

# 2011 Portfolio Analysis Projects

*Please note that data are not yet final; additional projects may be added.*

## QUESTION 3: WHAT CAUSED THIS TO HAPPEN AND CAN IT BE PREVENTED?

### 3.S.A

Coordinate and implement the inclusion of approximately 20,000 subjects for genome-wide association studies, as well as a sample of 1,200 for sequencing studies to examine more than 50 candidate genes by 2011. Studies should investigate factors contributing to phenotypic variation across individuals that share an identified genetic variant and stratify subjects according to behavioral, cognitive, and clinical features. *IACC Recommended Budget: \$43,700,000 over 4 years.*

Project Title	Principal Investigator	Institution	Funding	Funder
<a href="#">Advanced parental age and autism: The role of aneuploidy and uniparental disomy in ASD pathogenesis</a>	Berko, Esther	Albert Einstein College of Medicine of Yeshiva University	\$28,000.00	Autism Speaks
<a href="#">Genome-wide expression profiling data analysis to study autism genetic models</a>	Luo, Rui	University of California, Los Angeles	\$28,000.00	Autism Speaks
<a href="#">Rapid phenotyping for rare variant discovery in autism</a>	Nelson, Stanley	University of California, Los Angeles	\$645,169.00	National Institutes of Health
<a href="#">Isolation of autism susceptibility genes</a>	Stefansson, Kari	deCODE Genetics, ehf.	\$591,231.00	National Institutes of Health
<a href="#">Finding autism genes by genomic copy number analysis</a>	Walsh, Christopher	Boston Children's Hospital	\$577,035.00	National Institutes of Health
<a href="#">Genomic influences on developmental course and outcome in Infants at risk of ASD: A Baby Siblings Research Consortium (BSRC) Study</a>	Zwaigenbaum, Lonnie	University of Alberta	\$0.00	Autism Speaks
<a href="#">Genomic influences on development and outcomes in Infants at risk of ASD</a>	Zwaigenbaum, Lonnie	University of Alberta	\$337,779.00	Autism Speaks

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### **3.S.C**

Initiate efforts to expand existing large case-control and other studies to enhance capabilities for targeted gene – environment research by 2011. *IACC Recommended Budget: \$27,800,000 over 5 years.*

Project Title	Principal Investigator	Institution	Funding	Funder
<a href="#"><u>Prenatal and neonatal biologic markers for autism</u></a>	Croen, Lisa	Kaiser Foundation Research Institute	\$610,723.00	National Institutes of Health
<a href="#"><u>Vitamin D status and autism spectrum disorder: Is there an association?</u></a>	Hammock, Bruce	University of California, Davis	\$0.00	Autism Speaks
<a href="#"><u>Autism risk, prenatal environmental exposures, and pathophysiologic markers</u></a>	Hertz-Picciotto, Irva	University of California, Davis	\$1,858,222.00	National Institutes of Health
<a href="#"><u>The CHARGE Study: Childhood Autism Risks from Genetics and the Environment</u></a>	Hertz-Picciotto, Irva	University of California, Davis	\$965,562.00	National Institutes of Health
<a href="#"><u>Genetics and gene-environment interactions in a Korean epidemiological sample of autism</u></a>	Kim, Young Shin	Yale University	\$74,662.00	Simons Foundation
<a href="#"><u>Center for Genomic and Phenomic Studies in Autism (supplement)</u></a>	Lajonchere, Clara	University of Southern California	\$141,462.00	National Institutes of Health
<a href="#"><u>Center for Genomic and Phenomic Studies in Autism</u></a>	Lajonchere, Clara	University of Southern California	\$2,032,846.00	National Institutes of Health
<a href="#"><u>EPA/NIEHS Center for Children's Environmental Health (CCEH) at UC Davis</u></a>	Pessah, Isaac	University of California, Davis	\$0.00	Environmental Protection Agency
<a href="#"><u>Project 1: Effect of multi-level environmental exposure on birth outcomes</u></a>	Tager, Ira	University of California, Berkeley	\$30,931.00	National Institutes of Health
<a href="#"><u>Perinatal exposure to airborne pollutants and associations with autism phenotype</u></a>	Volk, Heather	University of Southern California	\$0.00	Autism Speaks

