observed in first-degree relatives of people with autism or with obsessive compulsive disorder show similar patterns, strengthening the idea that a common pathway underlies both conditions. *Autism Research*
  - Low levels of vitamin D during a woman's pregnancy are associated with higher odds of autism in her child; *Spectrum* has reported on **similar associations** found in larger studies. *Biological Psychiatry*
  - Autistic boys and girls have bigger sensory processing differences than non-autistic boys and girls do. *Autism Research*
  - A prolonged-release form of melatonin improves sleep onset and duration in autistic children with insomnia. *Expert Opinion on Pharmacotherapy*

### Science and society

- The U.K. government has announced an Autism Strategy, which includes funding to improve diagnosis and access to treatment and educational settings for people on the spectrum. **UK**
  - Autism and disability advocates say they are underrepresented in Hollywood, which casts non-disabled actors as disabled characters and tells stories that rely on disability stereotypes. *Ms. Magazine*
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