

2013 Portfolio Analysis Projects

QUESTION 2: HOW CAN I UNDERSTAND WHAT IS HAPPENING?

2013 Projects: 477

2013 Funding: \$96,872,439

2.S.A

Support at least four research projects to identify mechanisms of fever, metabolic and/or immune system interactions with the central nervous system that may influence ASD during prenatal-postnatal life by 2010. *IACC Recommended Budget: \$9,800,000 over 4 years.* (Fever studies to be started by 2012.)

2013 Projects: 29

2013 Funding: \$2,801,876

Project Title	Principal Investigator	Institution	Funding	Funder
Denritic Cell Function in Autism	Ashwood, Paul	MIND Institute	\$26,920	Autism Research Institute
Brain mitochondrial abnormalities in autism	Chauhan, Abha	New York State Institute for Basic Research in Developmental Disabilities	\$0	Autism Research Institute
Autism spectrum disorders –inflammatory subtype: Molecular characterization	Jyonouchi, Harumi	University of Medicine & Dentistry of New Jersey	\$0	Autism Research Institute
ASD - Inflammatory Subtype: Molecular Mechanisms	Jyonouchi, Harumi	Rutgers University	\$20,148	Autism Research Institute
The role of brainstem NTS inflammation and oxidative stress in Autism	Miller, Veronica	Wadsworth Center	\$43,000	Autism Research Institute
To study the relationship between low GAD2 levels and anti-GAD antibodies in autistic children	Russo, A.J.	Hartwick College	\$0	Autism Research Institute

To Determine Epidermal growth factor (EGF) and EGF Receptor Plasma Concentration and It's Relationship to Hepatocyte Growth Factor (HGF), GABA Levels and Symptom Severity in Autistic Children	Russo, A.J.	Hartwick College	\$4,500	Autism Research Institute
Anti-Neuronal Autoantibodies in PANDAS and Autism Spectrum Disorders	Cunningham, Madeleine	University of Oklahoma Health Sciences Center	\$100,000	Autism Speaks
IL-1beta and IL1RAPL1: Gene-environment interactions regulating synapse density and function in ASD	Estes, Myka	University of California, Davis	\$28,600	Autism Speaks
The mechanism of the maternal infection risk factor for autism	Patterson, Paul	California Institute of Technology	\$150,000	Autism Speaks
Folate receptor autoimmunity in Autism Spectrum Disorders	Quadros, Edward	State University of New York, Downstate Medical Center	\$149,755	Autism Speaks
Convergence of immune and genetic signaling pathways in autism and schizophrenia	Barrow, Stephanie	University of California, Davis	\$29,430	Brain & Behavior Research Foundation
Altered placental tryptophan metabolism: A crucial molecular pathway for the fetal programming of neurodevelopmental disorders	Bonnin, Alexandre	University of Southern California	\$0	Department of Defense
MATERNAL BRAIN-REACTIVE ANTIBODIES AND AUTISM SPECTRUM DISORDER	Diamond, Betty	Feinstein Institute for Medical Research	\$190,577	Department of Defense
Mechanisms of synaptic alterations in a neuroinflammation model of autism	Dunaevsky, Anna	University of Nebraska Medical Center	\$0	Department of Defense
Mechanisms of mitochondrial dysfunction in autism	Shoffner, John	Georgia State University	\$0	Department of Defense
Autoimmunity against novel antigens in neuropsychiatric dysfunction	Balice-Gordon, Rita	University of Pennsylvania	\$307,200	National Institutes of Health
Sensitive periods in cerebellar development	Hoffman, Jessica	University of Maryland, Baltimore	\$32,941	National Institutes of Health
Prostaglandins and cerebellum development	McCarthy, Margaret	University of Maryland, Baltimore	\$356,400	National Institutes of Health

GABRB3 and placental vulnerability in ASD	Palmer, Theo	Stanford University	\$523,820	National Institutes of Health
Mitochondrial dysfunction due to aberrant mTOR-regulated mitophagy in autism	Tang, Guomei	Columbia University	\$183,568	National Institutes of Health
Project 3: Immune environment interaction and neurodevelopment	Van De Water, Judy	University of California, Davis	\$109,725	National Institutes of Health
Hyperthermia and the amelioration of autism symptoms	Hollander, Eric	Montefiore Medical Center	\$66,153	Simons Foundation
Exploring metabolic dysfunction in the brains of people with autism	Hu, Valerie	George Washington University	\$0	Simons Foundation
Bone marrow transplantation and the role of microglia in autism	Kipnis, Jonathan	University of Virginia	\$109,651	Simons Foundation
Fever, meningeal immunity and immune factors in autism	Kipnis, Jonathan	University of Virginia	\$59,500	Simons Foundation
Roles of pro-inflammatory Th17 cells in autism	Littman, Dan	New York University	\$124,989	Simons Foundation
GABRB3 and prenatal immune events leading to autism	Palmer, Theo	Stanford University	\$62,500	Simons Foundation
Role of microglia and complement at developing synapses in ASD	Stevens, Beth	Boston Children's Hospital	\$122,500	Simons Foundation

2.S.B

Launch three studies that specifically focus on the neurodevelopment of females with ASD, spanning basic to clinical research on sex differences by 2011. *IACC Recommended Budget: \$8,900,000 over 5 years.*

2013 Projects: 7

2013 Funding: \$2,859,333

Project Title	Principal Investigator	Institution	Funding	Funder
Foxp2 regulation of sex specific transcriptional pathways and brain development	Bowers, Jerald	University of Maryland, Baltimore	\$88,128	National Institutes of Health
Behavioral and cognitive characteristics of females and males with autism	Frazier, Thomas	Cleveland Clinic Foundation	\$0	Simons Foundation

ACE Network: Multimodal developmental neurogenetics of females with ASD	Pelphrey, Kevin	Yale University	\$2,670,192	National Institutes of Health
Sex-Specific Gene-Environment Interactions Underlying ASD	Schaafsma, Sara	Rockefeller University	35,000	Autism Science Foundation
Why are autistic females rare and severe? An approach to autism gene identification.	Turner, Tychele	Johns Hopkins University	\$28,600	Autism Speaks
Sex differences in the neural mechanisms of treatment response	Ventola, Pamela	Yale University	\$5,000	Autism Science Foundation
Investigation of sex differences associated with autism candidate gene, Cyfip1	Werling, Donna	University of California, Los Angeles	\$32,413	National Institutes of Health

2.S.C

Identify ways to increase awareness among the autism spectrum community of the potential value of brain and tissue donation to further basic research by 2011. *IACC Recommended Budget: \$1,400,000 over 2 years.*

2013 Projects: 3

2013 Funding: \$674,525

Project Title	Principal Investigator	Institution	Funding	Funder
Addressing challenges to post-mortem tissue donation in families affected with autism	Singer, Alison	Autism Science Foundation	\$64,000	Autism Science Foundation
Foundation Associates agreement (BrainNet)	N/A	Foundation Associates, LLC	\$250,000	Autism Speaks
Building awareness of the value of brain tissue donation for autism research	Singer, Alison	Autism Science Foundation	\$360,525	Simons Foundation

2.S.D

Launch three studies that target improved understanding of the underlying biological pathways of genetic conditions related to autism (e.g. Fragile X, Rett syndrome, tuberous sclerosis complex) and how these conditions inform risk assessment and individualized intervention by 2012. *IACC Recommended Budget: \$9,000,000 over 5 years.*

2013 Projects: 95

2013 Funding: \$18,627,373

Project Title	Principal Investigator	Institution	Funding	Funder
Alteration of Dendrite and Spine Number and Morphology in Human Prefrontal Cortex of Autism	Hashemi, Ezzat	University of California, Davis	\$25,000	Autism Science Foundation
Role of astrocytic glutamate transporter GLT1 in Fragile X	Higashimori, Haruki	Tufts University	\$5,000	Autism Science Foundation
GABA and Gamma-band Activity: Biomarker for ASD?	Port, Russell	University of Pennsylvania	\$25,000	Autism Science Foundation
TMLHE deficiency and a carnitine hypothesis for autism	Beaudet, Arthur	Baylor College of Medicine	\$60,000	Autism Speaks
Autism phenotypes in Tuberous Sclerosis: Risk factors, features & architecture	Bolton, Patrick	King's College London	\$149,999	Autism Speaks
Elucidation and rescue of amygdala abnormalities in the Fmr1 mutant mouse model of fragile X syndrome	Corbin, Joshua	George Washington University	\$0	Autism Speaks
Testing the ribosomal protein S6 as treatment target and biomarker in autism spectrum disorders	Gross, Christina	Cincinnati Childrens Hospital Medical Center	\$60,000	Autism Speaks
Bi-directional regulation of Ube3a stability by cyclic AMP-dependent kinase	Hahn, Klaus	University of North Carolina at Chapel Hill	\$60,000	Autism Speaks
Pragmatic language and social-emotional processing in autism, fragile X, and the FMR1 premutation	Hogan-Brown, Abigail	Northwestern University	\$29,474	Autism Speaks
TrkB agonist therapy for sensorimotor dysfunction in Rett syndrome	Katz, David	Case Western Reserve University	\$141,976	Autism Speaks
Physiological studies in a human stem cell model of 15q duplication syndrome	Levine, Eric	University of Connecticut	\$60,000	Autism Speaks
Functional and anatomical recovery of synaptic deficits in a mouse model of Angelman Syndrome	McCoy, Portia	University of North Carolina at Chapel Hill	\$58,000	Autism Speaks
A stem cell based platform for identification of common defects in autism spectrum disorders	Nazor, Kristopher	The Scripps Research Institute - California	\$0	Autism Speaks