### **3.S.E**

Support at least two studies to determine if there are subpopulations that are more susceptible to environmental exposures (e.g., immune challenges related to infections, vaccinations, or underlying autoimmune problems) by 2012. *IACC Recommended Budget: \$8,000,000 over 2 years.*

<b>Project Title</b>	<b>Principal Investigator</b>	<b>Institution</b>	<b>Funding</b>	<b>Funder</b>
<a href="#">Autism spectrum disorder and autoimmune disease of mothers</a>	Diamond, Betty	The Feinstein Institute for Medical Research	\$91,480.00	Simons Foundation
<a href="#">Research project about a potential infectious origin of autism</a>	Montagnier, Luc	Institut de Recherche Luc Montagnier	\$0.00	Autism Research Institute
<a href="#">Vulnerability phenotypes and susceptibility to environmental toxicants: From organism to mechanism</a>	Noble, Mark	University of Rochester	\$0.00	Autism Speaks
<a href="#">Evaluation of the immune and physiologic response in children with autism following immune challenge</a>	Van de Water, Judy	University of California, Davis	\$327,735.00	Autism Speaks
<a href="#">Etiology of autism risk involving MET gene and the environment</a>	Van de Water, Judy	University of California, Davis	\$0.00	Autism Speaks

### **3.S.F**

Initiate studies on at least 10 environmental factors identified in the recommendations from the 2007 IOM report "Autism and the Environment: Challenges and Opportunities for Research" as potential causes of ASD by 2012. *Estimated cost \$56,000,000 over 2 years.*

<b>Project Title</b>	<b>Principal Investigator</b>	<b>Institution</b>	<b>Funding</b>	<b>Funder</b>
<a href="#">MeHG stimulates antiapoptotic signaling in stem cells</a>	Bressler, Joseph	Kennedy Krieger Institute	\$0.00	Department of Defense
<a href="#">Immunopathogenesis in autism: Regulatory T cells and autoimmunity in neurodevelopment</a>	DeWitt, Jamie	East Carolina University	\$0.00	Department of Defense
<a href="#">Early exposure to acetaminophen and autism</a>	Hertz-Picciotto, Irva	University of California, Davis	\$0.00	Autism Speaks

### **3.S.G**

Convene a workshop that explores the usefulness of bioinformatic approaches to identify environmental risks for ASD by 2011.

<b>Project Title</b>	<b>Principal Investigator</b>	<b>Institution</b>	<b>Funding</b>	<b>Funder</b>
<a href="#">Environmental Bioinformatics Workshop</a>	No PI listed	National Institutes of Health	\$46,991	National Institutes of Health

### **3.S.H**

Support at least three studies of special populations or use existing databases to inform our understanding of environmental risk factors for ASD in pregnancy and the early postnatal period by 2012. Such studies could include:

- Comparisons of populations differing in geography, gender, ethnic background, exposure history (e.g., prematurity, maternal infection, nutritional deficiencies, toxins), and migration patterns; and
- Comparisons of phenotype (e.g., cytokine profiles), in children with and without a history of autistic regression, adverse events following immunization (such as fever and seizures), and mitochondrial impairment. These studies may also include comparisons of phenotype between children with regressive ASD and their siblings.
- Emphasis on environmental factors that influence prenatal and early postnatal development is particularly of high priority. Epidemiological studies should pay special attention to include racially and ethnically diverse populations.

