



## **UCLA CART Pilot Grant Research Program LIST OF PROJECTS FUNDED TO DATE**

UCLA CART's goal for the Pilot Research Program is to attract investigators to study autism and to fund innovative projects so as to broaden the scope of autism research at UCLA. Major funding for the CART pilot grants includes NIH Center grants to CART under the STAART (2003-2008) and ACE (2008-2017) programs. CART has successfully attracted innovative and excellent research proposals and has projects, including human studies\* as well as innovative neurobiological studies using molecular and animal models.

### YEAR 1 (2004-2005)

The molecular basis for songbird learning as a model for speech-language acquisition - S. White, Ph.D.

Towards a neurochemistry of sociability - D. Jentsch, Ph.D.

Low-level perceptual processing in autism - O. Rosenthal, Ph.D. and L. Shams, Ph.D.\*

### YEAR 2 (2005-2006)

Recognition of social contact in *Drosophila* - A. Simon, Ph.D. and D. Krantz, M.D., Ph.D.

Study of cognitive behavior therapy (CBT) for children with autism and comorbid anxiety disorders - Jeff Wood, Ph.D.\*

### YEAR 3 (2006-2007)

Probing the mirror neuron system in children with autism spectrum disorders –Imaging Mirella Dapretto, Ph.D.\*

Potential involvement of microRNAs in the autistic trait of Rett syndrome: Methylation and epigenetics - Yi Sun, Ph.D.

### YEAR 4 (2007-2008)

Efficacy of an evidence-based parent-assisted social skills intervention for teens with ASD - Elizabeth Laugeson, Psy.D.\*

Next generation massively parallel sequencing applied to resequencing genomic regions linked to autism - Stanley Nelson, M.D.

An Investigation of the role of PTEN signaling on the structure and function of cortical circuitry in a mouse model of autism - Joshua Trachtenberg, Ph.D.  
\$20,000

YEAR 5 (2008-2009)

Neural basis of autistic spectrum disorders in 22q11.2 deletion syndrome - Carrie Bearden, Ph.D.\*

Genetic and environmental influences on brain overgrowth in autism - Janel Le Belle, Ph.D.

YEAR 6 (2009-2010)

Dendritic spine remodeling in a mouse model for autism – Ellen Carpenter, Ph.D.

YEAR 7 (2010-2011)

Face processing and visual search for social stimuli: A longitudinal eye-tracking study involving infants at risk for autism - Theodore Hutman, Ph.D. \*

YEAR 8 (2011-2012)

Functional cortical microcircuit changes in the NLGN-3 model of autism [mouse] - Peyman Golshani, M.D., Ph.D.

Cytoplasmic functions of A2BP/RBFox1, a candidate autism gene [mouse] - Kelsey Martin, M.D., Ph.D.

Variability in autism symptom severity in high functioning children: Investigating the role of diurnal cortisol and daily stress - Lindsey Sterling, Ph.D.\*

YEAR 9 (2012-2013)

Oxytocin and dopamine signaling in a preclinical model of autism [mouse] - Nigel Maidment, Ph.D.

Circadian disruption in the CNTNAP2 mouse model of autism spectrum disorder - Christopher Colwell, Ph.D.

Glutamate in Autism and Early Development - Jennifer Levitt, M.D.\*

YEAR 10 (2013-2014)

Perfusion MRI and functional connectivity in autism spectrum disorder (ASD) – Danny J.J. Wang, Ph.D.\*

Impact of autism on action perception - Hongjing Lu, Ph.D.\*

The link between pre-conceptual and prenatal supplementary folic acid intake and ASD In the Danish National Birth Cohort (DNBC) - Beate Ritz, M.D., Ph.D.\*



#### YEAR 11 (2014-2015)

Immune activation during pre- and post-natal development causes social phenotypes in a mouse model of Tuberous – Alicno Silva, Ph.D.

Brain oscillatory patterns associated with GABA/Glutamate signaling and cognition in ASD – Sandra Loo, Ph.D., Jennifer Levitt, M.D.\*

Early Intervention Targeting Social Communication in Infants with Tuberous Sclerosis Complex – Shafali Spurling Jeste, M.D, Amanda Gulsrud, Ph.D.\*

#### YEAR 12 (2015-2016)

From Seeing to Participating: Dysregulation of Functional Connectivity during Action Perception and Imitation in Autism Spectrum Disorder – Marco Iacoboni, M.D., Ph.D.

Functional effects of genetic variants associated with macrocephaly in autism – Julian Martinez-Agosto, M.D., Ph.D.

#### YEAR 13 (2016-2017)

Targeting Microglial Activation for Treatment of Autism Spectrum Disorder (ASD): A Proof-of-Concept, Target-engagement Study – Michael Gandai, M.D., Ph.D.\*

Latino Parents of Children with Autism: Understanding how Innovative Mobile Internet Technology can Increase Access to Care – David Hayes-Bautista, Ph.D.\*

Investigating The Role of Amygdala Circuitry in ASD-Related Behavior – Weizhe Hong, Ph.D.

#### YEAR 14 (2017-2018)

Is dim light at night a risk factor for autism spectrum disorders? – Christopher Colwell, Ph.D.

Parsing ASD Heterogeneity: Neuroendophenotypes of Social and Sensory Responsivity – Mirella Dapretto and Ariana Anderson (co-PI)

Establishing the causal contribution of microglia and adult neuroinflammation to social, cognitive, and tactile dysfunction in mice with environmental and genetic susceptibilities for ASD – Harley Kornblum, M.D., Ph.D.

#### YEAR 15 (2018-2019)

Neurochemical Excitatory/Inhibitory Imbalance and Sensory Over-Responsivity in Children with ASD – Shulamite Green, Ph.D.\*



Quantitative measures of infant motor function to identify early risk of Autism Spectrum Disorder– Rujuta Wilson, M.D.\*

EEG markers of intervention response in minimally verbal children with ASD – Charlotte DiStefano, Ph.D.

#### YEAR 16 (2019-2020)

Transcriptomic analysis of parvalbumin and pyramidal neurons in the Fmr1-/- mouse model of Fragile X Syndrome – Carlos Portera-Cailliau, MD

Defining cell types and transcriptional networks in a vocal learner – Stephanie White, Ph.D.

#### YEAR 17 (2020-2021)

Characterizing distinct and shared functional disruptions across genetic etiologies in ASD: Amultivariate pattern analysis – Abigail Dickinson, Ph.D.

Multi-omics Integration to Identify ASD Network Perturbations and Reposition Drugs – Xia Yang, Ph.D.

#### YEAR 18 (2021-2022)

Management of reproductive health and the impact of menstruation-related hormone change on autism-related impairment among autistic women – Catherine Lord, Ph.D., Connie Kasari, Ph.D., and Alexandra Sturm, Ph.D.\*

Treating Externalizing Behavior Problems in Young Children with Autism Spectrum Disorder: Investigating a Novel Cognitive Behavioral Therapy Approach – Patricia Renno, PhD and Amanda Gulsrud, Ph.D.\*

#### YEAR 19 (2022-2023)

Thalamocortical disruption during sleep and wake as a biomarker for sensory sensitivity – Carrie Bearden, Ph.D.

Exploring the impact of bilingualism on executive function and brain organization in children with autism – Lucina Uddin, Ph.D.\*

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