Temporal divergence of hypoconnectivity and excitotoxicity in Rett syndrome	Niswender, Colleen	Vanderbilt University	\$0	Autism Speaks
Probing the Molecular Mechanisms Underlying Autism: Examination of Dysregulated Protein Synthesis	Reith, Rachel	National Institute of Mental Health (NIH)	\$49,300	Autism Speaks
A cerebellar mutant for investigating mechanisms of autism in Tuberous Sclerosis	Sahin, Mustafa	Boston Children's Hospital	\$149,967	Autism Speaks
A Novel Glial Specific Isoform of Cdk15: Implications for the Pathology of Autism in Rett Syndrome	Arikkath, Jyothe	University of Nebraska Medical Center	\$0	Brain & Behavior Research Foundation
Understanding the Genetic Architecture of Rett Syndrome - an Autism Spectrum Disorder	Krishnan, Keerthi	Cold Spring Harbor Laboratory	\$0	Brain & Behavior Research Foundation
Studying Rett and Fragile X syndrome in human ES cells using TALEN technology	Li, Yun	Whitehead Institute for Biomedical Research	\$30,000	Brain & Behavior Research Foundation
Modeling Pitt-Hopkins Syndrome, an Autism Spectrum Disorder, in Transgenic Mice Harboring a Pathogenic Dominant Negative Mutation in TCF4	Thaxton, Courtney	University of North Carolina, Chapel Hill	\$0	Brain & Behavior Research Foundation
Role of Serotonin Signaling during Neural Circuitry Formation in Autism Spectrum Disorders	Yoshii, Akira	Massachusetts Institute of Technology	\$0	Brain & Behavior Research Foundation
Language development in fragile X syndrome	Abbeduto, Leonard	University of California, Davis	\$509,862	National Institutes of Health
Presynaptic Fragile X Proteins	Akins, Michael	Drexel University	\$249,000	National Institutes of Health
Neurobiological mechanism of 15q11-13 duplication autism spectrum disorder	Anderson, Matthew	Beth Israel Deaconess Medical Center	\$367,304	National Institutes of Health
Role of Sema7A in functional organization of neocortex	Benson, Deanna	Mount Sinai School of Medicine	\$366,120	National Institutes of Health
Genetic and developmental analyses of fragile X mental retardation protein	Broadie, Kendal	Vanderbilt University Medical Center	\$378,771	National Institutes of Health
mTOR modulation of myelination	Carson, Robert	Vanderbilt University Medical Center	\$178,659	National Institutes of Health

A novel essential gene for human cognitive function	Coulter, Michael	Harvard Medical School	\$47,232	National Institutes of Health
Synaptic phenotype, development, and plasticity in the fragile X mouse	Cox, Charles	University of Illinois at Urbana Champaign	\$379,329	National Institutes of Health
Allelic choice in Rett syndrome	Donohoe, Mary	Winifred Masterson Burke Medical Research Institute	\$374,862	National Institutes of Health
Mechanisms of motor skill learning in the fragile X mouse model	Dunaevsky, Anna	University of Nebraska Medical Center	\$292,423	National Institutes of Health
Predicting phenotypic trajectories in Prader-Willi syndrome	Dykens, Elisabeth	Vanderbilt University Medical Center	\$294,904	National Institutes of Health
Pleiotropic roles of dyslexia genes in neurodevelopmental language impairments	Eicher, John	Yale University	\$36,724	National Institutes of Health
Translation, synchrony, and cognition	Fenton, Andre	New York University	\$375,588	National Institutes of Health
The role of Fox-1 in neurodevelopment and autistic spectrum disorder	Fogel, Brent	University of California, Los Angeles	\$145,757	National Institutes of Health
BDNF and the restoration of synaptic plasticity in fragile X and autism	Gall, Christine	University of California, Irvine	\$449,134	National Institutes of Health
The microRNA pathway in translational regulation of neuronal development	Gao, Fen-Biao	University of Massachusetts Medical School	\$340,304	National Institutes of Health
Genotype-phenotype relationships in fragile X families	Hagerman, Randi	University of California, Davis	\$565,457	National Institutes of Health
Analysis of MEF2 in cortical connectivity and autism-associated behaviors	Harrington, Adam	Harvard Medical School	\$49,214	National Institutes of Health
A longitudinal MRI study of brain development in fragile X syndrome	Hazlett, Heather	University of North Carolina at Chapel Hill	\$549,582	National Institutes of Health
Mechanisms of mGluR5 function and dysfunction in mouse autism models	Huber, Kimberly	University of Texas Southwestern Medical Center	\$393,841	National Institutes of Health
Role of MEF2 and neural activity in cortical synaptic weakening and elimination	Huber, Kimberly M	University of Texas Southwestern Medical Center	\$415,385	National Institutes of Health

MicroRNAs in synaptic plasticity and behaviors relevant to autism	Kelleher, Raymond	Massachusetts General Hospital	\$131,220	National Institutes of Health
Novel candidate mechanisms of fragile X syndrome	Kwan, Kenneth	University of Michigan	\$249,000	National Institutes of Health
The role of MeCP2 in Rett syndrome	LaSalle, Janine	University of California, Davis	\$344,213	National Institutes of Health
Revealing protein synthesis defects in fragile X syndrome with new chemical tools	Lin, Michael	Stanford University	\$337,091	National Institutes of Health
A family-genetic study of autism and fragile X syndrome	Losh, Molly	Northwestern University	\$593,966	National Institutes of Health
Mechanism of UBE3A imprint in neurodevelopment	Powell, Weston	University of California, Davis	\$7,869	National Institutes of Health
MeCP2 modulation of BDNF signaling: Shared mechanisms of Rett and autism	Pozzo-Miller, Lucas	University of Alabama at Birmingham	\$303,067	National Institutes of Health
Longitudinal MRI study of brain development in fragile X	Reiss, Allan	Stanford University	\$748,506	National Institutes of Health
Emergence and stability of autism in fragile X syndrome	Roberts, Jane	University of South Carolina	\$343,680	National Institutes of Health
Olfactory abnormalities in the modeling of Rett syndrome	Ronnett, Gabriele	Johns Hopkins University	\$339,270	National Institutes of Health
Cortactin and spine dysfunction in fragile X	Seese, Ronald	University of California, Irvine	\$32,875	National Institutes of Health
New approaches to local translation: SpaceSTAMP of proteins synthesized in axons	Segal, Rosalind	Dana-Farber Cancer Institute	\$401,927	National Institutes of Health
Dysregulation of protein synthesis in fragile X syndrome	Smith, Carolyn	National Institutes of Health	\$1,089,880	National Institutes of Health
Grammatical development in boys with fragile X syndrome and autism	Sterling, Audra	University of Wisconsin - Madison	\$141,075	National Institutes of Health
Phagocytosis is misregulated in a Drosophila model of Fragile X syndrome	Stone, Elizabeth	Columbia University	\$47,232	National Institutes of Health

Astrocyte function in genetic mouse models of autism spectrum disorders	Trapp, Bruce	Cleveland Clinic Lerner College of Medicine, Case Western Reserve University	\$394,063	National Institutes of Health
Investigation of protocadherin-10 in MEF2- and FMRP-mediated synapse elimination	Tsai, Nien-Pei	University of Texas Southwestern Medical Center	\$55,670	National Institutes of Health
Mechanisms Underlying the Cerebellar Contribution to Autism in Mouse Models of Tu	Tsai, Peter	Boston Children's Hospital	\$190,458	National Institutes of Health
MRI biomarkers of patients with tuberous sclerosis complex and autism	Warfield, Simon	Boston Children's Hospital	\$720,276	National Institutes of Health
Modulation of RhoA signaling by the mRNA binding protein hnRNPQ1	Williams, Kathryn	Emory University	\$30,912	National Institutes of Health
Translational regulation of adult neural stem cells	Zhao, Xinyu	University of Wisconsin - Madison	\$359,977	National Institutes of Health
Phenotypic characterization of MECP2 mice	Zhou, Zhaolan	Children's Hospital of Philadelphia	\$64,742	National Institutes of Health
Dysregulation of mTOR signaling in fragile X syndrome	Zukin, R. Suzanne	Albert Einstein College of Medicine of Yeshiva University	\$467,760	National Institutes of Health
Fragile X syndrome target analysis and its contribution to autism	Ascano, Manuel	Vanderbilt University	\$259,025	Simons Foundation
Role of GABA interneurons in a genetic model of autism	Cardin, Jessica	Yale University	\$62,500	Simons Foundation
Neural mechanisms underlying autism behaviors in SCN1A mutant mice	Catterall, William	University of Washington	\$194,903	Simons Foundation
Regulation of cortical critical periods in a mouse model of autism	Contractor, Anis	Northwestern University	\$0	Simons Foundation
Mouse Model of Dup15q Syndrome	Dindot, Scott	Texas AgriLife Research	\$84,253	Simons Foundation