*IACC Recommended Budget: \$12,000,000 over 5 years.*

<b>Project Title</b>	<b>Principal Investigator</b>	<b>Institution</b>	<b>Funding</b>	<b>Funder</b>
<a href="#">Structural and functional neural correlates of early postnatal deprivation</a>	Behen, Michael	Wayne State University	\$150,423.00	National Institutes of Health
<a href="#">Multi-registry analyses for iCARE - Data Management Core</a>	Bresnahan, Michaeline	Columbia University	\$72,160.00	Autism Speaks
<a href="#">Effect of oxytocin receptor inhibitor (atosiban) during the perinatal period and prevalence of autism spectrum disorders</a>	Ebstein, Richard	Hebrew University	\$105,443.00	Autism Speaks
<a href="#">Multi-registry analyses for iCARE - Israel</a>	Gross, Raz	The Gertner Institute of Epidemiology and Health Policy Research	\$38,335.00	Autism Speaks
<a href="#">Multi-registry analyses for iCARE-Sweden</a>	Hultman, Christina	Karolinska Institutet	\$37,400.00	Autism Speaks
<a href="#">Neonatal biomarkers in extremely preterm babies predict childhood brain disorders</a>	Kuban, Karl	Boston Medical Center	\$3,465,570.00	National Institutes of Health

<a href="#">Early life environmental exposures and autism in an existing Swedish birth cohort</a>	Lee, Brian	Drexel University	\$0.00	Autism Speaks
<a href="#">Multi-registry analyses for iCARE- West Australia</a>	Leonard, Helen	The University of Western Australia	\$52,587.00	Autism Speaks
<a href="#">Risk factors, comorbid conditions, and epidemiology of autism in children</a>	Nylund, Cade	Henry M. Jackson Foundation	\$143,162.00	Department of Defense
<a href="#">Epidemiologic studies of reproductive and developmental outcomes – Denmark</a>	Olsen, Jorn	Aarhus University	\$300,054.00	Centers for Disease Control and Prevention
<a href="#">Multi-registry analyses for iCARE - Denmark</a>	Parner, Eric	Aarhus University	\$37,928.00	Autism Speaks
<a href="#">Assisted reproductive treatments and risk of autism</a>	Reichenberg, Avi	Institute of Psychiatry, King's College London	\$0.00	Autism Speaks
<a href="#">Multi-registry analyses for iCARE - Finland</a>	Sourander, Andre	Turku University	\$38,335.00	Autism Speaks
<a href="#">Multi-registry analyses for iCARE - Norway</a>	Stoltenberg, Camilla	Norwegian Institute of Public Health	\$37,115.00	Autism Speaks
<b><u>3.S.I</u></b>				
Support at least two studies that examine potential differences in the microbiome of individuals with ASD versus comparison groups by 2012. <i>IACC Recommended Budget: \$1,000,000 over 2 years.</i>				
Project Title	Principal Investigator	Institution	Funding	Funder
<a href="#">Defining the underlying biology of gastrointestinal dysfunction in autism</a>	Ashwood, Paul	University of California, Davis	\$384,971.00	Autism Speaks
<a href="#">Further studies on the role of desulfovibrio in regressive autism</a>	Finegold, Sydney	VA Medical Center, Los Angeles	\$30,000.00	Autism Research Institute

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<a href="#">Analysis of the small intestinal microbiome of children with autism</a>	Kushak, Rafail	Massachusetts General Hospital	\$0.00	Department of Defense
<a href="#">The role of intestinal microbiome in children with autism</a>	Winter, Harland	Harvard Medical School	\$25,000.00	Autism Research Institute

### **3.S.J**

Support at least three studies that focus on the role of epigenetics in the etiology of ASD, including studies that include assays to measure DNA methylations and histone modifications and those exploring how exposures may act on maternal or paternal genomes via epigenetic mechanisms to alter gene expression, by 2012. *IACC Recommended Budget: \$20,000,000 over 5 years.*

