

2013 Portfolio Analysis Projects

QUESTION 1: WHEN SHOULD I BE CONCERNED?

2013 Projects: 128

2013 Funding: \$27,652,658

1.S.A

Develop, with existing tools, at least one efficient diagnostic instrument (e.g., briefer, less time intensive) that is valid in diverse populations for use in large-scale studies by 2011. *IACC Recommended Budget: \$5,300,000 over 2 years.*

2013 Projects: 10

2013 Funding: \$3,200,652

Project Title	Principal Investigator	Institution	Funding	Funder
Cross-Model Automated Assessment of Behavior during Social Interactions in Children with ASD	Naples, Adam	Yale University	\$5,000	Autism Science Foundation
Biomarkers and diagnostics for ASD	Bahn, Sabine	Institute of Biotechnology	\$0	Autism Speaks
Assessing the accuracy of rapid phenotyping of nonverbal autistic children	Law, Paul	Kennedy Krieger Institute	\$124,998	Autism Speaks
Early detection of pervasive developmental disorders	Fein, Deborah	University of Connecticut	\$924,542	National Institutes of Health
Solid-state patch clamp platform to diagnose autism and screen for effective drug	Garner, Craig	Stanford University	\$196,247	National Institutes of Health
Enabling use of blood spot cards for accurate high throughput Fragile X screening	Latham, Gary	Asuragen, Inc.	\$1,142,346	National Institutes of Health
The use of interactive television in identifying autism in young children	Reese, R. Matthew	University of Kansas Medical Center	\$217,440	National Institutes of Health

Multimedia tool for psychology graduate student ASD assessment training	Strickland, Dorothy	Virtual Reality Aids, Inc.	\$1	National Institutes of Health
Development of a novel biomarker test for autism risk screening	Svarovsky, Sergei	Xen Biofluidx, Inc.	\$363,789	National Institutes of Health
Evaluation of pupillary light reflex as biomarker of neurodevelopmental disorder	Yao, Gang	University of Missouri	\$226,289	National Institutes of Health

1.S.B

Validate and improve the sensitivity and specificity of new or existing screening and diagnostic tools, including comparative studies of general developmental screening versus autism-specific screening tools, in both high-risk and population-based samples, including those from resource-poor international settings and those that are diverse in terms of age, socio-economic status, race, ethnicity, gender, characteristics of ASD, and general level of functioning by 2012. *IACC Recommended Budget: \$5,400,000 over 3 years.*

2013 Projects: 20

2013 Funding: \$3,634,193

Project Title	Principal Investigator	Institution	Funding	Funder
Analysis of cultural appropriateness and necessary modifications of the Survey of Well Being for Young Children on Native American reservations	Novan, Doug	University of Colorado Denver	\$0	Administration for Children & Family
Computer Assisted Autism Care (CAAC)	Downs, Stephen	Indiana University - Purdue University at Indianapolis	\$0	Agency for Healthcare Research Quality
The effects of autism on the sign language development of deaf children	Shield, Aaron	Boston University	5000	Autism Science Foundation
Developing a Sensory Reactivity Composite Score for the New DSM-5	Tavassoli, Teresa	Icahn School of Medicine at Mount Sinai	35,000	Autism Science Foundation
Development of a Prospective Parent Report Measure to Identify ASD Risk in Infancy	Ozonoff, Sally	University of California, Davis	\$150,000	Autism Speaks
Using Parent Report to Identify Infants Who Are at Risk for Autism Spectrum Disorder (ASD)	Reznick, James	University of North Carolina	\$137,090	Autism Speaks