The role of UBE3A in autism: Is there a critical window for social development?	Elgersma, Ype	Erasmus University Medical Center	\$54,450	Simons Foundation
Probing synaptic receptor composition in mouse models of autism	Fagiolini, Michela	Boston Children's Hospital	\$249,995	Simons Foundation
Probing the neural basis of social behavior in mice	Feng, Guoping	Massachusetts Institute of Technology	\$125,000	Simons Foundation
Linking circuit dynamics and behavior in a rat model of autism	Frank, Loren	University of California, San Francisco	\$0	Simons Foundation
Multigenic basis for autism linked to 22q13 chromosomal region	Goldfarb, Mitchell	Hunter College of the City University of New York (CUNY) jointly with Research Foundation of CUNY	\$250,000	Simons Foundation
The role of UBE3A in autism	Greenberg, Michael	Harvard Medical School	\$250,001	Simons Foundation
Cerebellar plasticity and learning in a mouse model of autism	Hansel, Christian	The University of Chicago	\$0	Simons Foundation
Mechanisms of synapse elimination by autism-linked genes	Huber, Kimberly	University of Texas Southwestern Medical Center	\$240,115	Simons Foundation
Connections between autism, serotonin and hedgehog signaling	Jacob, John	Medical Research Council-National Institute for Medical Research	\$124,401	Simons Foundation
Genetically defined stem cell models of Rett and fragile X syndrome	Jaenisch, Rudolf	Whitehead Institute for Biomedical Research	\$350,000	Simons Foundation
Translational dysregulation in autism pathogenesis and therapy	Kelleher, Raymond	Massachusetts General Hospital	\$125,000	Simons Foundation
Cortico-striatal dysfunction in the eIF4E transgenic mouse model of autism	Klann, Eric	New York University	\$61,999	Simons Foundation
Neurobiology of RAI1, the causal gene for Smith-Magenis syndrome	Luo, Liqun	Stanford University	\$62,314	Simons Foundation
Mesocorticolimbic dopamine circuitry in mouse models of autism	Malenka, Robert	Stanford University	\$349,295	Simons Foundation
16p11.2 rearrangements: Genetic paradigms for neurodevelopmental disorders	Reymond, Alexandre	University of Lausanne	\$100,000	Simons Foundation

Characterizing 22q11.2 abnormalities	Schultz, Robert	Children's Hospital of Philadelphia	\$62,498	Simons Foundation
Restoring cortical plasticity in a Rett mouse model	Shatz, Carla	Stanford University	\$60,000	Simons Foundation
Auditory cortical plasticity in a mouse model of Rett syndrome	Shea, Steven	Cold Spring Harbor Laboratory	\$43,501	Simons Foundation
The role of genetics in communication deficits in autism spectrum disorders	Siegel, Steven	University of Pennsylvania	\$0	Simons Foundation
Genetic contribution to language-related preclinical biomarkers of autism	Siegel, Steven	University of Pennsylvania	\$63,513	Simons Foundation
Motor cortex plasticity in MeCP2 duplication syndrome	Smirnakis, Stelios	Baylor College of Medicine	\$125,000	Simons Foundation
Aberrant synaptic form and function due to TSC-mTOR-related mutation in autism spectrum disorders	Sulzer, David	Columbia University	\$150,000	Simons Foundation
Understanding the basic neurobiology of Pitt-Hopkins syndrome	Sweatt, J. David	The University of Alabama at Birmingham	\$0	Simons Foundation
RNA expression at human fragile X synapses	Taylor, Anne	University of North Carolina at Chapel Hill and North Carolina State University	\$59,217	Simons Foundation
Linking genetic mosaicism, neural circuit abnormalities and behavior	Zervas, Mark	Brown University	\$62,500	Simons Foundation

2.S.E

Launch three studies that target the underlying biological mechanisms of co-occurring conditions with autism, including seizures/epilepsy, sleep disorders, wandering/elopement behavior, and familial autoimmune disorders, by 2012. *IACC Recommended Budget: \$9,000,000 over 5 years.*

2013 Projects: 23

2013 Funding: \$4,848,555

Project Title	Principal Investigator	Institution	Funding	Funder
The role of mTOR inhibitors in the treatment of autistic symptoms in symptomatic infantile spasms	Galanopoulou, Aristeia	Albert Einstein College of Medicine of Yeshiva University	\$0	Autism Speaks

Characterization of the sleep phenotype in adolescents and adults with autism spectrum disorder	Goldman, Suzanne	Vanderbilt University	\$150,000	Autism Speaks
Salivary melatonin as a biomarker for response to sleep interventions in children with autism	Laudenslager, Mark	University of Colorado Denver	\$0	Autism Speaks
The effects of disturbed sleep on sleep-dependent memory consolidation and daily function in individuals with ASD	Stickgold, Robert	Beth Israel Deaconess Medical Center	\$0	Autism Speaks
Single-unit recordings in neurosurgical patients with autism	Tudusciuc, Oana	California Institute of Technology	\$56,900	Autism Speaks
Molecular analysis of gene-environment interactions in the intestines of children with autism	Williams, Brent	Columbia University	\$150,000	Autism Speaks
Assessing sleep regulation, sleep-dependent memory consolidation, and sleep-dependent synaptic plasticity in mouse genetic models of schizophrenia and autism spectrum disorders	Aton, Sara J.	University of Pennsylvania	\$32,469	Brain & Behavior Research Foundation
PRECURSORS TO THE DEVELOPMENT OF ANXIETY DISORDERS IN YOUNG CHILDREN WITH AUTISM SPECTRUM DISORDER	Baranek, Grace	University of North Carolina at Chapel Hill	\$515,246	Department of Defense
PRECURSORS TO THE DEVELOPMENT OF ANXIETY DISORDERS IN YOUNG CHILDREN WITH AUTISM SPECTRUM DISORDER	Dawson, Geraldine	Duke University	\$589,750	Department of Defense
PRECURSORS TO THE DEVELOPMENT OF ANXIETY DISORDERS IN YOUNG CHILDREN WITH AUTISM SPECTRUM DISORDER	Egger, Helen	Duke University	\$173,826	Department of Defense
IMAGING DEPRESSION IN ADULTS WITH ASD	Gadow, Kenneth	State University New York Stony Brook	\$192,601	Department of Defense
AUTISM AND OBESITY: CO-OCCURRING CONDITIONS OR DRUG SIDE EFFECTS?	Talebizadeh, Zohreh	Children's Mercy Hospital	\$99,820	Department of Defense
CIRCADIAN RHYTHMS IN CHILDREN WITH ASD AND THEIR INFANT SIBLINGS	Taylor, Marc	Naval Medical Research Center	\$99,000	Department of Defense

Neurobiology of aggression co-morbidity in mouse model of idic15 autism	Anderson, Matthew	Beth Israel Deaconess Medical Center	\$261,000	National Institutes of Health
Molecular mechanisms linking early life seizures, autism and intellectual disability	Benke, Timothy	University of Colorado Denver	\$313,576	National Institutes of Health
Selective disruption of hippocampal dentate granule cells in autism: Impact of PT	Danzer, Steve	Cincinnati Children's Hospital Medical Center	\$396,897	National Institutes of Health
Neuroendocrine regulation of metabolism and neurocognition	Han, Joan	National Institutes of Health	\$355,088	National Institutes of Health
Early life seizures disrupt critical period plasticity	Jensen, Frances	University of Pennsylvania	\$429,559	National Institutes of Health
Self-Regulation and Sleep in Children At Risk for Autism Spectrum Disorders	Schwichtenberg, Amy	Purdue University	\$249,000	National Institutes of Health
Treatment of medical conditions among individuals with autism spectrum disorders	Swedo, Susan	National Institutes of Health	\$488,568	National Institutes of Health
Direct recording from autism brains	Adolphs, Ralph	California Institute of Technology	\$120,148	Simons Foundation
Platform for autism treatments from exome analysis	Gleeson, Joseph	Rockefeller University	\$100,000	Simons Foundation
Characterizing sleep disorders in autism spectrum disorder	O'Hara, Ruth	Stanford University	\$75,107	Simons Foundation

2.S.F

Launch two studies that focus on prospective characterization of children with reported regression to investigate potential risk factors by 2012.

IACC Recommended Budget: \$4,500,000 over 5 years.

2013 Projects: 3

2013 Funding: \$316,476

Project Title	Principal Investigator	Institution	Funding	Funder
Mutations associated with carnitine deficiency: risk factor for regression in ASD	Kochel, Robin	Baylor College of Medicine	\$78,650	National Institutes of Health
Neuroimmunologic investigations of autism spectrum disorders (ASD)	Swedo, Susan	National Institutes of Health	\$162,856	National Institutes of Health

[Investigating the etiology of childhood disintegrative disorder](#)

Pelphrey, Kevin

Yale University

\$74,970

Simons Foundation

2.S.G

Support five studies that associate specific genotypes with functional or structural phenotypes, including behavioral and medical phenotypes (e.g., nonverbal individuals with ASD and those with cognitive impairments) by 2015. *IACC Recommended Budget: \$22,600,000 over 5 years.*