Project Title	Principal Investigator	Institution	Funding	Funder
<a href="#">Studies of postmortem brain searching for epigenetic defects causing autism</a>	Beaudet, Arthur	Baylor College of Medicine	\$200,000.00	Simons Foundation
<a href="#">The role of the Rett gene, chromosome 15q11-q13, other genes, and epigenetics</a>	Beaudet, Arthur	Baylor College of Medicine	\$1,187.00	National Institutes of Health
<a href="#">Human neurobehavioral phenotypes associates with the extended PWS/AS domain</a>	Beaudet, Arthur	Baylor College of Medicine	\$628,392.00	National Institutes of Health
<a href="#">In vivo function of neuronal activity-induced MeCP2 phosphorylation</a>	Chang, Qiang	University of Wisconsin - Madison	\$292,721.00	National Institutes of Health
<a href="#">Genome-wide analyses of DNA methylation in autism</a>	Chess, Andrew	Massachusetts General Hospital	\$200,000.00	Simons Foundation
<a href="#">Cell specific genomic imprinting during cortical development and in mouse models</a>	Dulac, Catherine	Harvard University	\$312,559.00	National Institutes of Health
<a href="#">Genome-wide examination of DNA methylation in autism</a>	Fallin, Dani	Johns Hopkins University	\$0.00	Autism Speaks
<a href="#">Environment, the perinatal epigenome, and risk for autism and related disorders</a>	Fallin, Margaret	Johns Hopkins University	\$2,014,788.00	National Institutes of Health

<a href="#">Discordant monozygotic twins as a model for genetic-environmental interaction in autism</a>	Feinberg, Andrew	Johns Hopkins University	\$0.00	Department of Defense
<a href="#">Epigenetic and transcriptional dysregulation in autism spectrum disorder</a>	Geschwind, Daniel	University of California, Los Angeles	\$764,608.00	National Institutes of Health
<a href="#">Identification of aberrantly methylated genes in autism: The role of advanced paternal age</a>	Gingrich, Jay	Research Foundation for Mental Hygiene, Inc.	\$0.00	Simons Foundation
<a href="#">Maternal supplementation of folic acid and function of autism gene synaptic protein Shank3 in animal model</a>	Jiang, Yong-Hui	Baylor College of Medicine	\$87,793.00	Autism Speaks
<a href="#">Discordant monozygotic twins as a model for genetic-environmental interaction in autism</a>	Kaufmann, Walter	Kennedy Krieger Institute	\$0.00	Department of Defense
<a href="#">Molecular analysis of bipolar and schizophrenia candidate genes</a>	Lachman, Herbert	Albert Einstein College of Medicine of Yeshiva University	\$408,400.00	National Institutes of Health
<a href="#">Paternal age and epigenetic mechanisms in psychiatric disease</a>	Milekic, Maria H.	Research Foundation for Mental Hygiene, Inc/NYSPI	\$0.00	Brain & Behavior Research Foundation
<a href="#">Genome-wide methylation analyses in autism</a>	Natowicz, Marvin	Cleveland Clinic	\$8,419.00	Autism Research Institute
<a href="#">Locus-specific imprinting on the mammalian X chromosome (supplement)</a>	O'Neill, Michael	University of Connecticut	\$16,875.00	National Institutes of Health
<a href="#">Locus-specific imprinting on the mammalian X chromosome</a>	O'Neill, Michael	University of Connecticut	\$327,994.00	National Institutes of Health
<a href="#">Identical twins discordant for autism: Epigenetic (DNA methylation) biomarkers of non-shared environmental influences</a>	Plomin, Robert	King's College London	\$89,030.00	Autism Speaks

### **3.S.K**

Support two studies and a workshop that facilitate the development of vertebrate and invertebrate model systems for the exploration of environmental risks and their interaction with gender and genetic susceptibilities for ASD by 2012. *IACC Recommended Budget: \$1,535,000 over 3 years.*

<b>Project Title</b>	<b>Principal Investigator</b>	<b>Institution</b>	<b>Funding</b>	<b>Funder</b>
<a href="#">Analysis of developmental interactions between reelin haploinsufficiency, male sex, and mercury exposure</a>	Keller, Flavio	Universita Campus Bio-Medico di Roma	\$0.00	Autism Speaks
<a href="#">Epigenetics, hormones and sex differences in autism incidence</a>	Rissman, Emile	University of Virginia	\$85,000.00	Autism Speaks
<a href="#">Sex chromosomes, epigenetics, and neurobehavioral disease</a>	Rissman, Emilie	University of Virginia	\$378,841.00	National Institutes of Health