Validation of web-based administration of the M-CHAT-R with Follow-up (M-CHAT-R/F)	Robins, Diana	Georgia State University	\$149,999	Autism Speaks
Baby Siblings Research Consortium	Staff Member	Autism Speaks (AS)	\$2,698	Autism Speaks
Leadership Education in Neurodevelopmental Disabilities	Biasini, Fred	University of Alabama at Birmingham	\$2,500	Heath Resources and Services Administration
Intelligent data capture and assessment technology for developmental disabilities	Oberleitner, Ronald	Caring Technologies, Inc.	\$322,828	National Institutes of Health
Intelligent data capture and assessment technology for developmental disabilities	Oberleitner, Ronald	Caring Technologies, Inc.	\$721,082	National Institutes of Health
Development of a prospective video-based measure to identify ASD risk in infancy	Ozonoff, Sally	University of California, Davis	\$576,204	National Institutes of Health
Comparative effectiveness of developmental-behavioral screening instruments	Perrin, Ellen	Tufts Medical Center	\$680,452	National Institutes of Health
Early Identification of ASD: Translating eye Tracking into Practice	Pierce, Karen	University of California, San Diego	\$387,500	National Institutes of Health
Neurobehavioral Analysis Core	Simon, Tony	University of California, Davis	\$130,658	National Institutes of Health
FMR 1-SLS: Improving fragile X diagnosis using amplification-free single locus ta	Turner, Stephen	Pacific Biosciences Of California, Inc.	\$149,176	National Institutes of Health
Georgia Tech Non-Invasive Gaze Tracking Project	Rehg, James	Georgia Tech Research Corporation	\$0	Simons Foundation
Characterizing autism-related intellectual impairment and its genetic mechanisms	Schultz, Robert	The Children's Hospital of Philadelphia	\$120,472	Simons Foundation
Mobilized technology for rapid screening and clinical prioritization of ASD	Wall, Dennis	Stanford University	\$63,535	Simons Foundation
Autism and the RASopathies	Weiss,Lauren	University of California, San Francisco	\$0	Simons Foundation

1.S.C

Conduct at least three studies to identify reasons for the health disparities in accessing early screening and diagnosis services, including identification of barriers to implementation of and access to screening, diagnosis, referral, and early intervention services among diverse populations, as defined by socioeconomic status, race, ethnicity, and gender of the child, by 2012. *IACC Recommended Budget: \$2,000,000 over 2 years.*

2013 Projects: 5

2013 Funding: \$1,038,848

Project Title	Principal Investigator	Institution	Funding	Funder
Reducing disparities in Rimely Autism Diagnosis through Family Navigation	Feinberg, Emily	Boston Medical Center	\$99,999	Agency for Healthcare Research Quality
Dissemination of multi-stage screening to underserved culturally-diverse families	Martinez-Pedraza, Frances	University of Massachusetts, Boston	\$0	Autism Speaks
Addressing Health Disparities in ASD Diagnosis, Services, and School Engagement	Eisenhower, Abbey S	University of Massachusetts	\$282,459	Heath Resources and Services Administration
Reducing barriers to autism care in Latino children	Zuckerman, Katharine	Oregon Health & Science University	\$179,521	National Institutes of Health
A Sociology of Testing, Diagnosis and Autism Spectrum Disorder	Maynard, Douglas	University of Wisconsin-Madison	\$476,869	National Science Foundation

1.S.D

Conduct at least two studies to understand the impact of early diagnosis on choice of intervention and outcomes by 2015. *IACC Recommended Budget: \$6,000,000 over 5 years.*

2013 Projects: 0

2013 Funding: \$0

1.S.E

Conduct at least one study to determine the positive predictive value and clinical utility (e.g., prediction of co-occurring conditions, family planning) of chromosomal microarray genetic testing for detecting genetic diagnoses for ASD in a clinical setting by 2012. *IACC Recommended Budget: \$9,600,000 over 5 years.*

2013 Projects: 3

2013 Funding: \$983,936

Project Title	Principal Investigator	Institution	Funding	Funder
Gene dosage imbalance in neurodevelopmental disorders	Ledbetter, David	Weis Center for Research - Geisinger Clinic	\$662,379	National Institutes of Health
The impact of uncertainty in genome-wide testing for autism spectrum disorder	Reiff, Marian	University of Pennsylvania	\$200,000	National Institutes of Health
Novel metabolic biomarker for autism spectrum disorder	Schwartz, Charles	Greenwood Genetic Center	\$121,557	National Institutes of Health

1.S.F

Convene a workshop to examine the ethical, legal, and social implications of ASD research by 2011. The workshop should define possible approaches for conducting future studies of ethical, legal and social implications of ASD research, taking into consideration how these types of issues have been approached in related medical conditions. *IACC Recommended Budget: \$35,000 over 1 year.*

(This objective was fulfilled in 2011.)