2013 Projects: 49

2013 Funding: \$12,646,192

Project Title	Principal Investigator	Institution	Funding	Funder
The Role of Shank3 in Neocortex Versus Striatum and the Pathophysiology of Autism	Bey, Alexandra	Duke University	\$25,000	Autism Science Foundation
A system-level approach for discovery of phenotype specific genetic variation in ASD	Ben-David, Eyal	Hebrew University	\$29,500	Autism Speaks
Factors influencing early associative learning as a precursor to social behavior heterogeneity	Knoll, Allison	University of Southern California	\$54,500	Autism Speaks
Social processing, language, and executive functioning in twin pairs: Electrophysiological and behavioral endophenotypes	Webb, Sara	University of Washington	\$0	Autism Speaks
Identification and Functional Analysis of Risk Genes for Autistic Macrocephaly	Sahara, Setsuko	Institute of Psychiatry/King's College London	\$0	Brain & Behavior Research Foundation
Autism Linked LRRTM4-Heparan Sulphate Proteoglycan Complex Functions in Synapse Development	Siddiqui, Tabrez	University of British Columbia	\$0	Brain & Behavior Research Foundation
A collaborative translational autism research program for the military.	Herman, Gail	Nationwide Children's Hospital	\$966,000	Department of Defense
Development of vision and attention in typical and ASD individuals	Amso, Dima	Brown University	\$305,682	National Institutes of Health
ACE Center: Neuroimaging signatures of autism: Linking brain function to genes and behavior	Dapretto, Mirella	University of California, Los Angeles	\$178,857	National Institutes of Health

ACE Center: Genetic and genomic analyses to connect genes to brain to cognition in ASD	Geschwind, Daniel	University of California, Los Angeles	\$241,951	National Institutes of Health
Identification of candidate genes at the synapse in autism spectrum disorders	Gupta, Abha	Yale University	\$168,245	National Institutes of Health
A neuroimaging study of twin pairs with autism	Hardan, Antonio	Stanford University	\$599,326	National Institutes of Health
Biological determinants of brain variation in autism	Lainhart, Janet	University of Wisconsin - Madison	\$652,672	National Institutes of Health
A family-genetic study of language in autism	Losh, Molly	Northwestern University	\$308,419	National Institutes of Health
High throughput sequencing of autism spectrum disorder (ASD) endophenotypes	Lu, James	Baylor College of Medicine	\$39,432	National Institutes of Health
Animal model of genetics and social behavior in autism spectrum disorders	Platt, Michael	Duke University	\$658,361	National Institutes of Health
The genomic bridge project (GBP)	Robinson, Elise	Massachusetts General Hospital	\$158,206	National Institutes of Health
Genome-wide identification of variants affecting early human brain development	Santelli, Rebecca	University of North Carolina at Chapel Hill	\$590,292	National Institutes of Health
Characterizing the genetic systems of autism through multi-disease analysis	Wall, Dennis	Harvard Medical School	\$503,306	National Institutes of Health
Simons Variation in Individuals Project (VIP) Site	Bernier, Raphael	University of Washington	\$508,680	Simons Foundation
Simons Variation in Individuals Project (VIP) Imaging Analysis Site	Buckner, Randy	Harvard University	\$159,805	Simons Foundation
Beta-catenin signaling in autism spectrum disorders	Chenn, Anjen	University of Illinois at Chicago	\$60,100	Simons Foundation
Simons Variation in Individuals Project (VIP) Principal Investigator	Chung, Wendy	Columbia University	\$123,623	Simons Foundation
Role of the 16p11.2 CNV in autism: genetic, cognitive and synaptic/circuit analyses	Daly, Mark	Broad Institute, Inc.	\$0	Simons Foundation
Simons Variation in Individuals Project (VIP) Recruitment Coordination Site	Faucett, W. Andrew	Weis Center for Research - Geisinger Clinic	\$216,139	Simons Foundation

Simons Variation in Individuals Project (VIP) Recruitment Core and Phase 2 Coordination Site	Faucett, W. Andrew	Geisinger Clinic, Weis Center for Research	\$168,626	Simons Foundation
Genetic investigations of motor stereotypies	Fernandez, Thomas	Yale University	\$124,538	Simons Foundation
Simons Variation in Individuals Project (VIP) Site	Hanson, Ellen	Boston Children's Hospital	\$624,864	Simons Foundation
Simons Variation in Individuals Project (VIP) Site	Kochel, Robin	Baylor College of Medicine	\$316,306	Simons Foundation
Statistical methodology and analysis of the Simons Simplex Collection and related data	Krieger, Abba	University of Pennsylvania	\$80,389	Simons Foundation
Comprehensive phenotypic characterization of the 17q12 deletion syndrome	Ledbetter, David	Weis Center for Research - Geisinger Clinic	\$125,000	Simons Foundation
Simons Variation in Individuals Project (Simons VIP)	Lese Martin, Christa	Emory University	\$372,288	Simons Foundation
Identifying the gene in 17q12 responsible for neuropsychiatric phenotypes	Lese Martin, Christa	Geisinger Clinic	\$228,375	Simons Foundation
Children with 7q11.23 duplication syndrome: shared characteristics with autism	Mervis, Carolyn	University of Louisville	\$250,000	Simons Foundation
Assessing the Cognitive Deficits Associated with 16p11.2 Deletion Syndrome	Nahum, Mor	Posit Science Corporation	\$59,734	Simons Foundation
Characterization of infants and toddlers with the 16p copy-number variation	Nelson, Charles	Boston Children's Hospital	\$149,372	Simons Foundation
VIP Family Meetings	No PI Listed	VIP Family Meetings	\$121,016	Simons Foundation
Language processing in children with 22q11 deletion syndrome and autism	Ousley, Opal	Emory University	\$0	Simons Foundation
Developmental neurogenetics in adolescents with autism	Pelphrey, Kevin	Yale University	\$249,603	Simons Foundation
Simons Variation in Individuals Project (Simons VIP) Functional Imaging Site and Structural Imaging/Phenotyping Site	Roberts, Tim	Children's Hospital of Philadelphia	\$0	Simons Foundation
Simons Variation in Individuals Project (VIP) Functional Imaging Site	Roberts, Tim	The Children's Hospital of Philadelphia	\$419,819	Simons Foundation

Simons Variation in Individuals Project (VIP) Structural Imaging and Phenotyping Site - SCAP-local	Roberts, Tim	The Children's Hospital of Philadelphia	\$260,788	Simons Foundation
Relating copy number variants to head and brain size in neuropsychiatric disorders	Sebat, Jonathan	University of California, San Diego	\$399,146	Simons Foundation
Simons Variation in Individuals Project (VIP) Core Neuroimaging Support Site	Sherr, Elliott	University of California, San Francisco	\$434,182	Simons Foundation
Simons Variation in Individuals Project (VIP) Functional Imaging Site	Sherr, Elliott	University of California, San Francisco	\$1,142,798	Simons Foundation
Speech disorders in individuals with 16p11.2 deletion or duplication	Shriberg, Lawrence	University of Wisconsin	\$40,000	Simons Foundation
A gene-driven systems approach to identifying autism pathology	State, Matthew	University of California, San Francisco	\$249,874	Simons Foundation
Role of myelinating cells in autism spectrum disorders	Ullian, Erik	University of California, San Francisco	\$60,000	Simons Foundation
Simons Variation in Individuals Project (VIP) Statistical Core Site	Vaughan, Roger	Columbia University	\$221,381	Simons Foundation

2.L.A

Complete a large-scale, multi-disciplinary, collaborative project that longitudinally and comprehensively examines how the biological, clinical, and developmental profiles of individuals, with a special emphasis on females, youths, and adults with ASD, change over time as compared to typically developing people by 2020. *IACC Recommended Budget: \$126,200,000 over 12 years.*

2013 Projects: 7

2013 Funding: \$5,201,378

Project Title	Principal Investigator	Institution	Funding	Funder
Understanding the etiological significance of attentional disengagement in infants at-risk for ASD	Keehn, Brandon	Boston Children's Hospital	\$49,000	Autism Speaks
20-year outcome of autism	McMahon, William	University of Utah	\$0	Autism Speaks
Longitudinal characterization of functional connectivity in autism	Anderson, Jeffrey	University of Utah	\$182,352	National Institutes of Health

Pediatric brain imaging	Giedd, Jay	National Institutes of Health	\$2,140,977	National Institutes of Health
Amygdala connectivity in autism spectrum disorder	Johnson, Ryan	University of California, Davis	\$52,580	National Institutes of Health
ACE Network: A longitudinal MRI study of infants at risk for autism	Piven, Joseph	University of North Carolina at Chapel Hill	\$2,391,469	National Institutes of Health
Gesture as a forerunner of linguistic change-insights from autism	Ozcaliskan, Seyda	Georgia State University	\$385,000	National Science Foundation

2.L.B

Launch at least three studies which evaluate the applicability of ASD phenotype and/or biological signature findings for performing diagnosis, risk assessment, or clinical intervention by 2015. *IACC Recommended Budget: \$7,200,000 over 5 years.*

2013 Projects: 13

2013 Funding: \$3,096,581

Project Title	Principal Investigator	Institution	Funding	Funder
Autism Biomarker Discovery Program	Carpenter, Randall	Seaside Therapeutics	\$1,999,984	Autism Speaks
Neural Correlates of Imitation in Children with Autism and their Unaffected Siblings	Edwards, Laura	Harvard University	\$28,600	Autism Speaks
Imaging-based real-time feedback to enhance therapeutic intervention in ASD	Liu, Ning	Stanford University	\$59,825	Autism Speaks
In-vivo MRS assay of brain glutamate-GABA balance and drug response in autism	McAlonan, Grainne	King's College London	\$58,561	Autism Speaks
Electrophysiologic biomarkers of language function in autism spectrum disorders	McEvoy, Kevin	University of California, Los Angeles	\$28,600	Autism Speaks
Near-infrared spectroscopy studies of early neural signatures of autism	Pelphrey, Kevin	Yale University	\$149,977	Autism Speaks
Using fMRI to understand the Neural Mechanisms of Pivotal Response Treatment	Voos, Avery	University of California, Santa Barbara	\$29,500	Autism Speaks
ACE Center: Predicting risk and resilience in ASD through social visual engagement	Jones, Warren	Emory University	\$226,068	National Institutes of Health

