



Science Digest: A quarterly science bulletin

A Message from the Chief Science Officer



I am thrilled to share that Autism Speaks recently awarded more than \$4.7 million in grants to 26 autism researchers at premier academic and research institutions.

These projects include a range of basic and applied science topics, including dedicated funding of \$2.6 million to transition to adulthood, one of the biggest challenges facing people with autism and their families. This investment is critical to accomplishing our mission to deliver solutions that will enhance people's lives and enable more people to have more meaningful days. [Read more](#) about these funded projects and the researchers behind them.

We are also working on other ways to get research findings into the hands of health providers and families. Through our [Autism Treatment Network and ECHO Autism Primary Care](#), community providers are learning from specialists how to handle medical care and other concerns for autistic children. By learning best practices in screening for autism and helping reduce the wait for care, this program is helping children and families in their own communities.

Just last week, we also hosted a [Thought Leadership Summit on Transition to Adulthood](#) in Washington, D.C. Gatherings like these, where researchers, policy experts, advocates and self-advocates share ideas about what the future of transition research and systemic solutions should look like, will be critical to informing how we help people with autism across the lifespan.

Next month, we are excited to introduce you to our Science Spotlights, a series of

short videos that offer practical answers to common questions about autism science. Find the Science Spotlights on our [YouTube channel!](#)

We welcome your feedback on our quarterly science bulletin and our research program. Email us at research@autismspeaks.org.

Sincerely,



Thomas Frazier

Thought Leadership Summit on Transition to Adulthood



Joined by researchers, policy experts, family members and self-advocates, Autism Speaks hosted a Thought Leadership Summit on Transition to Adulthood on Oct. 2-3 in Washington, D.C. The two-day meeting featured facilitated discussions around employment, education, access to needed services including healthcare, transportation and housing for teens and adults with autism. [Read more.](#)

Is autism being overdiagnosed?



Despite claims by a recent research study that autism is being overdiagnosed, experts at Autism Speaks said that conclusion overstates what the study can realistically draw from its analysis. The study published last week in [JAMA Psychiatry](#) concluded that changes in how providers diagnose autism are blurring the line between people with autism and the general population. [Read more.](#)

Large family-based study finds 80 percent of autism risk due to inherited genes



A new study looking at autism in five countries found that 80 percent of autism risk can be traced to inherited genes rather than environmental factors and random mutations. The study, published July 18 in [JAMA Psychiatry](#), analyzed data of nearly 2 million people across Denmark, Finland, Sweden, Israel and Western Australia. It is the largest family-based genetic autism study to date, including children with autism, their siblings and cousins, as well as parents and their siblings. [Read more.](#)

Also see:

- [UN gathering promotes Universal Health Coverage for children with developmental delays](#)
- [Congress passes the Autism CARES Act of 2019](#)
- [Interview with IACC member John Elder Robison, autism researcher, self-advocate and parent advocate](#)

Upcoming and archived webcasts, webinars and meetings of interest



Advances in Autism Research & Care is a free monthly webinar series sponsored by the [Autism Speaks Autism Treatment Network](#) in its role as the [Autism Intervention Research Network on Physical Health](#). Join us for the upcoming October webinar:

Modeling Screening and Diagnosis: Featuring panelists Sarabeth Broder-Fingert, MD, assistant professor of pediatrics at Boston University School of Medicine, and Christopher Radley Sheldrik, PhD, research associate professor of health law, policy and management at Boston University School of Public Health. **Oct. 24, 2019, at 1 p.m. EST. Register [here](#).**

Recently published studies supported by Autism Speaks and its Autism Treatment Network

This research is made possible by the generosity of our volunteers and donors.

[Synaptic dysfunction in human neurons with autism-associated deletions in PTCHD1-AS](#). P. Joel Ross, et al. *Biological Psychiatry*. July 29, 2019. ([MSSNG](#))

[The reliability and validity of the social responsiveness scale to measure autism symptomology in Vietnamese children](#). Phuong H. Nguyen et al. *Autism Research*. July 20, 2019. ([9038](#))

[Relating diffusion tensor imaging measurements to microstructural quantities in the cerebral cortex in multiple sclerosis](#). Rebecca McKavanagh et al. *Human Brain Mapping*. Aug. 1, 2019. ([6026](#))

[A Framework for Research in Transition: Identifying Important Areas and Intersections for Future Study](#). Erik W. Carter, et al. *Career Development and Transition for Exceptional Individuals*. July 31, 2019.