1.L.A

Identify behavioral and biological markers that separately, or in combination, accurately identify, before age 2, one or more subtypes of children at risk for developing ASD, and evaluate whether these risk markers or profiles can improve early identification through heightened developmental monitoring and screening by 2014. *IACC Recommended Budget: \$33,300,000 over 5 years.*

2013 Projects: 37

2013 Funding: \$9,357,851

Project Title	Principal Investigator	Institution	Funding	Funder
Postural and vocal development during the first year of life in infants at heightened biological risk for AS	Leezenbaum, Nina	University of Pittsburgh	\$0	Autism Science Foundation

Identifying early biomarkers for autism using EEG connectivity	Levin, April	Boston Children's Hospital	\$0	Autism Science Foundation
Development of Vocal Coordination between Caregivers and Infants at Heightened Biological Risk for Autism Spectrum Disorder	Northrup, Jessie	University of Pittsburgh	25,000	Autism Science Foundation
Exploring Social Attribution in Toddlers At Risk for Autism Spectrum Disorder (ASD)	Ludwig, Natasha	Georgia State University	\$29,500	Autism Speaks
A Longitudinal EEG Study of Infants at Risk for Autism: Network Capacity Building (Phase I)	Piven, Joseph	University of North Carolina	\$359,738	Autism Speaks
A Centralized Standard Database for the Baby Siblings Research Consortium	Young, Gregory	University of California, Davis	\$117,851	Autism Speaks
Using near-infrared spectroscopy to measure the neural correlates of social and emotional development in infants at risk for autism spectrum disorder	Wagner, Jennifer B.	Harvard University	\$15,000	Brain & Behavior Research Foundation
Biomarkers for autism and for gastrointestinal and sleep problems in autism	Anderson, George	Yale University	\$0	Department of Defense
Serum antibody biomarkers for ASD	German, Dwight	University of Texas Southwestern Medical Center	\$0	Department of Defense
Epigenetic biomarkers of autism in human placenta	LaSalle, Janine	University of California, Davis	\$0	Department of Defense
An MEG investigation of neural biomarkers and language in nonverbal children with autism spectrum disorders	McFadden, Kristina	University of Colorado Denver	\$0	Department of Defense
EEG complexity trajectory as an early biomarker for autism	Bosl, William	Boston Children's Hospital	\$208,800	National Institutes of Health
Early social and emotional development in toddlers at genetic risk for autism	Campbell, Susan	University of Pittsburgh	\$354,246	National Institutes of Health
MRI studies of early brain development in autism	Courchesne, Eric	University of California, San Diego	\$468,100	National Institutes of Health
Are autism spectrum disorders associated with leaky-gut at an early critical period in development?	Dobkins, Karen	University of California, San Diego	\$292,221	National Institutes of Health