Quantifiable markers of ASD via multivariate MEG-DTI combination	Verma, Ragini	University of Pennsylvania	\$257,169	National Institutes of Health
Reliability of Sensory-Evoked Activity in Autism Spectrum Disorders- Project 1	Behrmann, Marlene	Carnegie Mellon University	\$0	Simons Foundation
The Brain Genomics Superstruct Project	Buckner, Randy	Harvard University	\$150,000	Simons Foundation
Local functional connectivity in the brains of people with autism	Kenet, Tal	Massachusetts General Hospital	\$108,297	Simons Foundation
A study of autism	Krieger, Abba	University of Pennsylvania	\$0	Simons Foundation

2.Other

Not specific to Question 2 objectives
2013 Projects: 248
2013 Funding: \$45,800,151

Project Title	Principal Investigator	Institution	Funding	Funder
3 Tesla 31Phosphorus magnetic resonance spectroscopy in disorder with abnormal bioenergetics	Herbert, Martha	Massachusetts General Hospital	\$0	Autism Research Institute
Using high definition fiber tracking to define developmental neurobiologic mechanisms & a neural basis for behavioral heterogeneity	Just, Marcel	Carnegie Mellon University	\$0	Autism Research Institute
Urokinase-type plasminogen activator plasma concentration and its relationship to hepatocyte growth factor (HGF) and GABA levels in autistic children	Russo, A.J.	Hartwick College	\$0	Autism Research Institute
Matrix metalloproteinases expression in autism spectrum disorders	Siniscalco, Dario	University of Naples	\$15,000	Autism Research Institute
Neuroprotective effects of oxytocin receptor signaling in the enteric nervous system	Welch, Martha	Columbia University	\$0	Autism Research Institute
Examining connectivity patterns of brain networks participating in social cognition in ASD	Fishman, Inna	San Diego State University	\$0	Autism Science Foundation
Role of CNTNAP2 in neuronal structural development and synaptic transmission	Anderson, Garret	Stanford University	\$55,200	Autism Speaks
Pathologic and genetic characterization of novel brain cortical patches in young autistic brains	Belinson, Haim	University of California, San Francisco	\$53,000	Autism Speaks
Multimodal neuroimaging of motor dysfunction	Buard, Isabelle	University of Colorado	\$58,000	Autism Speaks

in autism spectrum disorders		Denver		
Neuropathology of the social-cognitive network in Autism: a comparison with other structural theories	Chance, Steven	University of Oxford	\$143,728	Autism Speaks
Behavioral and neural correlates of reward motivation in children with autism spectrum disorders	Damiano, Cara	University of North Carolina at Chapel Hill	\$0	Autism Speaks
Mapping functional connectivity networks in autism spectrum disorder with diffuse optical tomography	Eggebrecht, Adam	Washington University in St. Louis	\$56,900	Autism Speaks
Preference acquisition in children and adolescents with and without autism spectrum disorder	Filliter, Jillian	Dalhousie University	\$0	Autism Speaks
Functional Connectivity during Working Memory in Children with ASD: A NIRS Study	Fishburn, Frank	Georgetown University	\$29,500	Autism Speaks
Spatial attention in autism spectrum disorders	Grubb, Michael	New York University	\$0	Autism Speaks
Classifying autism etiology by expression networks in neural progenitors and differentiating neurons	Gusella, James	Massachusetts General Hospital	\$149,999	Autism Speaks
High metabolic demand of fast-spiking cortical interneurons underlying the etiology of autism	Inan, Melis	Weill Cornell Medical College	\$56,000	Autism Speaks
Macrocephalic autism: Exploring and exploiting the role of PTEN	Johnston, Sean	University of Wisconsin - Madison	\$0	Autism Speaks
Thalamocortical connectivity in children and adolescents with ASD-A combined fcMRI and DTI approach	Nair, Aarti	San Diego State University	\$28,600	Autism Speaks
Brain electrophysiology of interactive social stimuli	Naples, Adam	Yale University	\$54,459	Autism Speaks
Understanding the brain basis of impaired imitation learning in autism	Nebel, Mary Beth	Kennedy Krieger Institute	\$56,900	Autism Speaks
Social reward in autism: Electrophysiological, behavioral, and clinical correlates	Neuhaus, Emily	Seattle Childrens Hospital	\$51,400	Autism Speaks
Deciphering the function and regulation of AUTS2	Oksenberg, Nir	University of California, San Francisco	\$0	Autism Speaks
GABAergic dysfunction in autism	Puts, Nicolaas	Johns Hopkins University	\$50,000	Autism Speaks
A novel transplantation assay to study human PTEN ASD alleles in GABAergic interneurons	Rubenstein, John	University of California, San Francisco	\$60,000	Autism Speaks
Stimulus preceding negativity and social stimuli in autism spectrum disorder	Stavropoulos, Katherine	University of California, San Diego	\$28,580	Autism Speaks

Genetic models of autism in human neural progenitor cells: a platform for therapeutic discovery	Stein, Jason	University of California, Los Angeles	\$54,400	Autism Speaks
Attention & word learning in children with ASD- Translating experimental findings into intervention	Tenenbaum, Elena	Women & Infants Hospital	\$53,500	Autism Speaks
Engagement of Social Cognitive Networks during Game Play in Autism	Carter, Ronald McKell	Duke University	\$0	Brain & Behavior Research Foundation
The role of the GRIP protein complex in AMPA receptor trafficking and autism spectrum disorders	Chiu, Shu-Ling	Johns Hopkins University	\$15,000	Brain & Behavior Research Foundation
Abnormal connectivity in autism	Clark, Kristi A.	University of California, Los Angeles	\$15,000	Brain & Behavior Research Foundation
Integrative Regulatory Network Analysis of iPSCs Derived Neuronal Progenitors from Macrocephalic ASD Individuals in a Family-based Design	Coppola, Gianfilippo	Yale University	\$0	Brain & Behavior Research Foundation
Investigating the Role of RBFOX1 in Autism Etiology	Cukier, Holly Nadine	University of Miami	\$0	Brain & Behavior Research Foundation
Enhancing neurobehavioural and clinical definitions in autism spectrum disorders	Fielding, Joanne	Monash University	\$14,000	Brain & Behavior Research Foundation
Probing the temporal dynamics of aberrant neural communication and its relation to social processing deficits in autism spectrum disorders	Ghuman, Avniel S.	University of Pittsburgh	\$29,987	Brain & Behavior Research Foundation
Role of negative regulators of FGF signaling in frontal cortex development and autism	Golonzhka, Olga	University of California, San Francisco	\$15,000	Brain & Behavior Research Foundation
Dissecting Reciprocal CNVs Associated With Autism	Golzio, Christelle	Duke University	\$0	Brain & Behavior Research Foundation
The PI3K Catalytic Subunit p110delta as Biomarker and Therapeutic Target in Autism and Schizophrenia	Gross, Christina	Cincinnati Children's Hospital Medical Center University of Cincinnati	\$0	Brain & Behavior Research Foundation
Regulation of Interneuron Development in the Cortex and Basal Ganglia by Coup-TF2	Hu, Jia Sheng	University of California, San Francisco	\$0	Brain & Behavior Research Foundation
The neural basis of weak central coherence in autism spectrum disorders	Jou, Roger J.	Yale University	\$26,080	Brain & Behavior Research Foundation

Investigating brain organization and activation in autism at the whole-brain level	Kennedy, Daniel P.	California Institute of Technology	\$30,000	Brain & Behavior Research Foundation
Dysregulated Translation and Synaptic Dysfunction in Medium Spiny Neurons of Autism Model Mice	Klann, Eric	New York University	\$0	Brain & Behavior Research Foundation
Perturbation of Excitatory Synapse Formation in Autism Spectrum Disorders	Kwon, Hyungbae	Max Planck Florida Institute for Neuroscience	\$0	Brain & Behavior Research Foundation
A Role for Cytoplasmic Rbfox1/A2BP1 in Autism	Lee, Ji-Ann	University of California, Los Angeles	\$0	Brain & Behavior Research Foundation
Roles of miRNAs in regulation of Foxp2 and in autism	Li, XiaoChing	Louisiana State University	\$15,000	Brain & Behavior Research Foundation
Behavioral and neural responses to emotional faces in individuals with ASD	Luyster, Rhiannon J.	Harvard University	\$29,871	Brain & Behavior Research Foundation
a-Actinin Regulates Postsynaptic AMPAR Targeting by Anchoring PSD-95	Matt, Lucas	University of California, Davis	\$0	Brain & Behavior Research Foundation
a-Actinin Regulates Postsynaptic AMPAR Targeting by Anchoring PSD-95	Matt, Lucas	University of California, Davis Medical Center University of California, Davis	\$0	Brain & Behavior Research Foundation
Neural underpinning of emotion perception and its disorders	Meng, Ming	Dartmouth College	\$15,000	Brain & Behavior Research Foundation
Development of a connectomic functional brain imaging endophenotype of autism	Rubinov, Mikail	University of Cambridge	\$13,634	Brain & Behavior Research Foundation
Brain-behavior interactions and visuospatial expertise in autism: a window into the neural basis of autistic cognition	Soulieres, Isabelle	Hospital Riviere-des-Praires, University of Montreal, Canada	\$14,800	Brain & Behavior Research Foundation
Activity-dependent Mechanisms of Visual Circuit Formation	Triplett, Jason	Children's Research Institute (CRI) Children's National Medical Center	\$0	Brain & Behavior Research Foundation
Neuropeptide regulation of juvenile social behaviors	Veenema, Alexa	Boston College	\$14,775	Brain & Behavior Research Foundation
Using near-infrared spectroscopy to measure the neural correlates of social and emotional development in infants at risk for autism spectrum disorder	Voineagu, Irina	University of New South Wales	\$14,950	Brain & Behavior Research Foundation