[A video-based measure to identify autism risk in infancy](#). Gregory S. Young et al. *Journal of Child Psychology and Psychiatry*. Aug. 1, 2019. ([9270](#))

[Attentional bias to fearful faces in infants at high risk for autism spectrum disorder](#). JP Wagner et al. *Europe PMC*. July 29, 2019. (Meixner Translational Postdoctoral Fellowship Grant [7629](#))

[Randomized, Placebo-controlled Trial of Ferrous Sulfate to Treat Insomnia in Children with Autism Spectrum Disorders](#). Ann M.Reynolds et al. *Pediatric Neurology*. Aug. 2, 2019. ([ATN](#))

[Examining Trajectories of Daily Living Skills over the Preschool Years for Children with Autism Spectrum Disorder](#). B. Di Rezze et al. *Journal of Autism and Developmental Disorders*. Aug. 1, 2019. ([Autism Speaks Canada](#))

[Mapping the Research Domain Criteria Social Processes Constructs to the Social Responsiveness Scale](#). Mirko Uljarević, et al. *Journal of the American Academy of Child & Adolescent Psychiatry*. Aug. 1, 2019.

[A Pivotal Response Treatment Package for Children With Autism Spectrum Disorder: An RCT](#). Grace W. Gengoux et al. *Pediatrics*. Aug. 10, 2019. ([5773](#))

[Haploinsufficiency in the ANKS1B gene encoding AIDA-1 leads to a neurodevelopmental syndrome](#). Abigail U. Carbonell et al. *Nature Communications*. Aug. 6, 2019. ([MSSNG](#))

[Predictors of longer-term development of expressive language in two independent longitudinal cohorts of language-delayed preschoolers with Autism Spectrum Disorder](#). Vanessa H. Bal et al. *Journal of Child Psychology and Psychiatry*. Aug. 19, 2019. ([Autism Speaks Canada](#))

[Exploring cortical activation and connectivity in infants with and without familial risk for autism during naturalistic social interactions: A preliminary study](#). A.N. Bhat et al. *Infant Behavior and Development*. Aug. 23, 2019. ([7634](#))

[Apparent Genetic Rescue of Adult Shank3 Exon 21 Insertion Mutation Mice Tempered by 2 Appropriate Control Experiments](#). Haley E. Speed et al. *eNeuro*. Aug. 26, 2019. ([7666](#))

[Promoting Social Attention in 3-Year-Olds with ASD through Gaze-Contingent Eye Tracking](#). Quan Wang et al. *Autism Research*. Aug. 30, 2019. ([9293](#))

[Inherited and De Novo Genetic Risk for Autism Impacts Shared Networks](#). Elizabeth K. Ruzzo et al. *Cell*. Aug. 8, 2019. ([AGRE](#))

[Promoting Social Attention in 3-Year-Olds with ASD through Gaze-Contingent Eye Tracking](#). Quan Wanget al. *Autism Research*. Aug. 30, 2019. (Meixner Translational Postdoctoral Fellowship Grant [9293](#))

[Predictors of health service use among adolescents and adults with autism and aggression](#). Melissa Paquette-Smith et al. *Research in Autism Spectrum Disorders*. Aug. 31, 2019. ([8749](#))

[“Um” Fillers Distinguish Children with and without ASD](#). Karla K. McGregor and Rex R. Hadden. *Journal of Autism and Developmental Disabilities*. ([1764](#))

[The Performance of the First Year Inventory \(FYI\) Screening on a Sample of High-Risk 12-Month-Olds Diagnosed with Autism Spectrum Disorder \(ASD\) at 36 Months](#). Helen Y. Lee et al. *Journal of Autism and Developmental Disabilities*. Sept. 5, 2019. ([Autism Speaks Canada](#))

[Brain somatic mutations in MTOR reveal translational dysregulations underlying intractable focal epilepsy](#). Jang Keun et al. *Journal of Clinical Investigation*. Sept. 4, 2019. ([Autism BrainNet](#))

[Neurexophilin4 is a selectively expressed \$\alpha\$ -neurexin ligand that modulates specific cerebellar synapses and motor functions](#). Xiangling Meng et al. *Neuroscience*. Sept. 16, 2019. (Weatherstone Pre-doctoral Fellowship Grant [9120](#))

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