Predicting the decline of social attention in infants at risk for autism	Hutman, Theodore	University of California, Los Angeles	\$179,388	National Institutes of Health
ACE Center: Neural assays and longitudinal assessment of infants at very high risk for ASD	Johnson, Scott	University of California, Los Angeles	\$173,955	National Institutes of Health
Autism: Social and communication predictors in siblings	Landa, Rebecca	Kennedy Krieger Institute	\$723,431	National Institutes of Health
Infants at risk of autism: A longitudinal study	Ozonoff, Sally	University of California, Davis	\$551,100	National Institutes of Health
fcMRI in infants at high risk for autism	Pruett, John	Washington University in St. Louis	\$419,567	National Institutes of Health
ACE Center: The ontogeny of social vocal engagement and its derailment in autism	Ramsay, Gordon	Emory University	\$159,324	National Institutes of Health
ACE Network: Early biomarkers of autism spectrum disorders in infants with tuberous sclerosis	Sahin, Mustafa	Boston Children's Hospital	\$2,604,574	National Institutes of Health
Neurobehavioral research on infants at risk for SLI and autism	Tager-Flusberg, Helen	Boston University	\$588,872	National Institutes of Health
Predicting autism through behavioral and biomarkers of attention in infants	Tonnsen, Bridgette	University of South Carolina	\$34,688	National Institutes of Health
Divergent biases for conspecifics as early markers for autism spectrum disorders	Vouloumanos, Athena	New York University	\$213,420	National Institutes of Health
A network approach to the prediction of autism spectrum disorders	West, Meredith	Indiana University	\$176,592	National Institutes of Health
Cortical activation to faces and objects in infants at high-risk for ASD	Zieber, Nicole	University of South Carolina	\$51,705	National Institutes of Health
A functional near-infrared spectroscopy study of first signs of autism	Barnea-Goraly, Naama	Stanford University	\$67,573	Simons Foundation
Developing fNIRS as a brain function indicator in at-risk infants	Johnson, Mark	Birkbeck College	\$223,738	Simons Foundation
Physical and clinical infrastructure for research on infants at risk for autism	Klin, Ami	Emory University	\$449,353	Simons Foundation

Growth charts of altered social engagement in infants with autism	Klin, Ami	Emory University	\$56,589	Simons Foundation
RNA expression studies in autism spectrum disorders	Kunkel, Louis	Boston Children's Hospital	\$250,000	Simons Foundation
Electrophysiological, metabolic and behavioral markers of infants at risk	Nelson, Charles	Boston Children's Hospital	\$0	Simons Foundation
Brain-behavior growth charts of altered social engagement in ASD infants	Pelphrey, Kevin	Yale University	\$304,231	Simons Foundation
Physical and clinical infrastructure for research on infants-at-risk for autism at Yale	Pelphrey, Kevin	Yale University	\$0	Simons Foundation
Bridging Basic Research with Clinical Research with the Aim of Discovering Biomarkers for Autism	Phillips, Deirdre	Autism Consortium	\$169,295	Simons Foundation
Supplement to NIH ACE Network grant: "A longitudinal MRI study of infants at risk for autism"	Piven, Joseph	University of North Carolina at Chapel Hill	\$90,000	Simons Foundation

1.L.B

Develop at least five measures of behavioral and/or biological heterogeneity in children or adults with ASD, beyond variation in intellectual disability, that clearly relate to etiology and risk, treatment response and/or outcome by 2015. *IACC Recommended Budget: \$71,100,000 over 5 years.*

2013 Projects: 38

2013 Funding: \$7,822,255

Project Title	Principal Investigator	Institution	Funding	Funder
Improved early detection of autism using novel statistical methodology	Campbell, Daniel	Yale University	\$52,966	Autism Speaks
Early-Stage Visual Processing in ASD: Neurophysiological Biomarkers Using Visual Evoked Potentials	Siper, Paige	Icahn School of Medicine at Mount Sinai	\$49,264	Autism Speaks
Predicting outcomes in autism with functional connectivity MRI	Barnes, Kelly Anne	National Institute of Mental Health	\$14,998	Brain & Behavior Research Foundation