### **3.L.A**

Conduct a multi-site study of the subsequent pregnancies of 1,000 women with a child with ASD to assess the impact of environmental factors in a period most relevant to the progression of ASD by 2014. *IACC Recommended Budget: \$11,100,000 over 5 years.*

<b>Project Title</b>	<b>Principal Investigator</b>	<b>Institution</b>	<b>Funding</b>	<b>Funder</b>
<a href="#">ACE Network: Early Autism Risk Longitudinal Investigation (EARLI) network</a>	Newschaffer, Craig	Drexel University	\$2,864,377.00	National Institutes of Health

### **3.L.B**

Identify genetic risk factors in at least 50% of people with ASD by 2014. *IACC Recommended Budget: \$33,900,000 over 6 years.*

<b>Project Title</b>	<b>Principal Investigator</b>	<b>Institution</b>	<b>Funding</b>	<b>Funder</b>
<a href="#">Integrative genetic analysis of autistic brains</a>	Arking, Dan	Johns Hopkins University School of Medicine	\$400,000.00	Simons Foundation
<a href="#">Genetic epidemiology of complex traits</a>	Bailey-Wilson, Joan	National Institutes of Health	\$880,653.00	National Institutes of Health
<a href="#">A genome-wide search for autism genes in the SSC Baylor</a>	Beaudet, Arthur	Baylor College of Medicine	\$0	Simons Foundation
<a href="#">Simons Simplex Collection Site</a>	Bernier, Raphael	University of Washington	\$186,539.00	Simons Foundation



<a href="#">Next generation gene discovery in familial autism</a>	Brkanac, Zoran	University of Washington	\$699,721.00	National Institutes of Health
<a href="#">The role of contactin-associated protein-like 2 (CNTNAP2) and other novel genes in autism</a>	Chakravarti, Aravinda	Johns Hopkins University School of Medicine	\$116,150.00	Simons Foundation
<a href="#">Simons Simplex Collection Site</a>	Cook, Edwin	University of Illinois at Chicago	\$114,869.00	Simons Foundation
<a href="#">A genome-wide search for autism genes in the SSC UIC</a>	Cook, Edwin	University of Illinois at Chicago	\$0.00	Simons Foundation
<a href="#">Autism Genome Project (AGP) Core Consortium</a>	Devlin, Bernie	University of Pittsburgh	\$50,985.00	Autism Speaks
<a href="#">A genome-wide search for autism genes in the SSC Pittsburgh</a>	Devlin, Bernie	University of Pittsburgh	\$0.00	Simons Foundation
<a href="#">Genomic hotspots of autism</a>	Eichler, Evan	University of Washington	\$616,368.00	Simons Foundation
<a href="#">Simons Simplex Collection Site</a>	Fombonne, Eric	The Research Institute of the McGill University Health Centre	\$132,257.00	Simons Foundation
<a href="#">ACE Network: A comprehensive approach to identification of autism susceptibility genes</a>	Geschwind, Daniel	University of California, Los Angeles	\$2,759,732.00	National Institutes of Health
<a href="#">Simons Simplex Collection Site</a>	Geschwind, Daniel	University of California, Los Angeles	\$277,643.00	Simons Foundation
<a href="#">A genome-wide search for autism genes in the SSC UCLA</a>	Geschwind, Daniel	University of California, Los Angeles	\$0.00	Simons Foundation
<a href="#">Whole-exome sequencing to identify causative genes for autism</a>	Gleeson, Joseph	University of California, San Diego	\$350,000.00	Simons Foundation
<a href="#">The role of the neurexin 1 gene in susceptibility to autism</a>	Gusella, James	Massachusetts General Hospital/Harvard Medical School	\$0	Autism Speaks