BRAIN MECHANISMS OF AFFECTIVE LANGUAGE COMPREHENSION IN AUTISM SPECTRUM DISORDERS	Bolger, Donald	University of Maryland, College Park	\$506,507	Department of Defense
DISRUPTION OF TROPHIC INHIBITORY SIGNALING IN AUTISM SPECTRUM DISORDERS	Contractor, Anis	Northwestern University	\$180,832	Department of Defense
The role of the new mTOR complex, mTORC2, in autism spectrum disorders	Costa-Mattioli, Mauro	Baylor College of Medicine	\$0	Department of Defense
Dual modulators of GABA-A and Alpha7 nicotinic receptors for treating autism	Gee, Kelvin	University of California, Irvine	\$0	Department of Defense
How autism affects speech understanding in multitaler environments	Newman, Rochelle	University of Maryland, College Park	\$0	Department of Defense
White matter glial pathology in autism	Ordway, Gregory	East Tennessee State University	\$0	Department of Defense
Time Perception and Timed Performance in Autism	Allman, Melissa	Michigan State University	\$248,938	National Institutes of Health
The social brain in schizophrenia and autism spectrum disorders	Assaf, Michal	Hartford Hospital	\$498,431	National Institutes of Health
ACE Center: Ontogeny and neural basis of social visual engagement in monkeys	Bachevalier, Jocelyne	Emory University	\$304,370	National Institutes of Health
Learning and plasticity in the human brain	Baker, Christopher	National Institutes of Health	\$392,666	National Institutes of Health
The neural bases of top-down attentional control in autism spectrum disorders	Banerjee, Snigdha	City College of New York	\$27,578	National Institutes of Health
Wnt modulation as a treatment for autism spectrum disorders	Bassuk, Alexander	University of Iowa	\$184,568	National Institutes of Health
Taste, smell, and feeding behavior in autism: A quantitative traits study	Bennetto, Loisa	University of Rochester	\$541,983	National Institutes of Health
Structural and functional neuroimaging of the auditory system in autism	Berman, Jeffrey	Children's Hospital of Philadelphia	\$157,938	National Institutes of Health
Engrailed targets and the control of synaptic circuits in Drosophila	Blagburn, Jonathan	University of Puerto Rico Medical Sciences Campus	\$361,875	National Institutes of Health
Controlling Interareal Gamma Coherence by Optogenetics, Pharmacology and Behavior	Buschman, Timothy	Princeton University	\$248,999	National Institutes of Health
Biology of non-coding RNAs associated with psychiatric disorders	Campbell, Daniel	University of Southern California	\$430,144	National Institutes of Health
Neurobehavioral investigation of tactile features in autism spectrum disorders	Cascio, Carissa	Vanderbilt University Medical Center	\$161,107	National Institutes of Health
Dissecting neural mechanisms integrating multiple inputs in C. elegans	Chalasani, Sreekanth	Salk Institute for Biological Studies	\$477,449	National Institutes of Health

Role of neurexin in synapse formation and maintenance	Chen, Lulu	Stanford University	\$53,942	National Institutes of Health
Caspr2 as an autism candidate gene: A proteomic approach to function & structure	Comoletti, Davide	University of Medicine & Dentistry of New Jersey - Robert Wood Johnson Medical School	\$305,280	National Institutes of Health
A neural model of fronto-parietal mirror neuron system dynamics	Contreras-Vidal, Jose	University of Maryland, College Park	\$178,100	National Institutes of Health
Psychobiological investigation of the socioemotional functioning in autism	Corbett, Blythe	Vanderbilt University Medical Center	\$333,590	National Institutes of Health
Study of health outcomes in children with autism and their families	Dennen, Taylor	Lewin Group, Inc.	\$496,440	National Institutes of Health
Assessment of glutamate delta-1 receptor in mental disorders	Dravid, Shashank	Creighton University	\$218,250	National Institutes of Health
Dysfunction of sensory inhibition in autism	Edden, Richard	Johns Hopkins University	\$258,134	National Institutes of Health
Functional connectivity in autism spectrum disorders	Edgar, James	Children's Hospital of Philadelphia	\$251,250	National Institutes of Health
Executive function in children with typical and atypical language abilities	Ellis-Weismer, Susan	University of Wisconsin - Madison	\$493,697	National Institutes of Health
Magnetoencephalographic studies of lexical processing and abstraction in autism	Embick, David	University of Pennsylvania	\$291,317	National Institutes of Health
EEG-based assessment of functional connectivity in autism	Ewen, Joshua	Kennedy Krieger Institute	\$175,176	National Institutes of Health
Characterizing mechanistic heterogeneity across ADHD and autism	Fair, Damien	Oregon Health & Science University	\$556,250	National Institutes of Health
Electrophysiological response to executive control training in autism	Faja, Susan	University of Washington	\$89,670	National Institutes of Health
Inhibitory mechanisms for sensory map plasticity in cerebral cortex	Feldman, Daniel	University of California, Berkeley	\$316,453	National Institutes of Health
Neural mechanisms of tactile sensation in rodent somatosensory cortex	Feldman, Daniel	University of California, Berkeley	\$246,278	National Institutes of Health
Shank3 in synaptic function and autism	Feng, Guoping	Massachusetts Institute of Technology	\$385,200	National Institutes of Health
Behavioral, fMRI, and anatomical MRI investigations of attention in autism	Fischer, Jason	Massachusetts Institute of Technology	\$49,214	National Institutes of Health
Multimodal imaging of social brain networks in ASD	Fishman, Inna	San Diego State University	\$148,945	National Institutes of Health

Brain bases of language deficits in SLI and ASD	Gabrieli, John	Massachusetts Institute of Technology	\$583,471	National Institutes of Health
Optogenetic treatment of social behavior in autism	Golshani, Peyman	University of California, Los Angeles	\$385,000	National Institutes of Health
Monolingual and bilingual infants' sensitivity to agreement morphology in Spanish	Gouvea, Ana	Florida International University	\$137,605	National Institutes of Health
Transcriptional control of inhibitory synapse formation	Greenberg, Michael	Dana-Farber Cancer Institute	\$353,295	National Institutes of Health
Verbal/non-verbal asynchrony in adolescents with high-functioning autism	Grossman, Ruth	Emerson College	\$402,978	National Institutes of Health
Statistical word learning in children with language disorders	Haebig, Eileen	University of Wisconsin - Madison	\$29,355	National Institutes of Health
Development of the functional neural systems for face expertise	Haist, Frank	University of California, San Diego	\$461,095	National Institutes of Health
Integrative functions of the planum temporale	Hickok, Gregory	University of California, Irvine	\$432,343	National Institutes of Health
Vasopressin receptor polymorphism and social cognition	Hopkins, William	Georgia State University	\$310,085	National Institutes of Health
High throughput screen for small molecule probes for neural network development	Huganir, Richard	Johns Hopkins University	\$388,800	National Institutes of Health
Analysis of Shank3 complete and temporal and spatial specific knockout mice	Jiang, Yong-Hui	Duke University	\$408,192	National Institutes of Health
Engrailed genes and cerebellum morphology, spatial gene expression and circuitry	Joyner, Alexandra	Sloan-Kettering Institute for Cancer Research	\$451,202	National Institutes of Health
Functional connectivity substrates of social and non-social deficits in ASD	Kenet, Tal	Massachusetts General Hospital	\$719,629	National Institutes of Health
Investigating brain connectivity in autism at the whole-brain level	Kennedy, Daniel	Indiana University	\$232,307	National Institutes of Health
Semaphorin4D and PlexinB1 mediate GABAergic synapse development in mammalian CNS	Kuzirian, Marissa	Brandeis University	\$27,814	National Institutes of Health
Monoallelic expression in neurons derived from induced pluripotent stem cells	Lachman, Herbert	Albert Einstein College of Medicine of Yeshiva University	\$404,100	National Institutes of Health
The microstructural basis of abnormal connectivity in autism	Lainhart, Janet	University of Utah	\$276,865	National Institutes of Health
NINDS comment: Disruption of Reelin biosynthesis by de novo missense mutations found in aut	Lammert, Dawn	State University of New York Upstate Medical Center	\$32,615	National Institutes of Health