Subtyping of toddlers with ASD based on patterns of social attention deficits	Chawarska, Katarzyna	Yale University	\$0	Department of Defense
GENETIC AND DIAGNOSTIC BIOMARKER DEVELOPMENT IN ASD TODDLERS USING RESTING STATE FUNCTIONAL MRI	Courchesne, Eric	University of California San Diego	\$273,772	Department of Defense
GENETIC AND DIAGNOSTIC BIOMARKER DEVELOPMENT IN ASD TODDLERS USING RESTING STATE FUNCTIONAL MRI	Fox, Peter	University of Texas San Antonio	\$147,531	Department of Defense
FUNDAMENTAL VISUAL REPRESENTATIONS AND SOCIAL COGNITION IN ASD	Foxe, John	Albert Einsteign College of Medicine Yeshiva University	\$158,000	Department of Defense
GENETIC AND DIAGNOSTIC BIOMARKER DEVELOPMENT IN ASD TODDLERS USING RESTING STATE FUNCTIONAL MRI	Glahn, David	Yale University	\$144,000	Department of Defense
IMPLICIT LEARNING ABILITIES PREDICT TREATMENT RESPONSE IN AUTISM SPECTRUM DISORDERS	Lord, Catherine	Joan and Sanford I Weill Medical College of Cornell University	\$158,963	Department of Defense
Restricted repetitive behavior in autism	Bodfish, James	University of North Carolina at Chapel Hill	\$391,678	National Institutes of Health
Development of face processing in infants with autism spectrum disorders	Chawarska, Katarzyna	Yale University	\$393,228	National Institutes of Health
Translational developmental neuroscience of autism	Di Martino, Adriana	New York University School of Medicine	\$167,187	National Institutes of Health
Extraction of functional subnetworks in autism using multimodal MRI	Duncan, James	Yale University	\$348,034	National Institutes of Health
Neural predictors of language function after intervention in children with autism	Jeste, Shafali	University of California, Los Angeles	\$181,103	National Institutes of Health
Perception of social and physical contingencies in infants with ASD	Klin, Ami	Emory University	\$301,268	National Institutes of Health
The Autism Impact Measure: A new tool for treatment outcome measurement	Mazurek, Micah	University of Missouri	\$1,355,047	National Institutes of Health
Analyses of brain structure and connectivity in young children with autism	Nordahl, Christine	University of California, Davis	\$222,933	National Institutes of Health

Toward outcome measurement of anxiety in youth with autism spectrum disorders	Scahill, Lawrence	Yale University	\$604,292	National Institutes of Health
Validity of an anxious subtype in autism spectrum disorders	Sterling, Lindsey	University of California, Los Angeles	\$53,270	National Institutes of Health
Clinical and behavioral phenotyping of autism and related disorders	Swedo, Susan	National Institutes of Health	\$1,954,272	National Institutes of Health
Electrophysiological correlates of cognitive control in autism	Takarae, Yukari	University of California, Davis	\$127,805	National Institutes of Health
Social evaluation in infants and toddlers	Wynn, Karen	Yale University	\$393,228	National Institutes of Health
Collaborative research: Computational behavioral science: Modeling, analysis, and visualization of social and communicative behavior	Dey, Anind	Carnegie Mellon University	\$0	National Science Foundation
Collaborative research: Computational behavioral science: Modeling, analysis, and visualization of social and communicative behavior	Forsyth, David	University of Illinois at Urbana Champaign	\$0	National Science Foundation
Collaborative research: Computational behavioral science: Modeling, analysis, and visualization of social and communicative behavior	Narayanan, Shrikanth	University of Southern California	\$0	National Science Foundation
Collaborative research: Computational behavioral science: Modeling, analysis, and visualization of social and communicative behavior	Picard, Rosalind	Massachusetts Institute of Technology	\$0	National Science Foundation
Collaborative research: Computational behavioral science: Modeling, analysis, and visualization of social and communicative behavior	Rehg, James	Georgia Tech Research Corporation	\$19,200	National Science Foundation
Collaborative research: Computational behavioral science: Modeling, analysis, and visualization of social and communicative behavior	Sclaroff, Stan	Trustees of Boston University	\$0	National Science Foundation
HCC: Medium: Automatic detection of atypical patterns in cross-modal affect	van Santen, Jan	Oregon Health & Science University	\$0	National Science Foundation