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<a href="#">A recurrent genetic cause of autism</a>	Gusella, James	Massachusetts General Hospital	\$200,000.00	Simons Foundation
<a href="#">Simons Simplex Collection Site</a>	Kochel, Robin	Baylor College of Medicine	\$165,584.00	Simons Foundation
<a href="#">Simons Simplex Collection</a>	Kochel, Robin	Baylor College of Medicine	\$144,848.00	National Institutes of Health
<a href="#">RNA expression patterns in autism</a>	Kunkel, Louis	Children's Hospital Boston	\$705,545.00	National Institutes of Health
<a href="#">Simons Simplex Collection Site</a>	Lese Martin, Christa	Emory University	\$256,849.00	Simons Foundation
<a href="#">A genome-wide search for autism genes in the SSC Emory</a>	Lese Martin, Christa	Emory University	\$0.00	Simons Foundation
<a href="#">Simons Simplex Collection Site</a>	Lord, Catherine	University of Michigan	\$402,144.00	Simons Foundation
<a href="#">Simons Foundation Simplex Project Collection Site</a>	Lord, Catherine	Weill Cornell Medical College	\$159,775.00	Simons Foundation
<a href="#">Relevance of NPAS1/3 balance to autism and schizophrenia</a>	McKnight, Steven	University of Texas Southwestern Medical Center	\$0.00	Simons Foundation
<a href="#">Simons Simplex Collection Site</a>	Miles, Judith	University of Missouri	\$311,075.00	Simons Foundation
<a href="#">Linking autism and congenital cerebellar malformations</a>	Millen, Kathleen	University of Chicago	\$60,000.00	Autism Speaks
<a href="#">Genetic investigation of cognitive development in autistic spectrum disorders</a>	Morrow, Eric	Brown University	\$184,248.00	National Institutes of Health
<a href="#">A genome-wide search for autism genes in the SSC Brown</a>	Morrow, Eric	Brown University	\$0.00	Simons Foundation

<a href="#">Illumina, Inc.</a>	No PI listed	Illumina, Inc.	\$1,471,725.00	Simons Foundation
<a href="#">The frequency of polymorphisms in maternal- and paternal-effect genes in autism spectrum</a>	Notterman, Daniel	The Pennsylvania State University	\$75,000.00	Simons Foundation
<a href="#">Simons Simplex Collection Site</a>	Pelphrey, Kevin	Yale University	\$130,000.00	Simons Foundation
<a href="#">Molecular and genetic epidemiology of autism</a>	Pericak-Vance, Margaret	University of Miami Miller School of Medicine	\$1,125,352.00	National Institutes of Health
<a href="#">Simons Simplex Collection Site</a>	Peterson, Bradley	Columbia University	\$260,000.00	Simons Foundation
<a href="#">Hypocholesterolemic autism spectrum disorder</a>	Porter, Forbes	National Institutes of Health	\$92,155.00	National Institutes of Health
<a href="#">The transcription factor PLZF: A possible genetic link between immune dysfunction and autism</a>	Sant'Angelo, Derek	Memorial Sloan-Kettering Cancer Center	\$0.00	Department of Defense
<a href="#">Autism Genome Project (AGP): Genome sequencing and analysis supplement</a>	Scherer, Stephen	The Hospital for Sick Children	\$0.00	Autism Speaks
<a href="#">Investigation of DUF1220 domains in human brain function and disease</a>	Sikela, James	University of Colorado Denver	\$471,018.00	National Institutes of Health
<a href="#">Autism Genome Project (AGP)</a>	Staff Member	Autism Speaks (AS)	\$0.00	Autism Speaks
<a href="#">ACE Center: Rare variant genetics, contactin-related proteins and autism</a>	State, Matthew	Yale University	\$326,348.00	National Institutes of Health
<a href="#">A genome-wide search for autism genes in the Simons Simplex Collection</a>	State, Matthew	Yale University	\$1,383,893.00	Simons Foundation
<a href="#">Whole Exome Sequencing of Simons Simplex Trios</a>	State, Matthew	Yale University	\$5,656,277.00	Simons Foundation

