

# 2017 Summary of Advances Nominations April – July 2017



**Susan A. Daniels, Ph.D.**

Director, Office of Autism Research Coordination  
Executive Secretary, IACC  
National Institute of Mental Health

# Question 1: Screening and Diagnosis



Science  
Translational  
Medicine

Jun 2017

## **Functional neuroimaging of high-risk 6-month-old infants predicts a diagnosis of autism at 24 months of age.**

Emerson RW, Adams C, Nishino T, Hazlett HC, Wolff JJ, Zwaigenbaum L, Constantino JN, Shen MD, Swanson MR, Elison JT, Kandala S, Estes AM, Botteron KN, Collins L, Dager SR, Evans AC, Gerig G, Gu H, McKinstry RC, Paterson S, Schultz RT, Styner M; IBIS Network, Schlaggar BL, Pruett JR Jr, Piven J

# Question 2: Biology



**nature**

Jul 2017

**Infant viewing of social scenes is under genetic control and is atypical in autism.**

Constantino JN, Kennon-McGill S, Weichselbaum C, Marrus N, Haider A, Glowinski AL, Gillespie S, Klaiman C, Klin A, Jones W



Apr 2017

**Neurogenetic analysis of childhood disintegrative disorder.**

Gupta AR, Westphal A, Yang DYJ, Sullivan CAW, Eilbott J, Zaidi S, Voos A, Vander Wyk BC, Ventola P, Waqar Z, Fernandez TV, Ercan-Sencicek AG, Walker MF, Choi M, Schneider A, Hedderly T, Baird G, Friedman H, Cordeaux C, Ristow A, Shic F, Volkmar FR, Pelphrey KA

# Question 2: Biology



## ***Cerebral* CORTEX**

Mar 2017

**Cortical thickness abnormalities in autism spectrum disorders through late childhood, adolescence, and adulthood: a large-scale MRI study.**

Khundrakpam BS, Lewis JD, Kostopoulos P, Carbonell F, Evans AC

# Question 3: Risk Factors



Jun 2017

## **Fetal and postnatal metal dysregulation in autism.**

Arora M, Reichenberg A, Willfors C, Austin C, Gennings C, Berggren S, Lichtenstein P, Anckarsäter H, Tammimies K, Bölte S



Apr 2017

## **Grand-maternal smoking in pregnancy and grandchild's autistic traits and diagnosed autism.**

Golding J, Ellis G, Gregory S, Birmingham K, Iles-Caven Y, Rai D, Pembrey M

# Question 3: Risk Factors



AUTISM RESEARCH  
January, 2017 | Volume 10 | Number 1

Apr 2017 [Epub ahead of print]

## **The joint effect of air pollution exposure and copy number variation on risk for autism.**

Kim D, Volk H, Girirajan S, Pendergrass S, Hall MA, Verma SS, Schmidt RJ, Hansen RL, Ghosh D, Ludena-Rodriguez Y, Kim K, Ritchie MD, Hertz-Picciotto I, Selleck SB

nature  
neuroscience

Jul 2017

## **Rates, distribution and implications of postzygotic mosaic mutations in autism spectrum disorder.**

Lim ET, Uddin M, De Rubeis S, Chan Y, Kamumbu AS, Zhang X, D'Gama AM, Kim SN, Hill RS, Goldberg AP, Poultney C, Minshew NJ, Kushima I, Aleksic B, Ozaki N, Parellada M, Arango C, Penzol MJ, Carracedo A, Kolevzon A, Hultman CM, Weiss LA, Fromer M, Chiacchetti AG, Freitag CM; Autism Sequencing Consortium, Church GM, Scherer SW, Buxbaum JD, Walsh CA

# Question 3: Risk Factors



PSYCHOLOGICAL  
MEDICINE

May 2017 [Epub ahead of print]

**Autism risk following antidepressant medication during pregnancy.**

Viktorin A, Uher R, Reichenberg A, Levine SZ, Sandin S

nature  
genetics

May 2017 [Epub ahead of print]

**Polygenic transmission disequilibrium confirms that common and rare variation act additively to create risk for autism spectrum disorders.**