Development of face processing expertise	Lee, Kang	University of Toronto	\$339,118	National Institutes of Health
Function and structure adaptations in forebrain development	Levitt, Pat	University of Southern California	\$520,098	National Institutes of Health
Using Drosophila to characterize the molecular pathogenesis of autism	Littleton, J.	Massachusetts Institute of Technology	\$234,000	National Institutes of Health
The flexibility of individuation and ensemble representation	Liverence, Brandon	Northwestern University	\$47,114	National Institutes of Health
Pragmatics and semantics in autism spectrum disorder	Lopez, Karece	City University of New York Graduate School and University Center	\$27,487	National Institutes of Health
The impact of Pten signaling on neuronal form and function	Luikart, Bryan	Dartmouth College	\$375,706	National Institutes of Health
Regulation of spine morphogenesis by NrCAM	Maness Tidwell, Patricia	University of North Carolina at Chapel Hill	\$213,120	National Institutes of Health
The cognitive neuroscience of autism spectrum disorders	Martin, Alex	National Institutes of Health	\$997,922	National Institutes of Health
Cytoplasmic functions of Rbfox1, a candidate autism gene	Martin, Kelsey	University of California, Los Angeles	\$231,000	National Institutes of Health
Cellular density and morphology in the autistic temporal human cerebral cortex	Martinez Cerdeno, Veronica	University of California, Davis	\$352,346	National Institutes of Health
Refining the Tourette Syndrome phenotype across diagnoses to aid gene discovery	Mathews, Carol	University of California, San Francisco	\$417,271	National Institutes of Health
Cognitive control of emotion in autism	Mazefsky, Carla	University of Pittsburgh	\$102,004	National Institutes of Health
Social brain networks for the detection of agents and intentions	McCarthy, Gregory	Yale University	\$399,300	National Institutes of Health
Neural markers of shared gaze during simulated social interactions in ASD	Mcpartland, James	Yale University	\$416,250	National Institutes of Health
Mathematical cognition in autism: A cognitive and systems neuroscience approach	Menon, Vinod	Stanford University	\$610,784	National Institutes of Health
Molecular mechanisms of electrical synapse formation in vivo	Miller, Adam	Fred Hutchinson Cancer Research Center	\$90,000	National Institutes of Health
Cerebellar modulation of frontal cortical function	Mittleman, Guy	University of Memphis	\$286,989	National Institutes of Health
Sensory processing and integration in autism	Molholm, Sophie	Albert Einstein College of Medicine of Yeshiva University	\$524,517	National Institutes of Health

Genetic-imaging study of obsessive compulsive behavior in autism	Morrow, Eric	Brown University	\$360,826	National Institutes of Health
Motor control and cerebellar maturation in autism	Mosconi, Matthew	University of Texas Southwestern Medical Center	\$157,148	National Institutes of Health
Linking local activity and functional connectivity in autism	Mueller, Ralph-Axel	San Diego State University	\$360,142	National Institutes of Health
Cell adhesion molecules in CNS development	Mueller, Ulrich	The Scripps Research Institute - California	\$515,850	National Institutes of Health
Networked cortical responses to movement associated with ASD	Murias, Michael	University of Washington	\$384,222	National Institutes of Health
Development of ventral stream organization	O'Hearn, Kirsten	University of Pittsburgh	\$137,338	National Institutes of Health
Cell adhesion molecules in autism: A whole-brain study of genetic mouse models	Osten, Pavel	Cold Spring Harbor Laboratory	\$448,320	National Institutes of Health
Investigating the role of neurexin-1 mutation in autism using human induced neuro	Pak, Changhui	Stanford University	\$49,214	National Institutes of Health
Elucidating the function of class 4 semaphorins in GABAergic synapse formation	Paradis, Suzanne	Brandeis University	\$325,130	National Institutes of Health
Effect of paternal age on mutational burden and behavior in mice	Pardo-Manuel De Villena, Fernando	University of North Carolina at Chapel Hill	\$177,600	National Institutes of Health
Behavioral and neural processing of faces and expressions in nonhuman primates	Parr, Lisa	Emory University	\$334,541	National Institutes of Health
Project 4: Calcium signaling defects in autism (Pessah/Lein)	Pessah, Isaac	University of California, Davis	\$109,730	National Institutes of Health
Neuronal basis of vicarious reinforcement dysfunction in autism spectrum disorder	Platt, Michael	Duke University	\$297,527	National Institutes of Health
Met signaling in neural development and circuitry formation	Qiu, Shenfeng	University of Arizona	\$230,032	National Institutes of Health
Evaluating the time-dependent unfolding of social interactions in autism	Richardson, Michael	University of Cincinnati	\$196,987	National Institutes of Health
Neural synchronydysfunction of gamma oscillations in autism	Rojas, Donald	University of Colorado Denver	\$254,470	National Institutes of Health
Auditory and integrative functions of the prefrontal cortex	Romanski, Lizabeth	University of Rochester	\$374,016	National Institutes of Health
Brain Systems Supporting Learning and Memory in Children with Autism	Rosenberg-Lee, Miriam	Stanford University	\$173,607	National Institutes of Health
Frontostriatal synaptic dysfunction in a model of autism	Rothwell, Patrick	Stanford University	\$52,190	National Institutes of Health

Molecular mechanisms of the synaptic organizer alpha-neurexin	Rudenko, Gabrielle	University of Michigan	\$373,200	National Institutes of Health
Impact of SynGAP1 mutations on synapse maturation and cognitive development	Rumbaugh, Gavin	The Scripps Research Institute - Florida	\$661,570	National Institutes of Health
The neurophysiology of sensory processing and multisensory integration in ASD	Russo, Natalie	Syracuse University	\$437,684	National Institutes of Health
Impairments of theory of mind disrupt patterns of brain activity	Saxe, Rebecca	Massachusetts Institute of Technology	\$308,160	National Institutes of Health
Artifacts as windows to other minds: Social reasoning in typical and ASD children	Schachner, Adena	Boston University	\$49,214	National Institutes of Health
Testing the hyperspecificity hypothesis: A neural theory of autism	Schultz, Robert	Children's Hospital of Philadelphia	\$189,836	National Institutes of Health
Typical and pathological cellular development of the human amygdala	Schumann, Cynthia	University of California, Davis	\$369,600	National Institutes of Health
Molecular dissection of calmodulin domain functions	Shea, Madeline	University of Iowa	\$310,222	National Institutes of Health
The effects of autism on the sign language development of deaf children	Shield, Aaron	Boston University	\$53,942	National Institutes of Health
The neural substrates of higher-level learning in autism	Solomon, Marjorie	University of California, Davis	\$221,760	National Institutes of Health
The computational basis of theory of mind in the human brain	Stanley, Damian	California Institute of Technology	\$130,695	National Institutes of Health
Neural circuits that regulate social motivation in autism	Stuber, Garret	University of North Carolina at Chapel Hill	\$150,542	National Institutes of Health
Role of neuronal migration genes in synaptogenesis and plasticity	Sudarov, Anamaria	Weill Cornell Medical College	\$53,942	National Institutes of Health
Function of neurexins	Sudhof, Thomas	Stanford University	\$461,977	National Institutes of Health
Modeling 5-HT-absorbing neurons in neuropathology of autism	Sze, Ji	Albert Einstein College of Medicine of Yeshiva University	\$200,400	National Institutes of Health
Kinetics of drug macromolecule complex formation	Taylor, Palmer	University of California, San Diego	\$687,969	National Institutes of Health
Influence of attention and arousal on sensory abnormalities in ASD	Townsend, Jeanne	University of California, San Diego	\$186,000	National Institutes of Health
Structural and functional connectivity of large-scale brain networks in autism	Uddin, Lucina	Stanford University	\$168,978	National Institutes of Health
Functional anatomy of face processing in the primate brain	Ungerleider, Leslie	National Institutes of Health	\$1,555,641	National Institutes of Health
Morphogenesis and function of the cerebral	Vaccarino, Flora	Yale University	\$393,228	National Institutes of Health

cortex					Health
Neuroimaging of top-down control and bottom-up processes in childhood ASD	Vaidya, Chandan	Georgetown University	\$371,791		National Institutes of Health
Computational characterization of language use in autism spectrum disorder	Van Santen, Jan P	Oregon Health & Science University	\$692,911		National Institutes of Health
Novel computational methods for higher order diffusion MRI in autism	Verma, Ragini	University of Pennsylvania	\$601,657		National Institutes of Health
Physiology of attention and regulation in children with ASD and LD	Webb, Sara	Seattle Children's Hospital	\$327,380		National Institutes of Health
Neural basis of behavioral flexibility	Weiss, Klaudiusz	Mount Sinai School of Medicine	\$347,607		National Institutes of Health
The striatal circuitry underlying autistic-like behaviors	Wells, Michael	Duke University	\$31,975		National Institutes of Health
Dynamic regulation of Shank3 and ASD	Worley, Paul	Johns Hopkins University	\$604,587		National Institutes of Health
Bayesian variable selection in generalized linear models with missing variables	Yang, Xiaowei	Hunter College (City University of New York)	\$229,953		National Institutes of Health
Imaging signal transduction in single dendritic spines	Yasuda, Ryohei	Max Planck Florida Corporation	\$449,208		National Institutes of Health
Novel regulatory network involving non-coding role of an ASD candidate gene PTEN	Zheng, Deyou	Albert Einstein College of Medicine of Yeshiva University	\$240,480		National Institutes of Health
Statistical analysis of biomedical imaging data in curved space	Zhu, Hongtu	University of North Carolina at Chapel Hill	\$313,376		National Institutes of Health
Network Optimization of Functional Connectivity in Neuroimaging for Differential Diagnosis of Brain Diseases	Chaovaitwongse, Wanpracha	University of Washington	\$345,000		National Science Foundation
SHB: Type II (INT): Synthesizing self-model and mirror feedback imageries with applications to behavior modeling for children with autism	Cheung, Sen-ching	University of Kentucky Research Foundation	\$0		National Science Foundation
CAREER: The role of prosody in word segmentation and lexical access	Dilley, Laura	Michigan State University	\$0		National Science Foundation
CAREER: Statistical models and classification of time-varying shape	Fletcher, Preston Thomas	University of Utah	\$0		National Science Foundation
RI: Small: Addressing visual analogy problems on the raven's intelligence test	Goel, Ashok	Georgia Tech Research Corporation	\$0		National Science Foundation
Face perception: Mapping psychological spaces to neural responses	Grill-Spector, Kalanit	Stanford University	\$0		National Science Foundation