Using a direct observation assessment battery to assess outcome of early intensive behavioral intervention for children with autism	MacDonald, Rebecca	New England Center for Children	\$20,000	Organization for Autism Research
Extracellular signal-related kinase biomarker development in autism	Erickson, Craig	Cincinnati Children's Hospital Medical Center - Research Foundation	\$115,779	Simons Foundation
Identification of candidate serum antibody biomarkers for ASD	German, Dwight	University of Texas Southwestern Medical Center	\$112,032	Simons Foundation
Reliability of sensory-evoked activity in autism	Heeger, David	New York University	\$0	Simons Foundation
The early development of attentional mechanisms in ASD	Kaldy, Zsuzsanna	University of Massachusetts, Boston	\$0	Simons Foundation
Development of accelerated diffusion and functional MRI scans with real-time motion tracking for children with autism	Manoach, Dara	Massachusetts General Hospital	\$0	Simons Foundation
Functional brain networks in autism and attention deficit hyperactivity disorder	Nigg, Joel	Oregon Health & Science University	\$0	Simons Foundation
Testing the tuning-width hypothesis in a unified theory for autism	Qian, Ning	Columbia University Medical Center	\$60,000	Simons Foundation
ERK signaling and autism: Biomarker development	Sherr, Elliott	University of California, San Francisco	\$2,405	Simons Foundation

1.L.C

Identify and develop measures to assess at least three "continuous dimensions" (e.g., social reciprocity, communication disorders, and repetitive/restrictive behaviors) of ASD symptoms and severity that can be used by practitioners and/or families to assess response to intervention for people with ASD across the lifespan by 2016. *IACC Recommended Budget: \$18,500,000 over 5 years.*

2013 Projects: 7

2013 Funding: \$1,224,987

Project Title	Principal Investigator	Institution	Funding	Funder
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Receptive vocabulary knowledge in low-functioning autism as assessed by eye movements, pupillary dilation, and event-related potentials	Gordon, Barry	Johns Hopkins University	\$0	Department of Defense
Intersensory perception of social events: Typical and atypical development	Bahrack, Lorraine	Florida International University	\$134,355	National Institutes of Health
Early quantitative characterization of reciprocal social behavior	Constantino, John	Washington University in St. Louis	\$545,295	National Institutes of Health
Developmental social neuroscience in infants at-risk for autism	McPartland, James	Yale University	\$180,621	National Institutes of Health
Neural economics of biological substrates of valuation	Montague, P. Read	Virginia Polytechnic Institute and State University	\$364,716	National Institutes of Health
Measuring imitation and motor control in severe autism	Munson, Jeffrey	University of Washington	\$0	Simons Foundation
Language learning in autism	Ullman, Michael	Georgetown University	\$0	Simons Foundation

1.Other

Not specific to Question 1 objectives

2013 Projects: 8

2013 Funding: \$389,937

Project Title	Principal Investigator	Institution	Funding	Funder
South Carolina Children's Educational Surveillance Study: Comparison of DSM-IV & DSM-5 prevalence	Carpenter, Laura	Medical University of South Carolina	\$56,606	Autism Speaks
Risk Evaluation for Autism in Latinos-- Screening tools and Referral Training (REAL-START)	Fombonne, Eric	Oregon Health & Science University	\$0	Autism Speaks
ASD prevalence by DSM-IV and DSM-5: Total population study	Leventhal, Bennett	Nathan Kline Institute	\$0	Autism Speaks

Test of integrated language and literacy skills validation research	Nelson, Nickola	Western Michigan University	\$0	Department of Education
A monkey model of naturally occurring low sociability	Parker, Karen	Stanford University	\$222,461	National Institutes of Health
CAREER: Enabling community-scale modeling of human behavior and its application to healthcare	Choudhury, Tanzeem	Cornell University	\$110,870	National Science Foundation
Social and statistical mechanisms of prelinguistic vocal development	Goldstein, Michael	Cornell University	\$0	National Science Foundation
INT2-Large: Collaborative research: Developing social robots	Movellan, Javier	University of California, San Diego	\$0	National Science Foundation