Weiner DJ, Wigdor EM, Ripke S, Walters RK, Kosmicki JA, Grove J, Samocha KE, Goldstein JL, Okbay A, Bybjerg-Grauholm J, Werge T, Hougaard DM, Taylor J; iPSYCH-Broad Autism Group; Psychiatric Genomics Consortium Autism Group, Skuse D, Devlin B, Anney R, Sanders SJ, Bishop S, Mortensen PB, Børgeglum AD, Smith GD, Daly MJ, Robinson EB

# Question 4: Treatments and Interventions



**AUTISM RESEARCH**  
January, 2017 | Volume 10 | Number 1

Jun 2017 [Epub ahead of print]

**Cross-site randomized control trial of the Social ABCs caregiver-mediated intervention for toddlers with autism spectrum disorder.**

Brian JA, Smith IM, Zwaigenbaum L, Bryson SE

**BEHAVIORAL DEVELOPMENT BULLETIN**  
Volume 10 | Number 1 | April 2017

Apr 2017

**Measuring developmental outcomes in autism spectrum disorder (ASD).**

Commons ML, Adhikari D, Giri S, Weinberg M, Baran JJ, Malik E



# Question 4: Treatments and Interventions



The International Journal of Research and Practice ● Volume 21 Number 5 July 2017

**autism**

Apr 2017

**Changes in anxiety following a randomized control trial of a theatre-based intervention for youth with autism spectrum disorder.**

Corbett BA, Blain SD, Ioannou S, Balsler M

**PEDIATRICS**

OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

May 2017

**Nutritional and dietary interventions for autism spectrum disorder: a systematic review.**

Sathe N, Andrews JC, McPheeters ML, Warren ZE

# Question 4: Treatments and Interventions



The Journal of Child  
Psychology and Psychiatry

May 2017

**Hybrid implementation model of community-partnered early intervention for toddlers with autism: a randomized trial.**

Shire SY, Chang YC, Shih W, Bracaglia S, Kodjoe M, Kasari C



Jun 2017

**Four-year follow-up of children in the LEAP Randomized Trial: some planned and accidental findings.**

Strain PS

# Question 4: Treatments and Interventions



**PEDIATRICS**

OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

May 2017 [Epub ahead of print]

**Interventions targeting sensory challenges in autism spectrum disorder: a systematic review.**

Weitlauf AS, Sathe N, McPheeters ML, Warren ZE

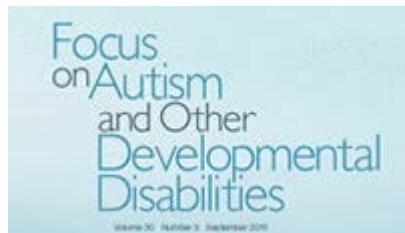
# Question 5: Services



Jun 2017

**Implementation evaluation of early intensive behavioral intervention programs for children with autism spectrum disorders: A systematic review of studies in the last decade.**

Caron V, Bérubé A, Paquet A



Jun 2017

**Comparisons of self-determination among students with autism, intellectual disability, and learning disabilities: a multivariate analysis.**

Chou Y, Wehmeyer ML, Palmer SB, Lee J

# Question 5: Services



**PEDIATRICS**

OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

May 2017

**Disparities in diagnosis and treatment of autism in Latino and non-Latino white families.** Zuckerman KE, Lindly OJ, Reyes NM, Chavez AE, Macias K, Smith KN, Reynolds A

# Question 6: Lifespan Issues



***No articles were nominated in April – July 2017 for Question 6***

# Question 7: Infrastructure



American Journal of  
**Epidemiology**

May 2017

**Geographic patterns of autism spectrum disorder among children of Nurses' Health Study II women.**

Hoffman K, Weisskopf MG, Roberts AL, Raz R, Hart JE, Lyall K, Hoffman EM, Laden F, Vieira VM

*Journal of the American Academy of*  
**CHILD & ADOLESCENT  
PSYCHIATRY**

Jun 2017

**What is the male-to-female ratio in autism spectrum disorder? A systematic review and meta-analysis.**

Loomes R, Hull L, Mandy WPL