Neural basis of cross-modal influences on perception	Hillyard, Steven	University of California, San Diego	\$163,755	National Science Foundation
Multiple systems in theory of mind development	Leslie, Alan	Rutgers, The State University of New Jersey - New Brunswick	\$0	National Science Foundation
Synchronous activity in networks of electrically coupled cortical interneurons	Lewis, Timothy	University of California, Davis	\$0	National Science Foundation
MRI: Acquisition of an Infrared Eye Tracker to Study the Emergence, Use, Loss, and Requisition of Communication Skills	Luyster, Rhiannon	Emerson College	\$41,575	National Science Foundation
CDI-TYPE II: From language to neural representations of meaning	Mitchell, Tom	Carnegie Mellon University	\$0	National Science Foundation
HCC:Small:Computational studies of social nonverbal communication	Morency, Louis-Philippe	University of Southern California	\$0	National Science Foundation
Experience and cognitive development in infancy	Oakes, Lisa	University of California, Davis	\$0	National Science Foundation
CAREER: Integrative behavioural and neurophysiological studies of normal and autistic cognition using video game environments	Robertson, Steven	Cornell University	\$0	National Science Foundation
CAREER: Typical and atypical development of brain regions for theory of mind	Saxe, Rebecca	Massachusetts Institute of Technology	\$148,521	National Science Foundation
CAREER: Dissecting the neural mechanisms for face detection	Tsao, Doris	California Institute of Technology	\$0	National Science Foundation
BRIGE: Emotion mapping of children through human-robot interaction and affective computing	Welch, Karla	University of Louisville Research Foundation Inc	\$0	National Science Foundation
Action anticipation in infants	Woodward, Amanda	University of Chicago	\$105,936	National Science Foundation
A preliminary investigation of the neurobehavioral basis of sensory behavior in autism	Wodka, Ericka	Kennedy Krieger Institute	\$20,000	Organization for Autism Research
Characterizing the regulatory pathways and regulation of AUTS2	Ahituv, Nadav	University of California, San Francisco	\$0	Simons Foundation
Autism and the insula: Genomic and neural circuits	Allman, John	California Institute of Technology	\$0	Simons Foundation
Transcriptional responsiveness in lymphoblastoid cell lines	Alter, Mark	University of Pennsylvania	\$0	Simons Foundation

Multisensory processing in autism	Angelaki, Dora	Baylor College of Medicine	\$0	Simons Foundation
Contribution of cerebellar CNTNAP2 to autism in a mouse model	Becker, Esther	University of Oxford	\$60,000	Simons Foundation
Determining the role of GABA in four animal models of autism	Ben-Ari, Yehezkel	Neurochlore	\$166,895	Simons Foundation
Genetic studies of autism-related Drosophila neurexin and neuroligin	Bhat, Manzoor	University of Texas Health Science Center, San Antonio	\$175,802	Simons Foundation
Corticothalamic circuit interactions in autism	Chen, Chinfei	Boston Children's Hospital	\$200,000	Simons Foundation
Atypical architecture of prefrontal cortex in young children with autism	Courchesne, Eric	University of California, San Diego	\$149,715	Simons Foundation
Functional analysis of EPHB2 mutations in autism	Cowan, Christopher	McLean Hospital	\$124,950	Simons Foundation
RNA dysregulation in autism	Darnell, Robert	The Rockefeller University	\$250,000	Simons Foundation
Functional analysis of EFR3A mutations associated with autism	De Camilli, Pietro	Yale University	\$62,500	Simons Foundation
CLARITY: circuit-dynamics and connectivity of autism-related behavior	Deisseroth, Karl	Stanford University	\$248,468	Simons Foundation
Interneuron subtype-specific malfunction in autism spectrum disorders	Fishell, Gordon	New York University School of Medicine	\$120,000	Simons Foundation
A functional genomic analysis of the cerebral cortex	Geschwind, Daniel	University of California, Los Angeles	\$486,802	Simons Foundation
Using fruit flies to map the network of autism-associated genes	Greenspan, Ralph	University of California, San Diego	\$124,996	Simons Foundation
Identification and analysis of ASD patients with PI3K/mTOR signalopathies	Gross, Christina	Emory University	\$66,500	Simons Foundation
Functional analysis of EPHB2 mutations in autism - Project 1	Gupta, Abha	Yale University	\$89,633	Simons Foundation
Molecular signatures of autism genes and the 16p11.2 deletion	Gusella, James	Massachusetts General Hospital	\$62,500	Simons Foundation
Cerebellar plasticity and learning in a mouse model of autism	Hansel, Christian	University of Chicago	\$62,500	Simons Foundation
Canonical neural computation in autism	Heeger, David	New York University	\$321,362	Simons Foundation
Protein interaction networks in autism	Howley, Peter	Harvard Medical School	\$62,500	Simons Foundation
Hippocampal mechanisms of social learning in animal models of autism	Ji, Daoyun	Baylor College of Medicine	\$62,500	Simons Foundation
Neurexin-neuroligin trans-synaptic interaction in learning and memory	Kandel, Eric	Columbia University	\$100,000	Simons Foundation
Role of neurexin in the amygdala and	Kandel, Eric	Columbia University	\$0	Simons Foundation

This document is for discussion purposes only and does not reflect the decisions of the IACC

associated fear memory				
Retrograde synaptic signaling by Neurexin and Neuroligin in C. elegans	Kaplan, Joshua	Massachusetts General Hospital	\$125,000	Simons Foundation
Analysis of autism linked genes in C. elegans	Kaplan, Joshua	Massachusetts General Hospital	\$62,500	Simons Foundation
ERK signaling in autism associated with copy number variation of 16p11.2	Landreth, Gary	Case Western Reserve University	\$0	Simons Foundation
Identification of genes responsible for a genetic cause of autism	Landreth, Gary	Case Western Reserve University	\$125,000	Simons Foundation
Altered sensorimotor processing in a mouse model of autism	Lee, Charles	Louisiana State University School of Veterinary Medicine	\$60,000	Simons Foundation
Genetic model to study the ASD-associated gene A2BP1 and its target PAC1	Levkowitz, Gil	Weizmann Institute of Science	\$125,000	Simons Foundation
Role of major vault protein in autism	Lombroso, Paul	Yale University	\$0	Simons Foundation
Social interaction and reward in autism: Possible role for ventral tegmental area	Luscher, Christian	University of Geneva	\$124,936	Simons Foundation
Investigation of a possible role of the protocadherin gene cluster in autism	Maniatis, Tom	Columbia University	\$150,000	Simons Foundation
Role of LIN28/let-7 axis in autism	Meffert, Mollie	Johns Hopkins University School of Medicine	\$62,500	Simons Foundation
Alterations in brain-wide neuroanatomy in autism mouse models	Mitra, Partha	Cold Spring Harbor Laboratory	\$300,000	Simons Foundation
Role of endosomal NHE6 in brain connectivity and autism	Morrow, Eric	Brown University	\$62,500	Simons Foundation
Social brain circuits and fever-evoked response in 16p11.2 mice	Osten, Pavel	Cold Spring Harbor Laboratory	\$87,500	Simons Foundation
Investigation of social brain circuits and fever-evoked response in 16p11.2 mice	Osten, Pavel	Cold Spring Harbor Laboratory	\$0	Simons Foundation
Correcting excitatory-inhibitory imbalance in autism	Philpot, Benjamin	University of North Carolina at Chapel Hill	\$112,500	Simons Foundation
Neuroligin, oxidative stress and autism	Rand, James	Oklahoma Medical Research Foundation	\$150,000	Simons Foundation
Amygdala circuitry of impaired social-emotional behavior in autism	Rosenkranz, Amiel	Rosalind Franklin University of Medicine and Science	\$58,488	Simons Foundation
Impact of NR2B mutations on NMDA receptors and synapse formation	Sabo, Shasta	Case Western Reserve University	\$60,000	Simons Foundation

Pathogenic roles of paternal-age-associated mutations in autism	Seandel, Marco	Weill Cornell Medical College	\$62,500	Simons Foundation
CNTNAP2 regulates production, migration and organization of cortical neurons	Shi, Songhai	Memorial Sloan-Kettering Cancer Center	\$62,496	Simons Foundation
Function and dysfunction of neuroligins in synaptic circuits	Sudhof, Thomas	Stanford University	\$450,000	Simons Foundation
Subependymal zone function in autism spectrum disorders	Szele, Francis	University of Oxford	\$0	Simons Foundation
Unreliability of neuronal responses in mouse models of autism	Urban, Nathan	Carnegie Mellon University	\$62,500	Simons Foundation
Mapping functional neural circuits that mediate social behaviors in autism	Wang, Fan	Duke University Medical Center	\$62,500	Simons Foundation
Local connectivity in altered excitation/inhibition balance states	Yizhar, Ofer	Weizmann Institute of Science	\$125,000	Simons Foundation
Modeling alteration of RBFOX1 (A2BP1) target network in autism	Zhang, Chaolin	Columbia University	\$60,000	Simons Foundation
Modeling multiple heterozygous genetic lesions in autism using Drosophila melanogaster	Zipursky, Larry	University of California, Los Angeles	\$201,838	Simons Foundation