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<a href="#">Simons Simplex Collection Site</a>	Sutcliffe, James	Vanderbilt University	\$516,490.00	Simons Foundation
<a href="#">A genome-wide search for autism genes in the SSC Vanderbilt</a>	Sutcliffe, James	Vanderbilt University Medical Center	\$0.00	National Institutes of Health
<a href="#">Potential role of non-coding RNAs in autism</a>	Talebzadeh, Zohreh	Children's Mercy Hospitals And Clinics	\$0.00	Autism Speaks
<a href="#">Rapid characterization of balanced genomic rearrangements contributing to autism</a>	Talkowski, Michael	Massachusetts General Hospital	\$53,459.00	National Institutes of Health
<a href="#">Autism Genome Project (AGP) Core Consortium</a>	Vieland, Veronica	Nationwide Children's Hospital	\$278,113.00	Autism Speaks
<a href="#">Mitochondria and the etiology of autism</a>	Wallace, Douglas	Children's Hospital of Philadelphia	\$87,500.00	Simons Foundation
<a href="#">Simons Simplex Collection Site</a>	Walsh, Christopher	Children's Hospital Boston	\$124,993.00	Simons Foundation
<a href="#">Recessive genes for autism and mental retardation</a>	Walsh, Christopher	Beth Israel Deaconess Medical Center	\$0.00	Simons Foundation
<a href="#">Finding recessive genes for autism spectrum disorders</a>	Walsh, Christopher	Children's Hospital Boston	\$361,824.00	Simons Foundation
<a href="#">A genome-wide search for autism genes in the SSC CHB</a>	Walsh, Christopher	Children's Hospital Boston	\$0.00	Simons Foundation
<a href="#">Comprehensive genetic variation detection to assess the role of the X chromosome in autism</a>	Warren, Stephen	Emory University	\$0.00	Simons Foundation
<a href="#">Dissecting expression regulation of an autism GWAS hit</a>	Weiss, Lauren A.	University of California, San Francisco	\$15,000.00	Brain & Behavior Research Foundation
<a href="#">Genetic basis of autism</a>	Wigler, Michael	Cold Spring Harbor Laboratory	\$3,332,095.00	Simons Foundation

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<a href="#">Population genetics to improve homozygosity mapping and mapping in admixed groups</a>	Williams, Amy	Harvard Medical School	\$48,398.00	National Institutes of Health
<a href="#">ACE Center: Targeting genetic pathways for brain overgrowth in autism spectrum disorders</a>	Wynshaw-Boris, Anthony	University of California, San Diego	\$398,723.00	National Institutes of Health
<a href="#">Analysis of candidate genes derived from a protein interaction network in SSC samples</a>	Zoghbi, Huda	Baylor College of Medicine	\$0.00	Simons Foundation

### **3.L.C**

Determine the effect of at least five environmental factors on the risk for subtypes of ASD in the pre- and early postnatal period of development by 2015. *IACC Recommended Budget: \$25,100,000 over 7 years.*

<b>Project Title</b>	<b>Principal Investigator</b>	<b>Institution</b>	<b>Funding</b>	<b>Funder</b>
<a href="#">Maternal risk factors for autism spectrum disorders in children of the Nurses' Health Study II</a>	Ascherio, Alberto	Harvard University	\$0.00	Department of Defense
<a href="#">Novel animal models of impaired social behavior and anxiety: A role for MeCP2</a>	Reyes, Teresa	University of Pennsylvania	\$198,000.00	National Institutes of Health
<a href="#">Maternal risk factors for autism spectrum disorders in children of the Nurses' Health Study II</a>	Santangelo, Susan	Massachusetts General Hospital	\$0.00	Department of Defense
<a href="#">IL-6-mediated Jak2/Stat3 signaling and brain development</a>	Tan, Jun	University of South Florida	\$181,913.00	National Institutes of Health
<a href="#">Maternal risk factors for autism spectrum disorders in children of the Nurses' Health Study II</a>	Weisskopf, Marc	Harvard University	\$0.00	Department of Defense

### **3.L.D**

Support ancillary studies within one or more large-scale, population-based surveillance and epidemiological studies, including U.S. populations, to collect data on environmental factors during preconception, and during prenatal and early postnatal development, as well as genetic data, that could be pooled (as needed), to analyze targets for potential gene/environment interactions by 2015. *IACC Recommended Budget: \$44,400,000 over 5 years.*

<b>Project Title</b>	<b>Principal Investigator</b>	<b>Institution</b>	<b>Funding</b>	<b>Funder</b>
<a href="#">Social determinants of the autism epidemic</a>	Bearman, Peter	Columbia University	\$796,950.00	National Institutes of Health
<a href="#">Centers for Autism and Developmental Disabilities Research and Epidemiology (CADDRE) - California</a>	Croen, Lisa	Kaiser Foundation Research Institute	\$900,000.00	Centers for Disease Control and Prevention
<a href="#">Centers for Autism and Developmental Disabilities Research and Epidemiology (CADDRE) - North Carolina</a>	Daniels, Julie	University of North Carolina at Chapel Hill	\$900,000.00	Centers for Disease Control and Prevention

<a href="#">Centers for Autism and Developmental Disabilities Research and Epidemiology (CADDRE) - Maryland</a>	Fallin, Margaret Danielle	Johns Hopkins University	\$1,650,000.00	Centers for Disease Control and Prevention
<a href="#">Gene-environment interactions in an autism birth cohort (supplement)</a>	Lipkin, W. Ian	Columbia University	\$3,183,066.00	National Institutes of Health
<a href="#">Centers for Autism and Developmental Disabilities Research and Epidemiology (CADDRE) - Colorado</a>	Miller, Lisa	Colorado Department of Health and Environment	\$900,000.00	Centers for Disease Control and Prevention
<a href="#">UC Davis Center for Children's Environmental Health (CCEH) (supplement)</a>	Pessah, Isaac	University of California, Davis	\$130,000	National Institutes of Health
<a href="#">Centers for Autism and Developmental Disabilities Research and Epidemiology (CADDRE) - Pennsylvania</a>	Pinto-Martin, Jennifer	University of Pennsylvania/Children's Hospital of Philadelphia	\$900,000.00	Centers for Disease Control and Prevention
<a href="#">Centers for Autism and Developmental Disabilities Research and Epidemiology (CADDRE) - Data Coordinating Center</a>	Reed, Phillip	Michigan State University	\$900,000.00	Centers for Disease Control and Prevention
<a href="#">Centers for Autism and Developmental Disabilities Research and Epidemiology (CADDRE) - Georgia</a>	Schendel, Diana; Schieve, Laura; Wiggins, Lisa	Centers for Disease Control and Prevention (CDC)	\$1,307,234.00	Centers for Disease Control and Prevention
<b><u>3. Other</u></b>				
Not specific to any objective				
<b>Project Title</b>	<b>Principal Investigator</b>	<b>Institution</b>	<b>Funding</b>	<b>Funder</b>
<a href="#">ACE Center: Imaging autism biomarkers + risk genes</a>	Glatt, Stephen	University of California, San Diego	\$263,940.00	National Institutes of Health
<a href="#">Genetic epidemiology of autism spectrum disorders</a>	Kim, Young Shin	Yale University	\$178,312.00	National Institutes of Health
<a href="#">FOXP2-regulated signaling pathways critical for higher cognitive functions</a>	Konopka, Genevieve	University of Texas Southwestern Medical Center	\$248,865.00	National Institutes of Health
<a href="#">A history of behavioral genetics</a>	Schaffner, Kenneth	University of Pittsburgh	\$19,900.00	National Science Foundation

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

<a href="#">Next generation approaches to non-human primate bioinformatics</a>	Vallender, Eric	Harvard Medical School	\$13,753.00	National Institutes of Health
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