Rebecca J. Schmidt, Ph.D.

Clinical Interests

Dr. Schmidt is not a clinician. Dr. Schmidt is a molecular epidemiologist that aims to advance understanding of how early life environmental exposures interact with genetic susceptibility and molecular mechanisms to influence neurodevelopmental outcomes of children, with a primary interest in autism spectrum disorders.

Research/Academic Interests

Dr. Schmidt is a molecular epidemiologist that aims to advance understanding of how early life environmental exposures interact with genetic susceptibility and molecular mechanisms to influence neurodevelopmental outcomes of children. Her pioneering work includes highly recognized work where she found some of the first evidence in the autism field for a potentially protective effect of folic acid-rich prenatal vitamins, evidence for gene x environment interactions, and protective interactions between folate and environmental contaminants.
Dr. Schmidt leads the MARBLES high-risk autism sibling pregnancy cohort study, two wildfire pregnancy studies, a study focused on understanding the role of folate and epigenetic DNA methylation in the MARBLES and EARLI high-risk autism pregnancy cohorts, and follow-up for Northern California participants in these cohorts to assess later health outcomes in an ECHO multi-center cohort study. She additionally leads or co-leads several epidemiologic mechanistic autism studies, including examinations of mitochondrial, epigenomic, transcriptomic, and metabolomic variations as contributors to and biomarkers of neurodevelopmental outcomes.

Title

Associate Professor

Specialty

Autism, Molecular Epidemiology, Neurodevelopmental Disorders, Reproductive Epidemiology, Epidemiology, Prenatal/Preconception, Genetics, Epigenetics

Department

Public Health Sciences

Division

Epidemiology

Center/Program Affiliation

UC Davis MIND Institute

Address/Phone

UC Davis School of Medicine, UC Davis School of Medicine - Medical Sciences 1C, Suite 123
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Languages

Spanish

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Rebecca J. Schmidt, Ph.D.

Education

M.S., University of Iowa College of Public Health, Iowa City, IA, 2000
Ph.D., University of Iowa College of Public Health, Iowa City, IA, 2007
B.S., University of Iowa, Iowa City, Iowa, 1998

Fellowships

MIND Institute/Autism, UC Davis MIND Institute, Sacramento CA 2008 - 2010

Professional Memberships

American Society for Nutrition
American Society of Human Genetics
International Society for Autism Research
International Society for Epidemiological Epidemiology
International Society of Environmental Epidemiology
Society for Epidemiologic Research

Honors and Awards

NIEHS Keystone Science Lecturer, 2019
Primary mentor for 2 graduate students selected for FUTURE Certificate Program funded in part by the NIH Broadening Experiences in Scientific Training (BEST) initiative, 2018
Top 20 most read paper / top downloaded article 2017-2018 in Autism Research - Wiley 2017, 2018
Mentor for two graduate students awarded the Ellen B. Gold Fellowship 2015, 2016, 2017
NIEHS travel awards for The Environmental Epidemiology of Autism Research Network 3rd, 4th, and 5th annual meeting in Toronto, Canada; San Sabastian, Spain; Atlanta, GA, USA 2012, 2013, 2014
Primary mentor for 2 graduate students selected for FUTURE Certificate Program funded in part by the NIH Broadening Experiences in Scientific Training (BEST) initiative, 2015
Paper recognized as a 2011 Paper of the Year by the NIH National Institute of Environmental Health Sciences (NIEHS), 2011
Paper selected as Top Ten Science Autism Research Achievements of 2011 by Autism Speaks, 2011
Building Interdisciplinary Careers in Womens Health Program Scholar, 2011
University of Iowa Graduate College Summer Fellowship Award, 2007
University of Iowa Department of Epidemiology Tuition Scholarship Awards 2004, 2005, 2006, 2007
Graduate Student Poster Award Recipient for Research Week, UI College of Public Health, 2004
Deans List (GPA: 4.00 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004

Select Recent Publications

Schmidt RJ, Niu Q, Eyles DW, Hansen RL, Iosif A-M (2019). Neonatal Vitamin D Status in Relation to Autism Spectrum Disorder and Developmental Delay in the CHARGE Case-Control Study. Autism Research. May 16, 2019 doi: 10.1002/aur.2118

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Schmidt RJ, Iosif A-M, Guerrero Angel E, Ozonoff S (2019). Maternal Prenatal Vitamin Use and Risk for Autism Spectrum Disorder in the MARBLES Prospective Study of Enriched-risk Siblings. JAMA Pscychiatry. 2019;76(4):391-398. doi:10.1001/jamapsychiatry.2018.3901

Goodrich AJ, Volk HE, Tancredi DJ, McConnell R, Lurmann FW, Hansen RL, Schmidt RJ. (2018 Jan) Joint Effects of Prenatal Air Pollutant Exposure and Maternal Folic Acid Supplementation on Risk of Autism Spectrum Disorder. Autism Research. 11(1):69-80. PMID 29120534.

Schmidt RJ, Kogan V, Shelton J, Delwiche L, Hansen RL, Ozonoff S, Ma CC, McCanlies EC, Bennett DH, Hertz-Picciotto I, Tancredi D, Volk HE. (2017) Combined Exposures to Prenatal Pesticides and Folic Acid Intake in Relation to Autism Spectrum Disorder. Environ Health Perspect. 125(9):097007. PMID 28934093.

Schmidt RJ, Schroeder DI, Crary FK, Barkoski JM, Tancredi DJ, Walker CK, Ozonoff S, Hertz-Picciotto I, LaSalle JM. (2016) Self-Reported Pregnancy Exposures and Placental DNA Methylation in the MARBLES Prospective Autism Sibling Study. Environ Epigenet. 2(4):1-10. PMID: 28781890.

Schmidt RJ, Hansen RL, Hartiala J, Allayee H, Sconberg JL, Schmidt LC, Volk HE, Tassone F. (2015 Aug) Selected vitamin D metabolic gene variants and risk for autism spectrum disorders in the CHARGE Study. Early Human Development. 91(8):483-489. PMID: 26073892.

Schmidt RJ, Tancredi DJ, Krakowiak P, Hansen RL, Ozonoff S. (2014 Nov 1). Maternal Intake of Supplemental Iron and Risk for Autism Spectrum Disorders. Am J Epidemiol. l80(9):890-900. Published online Sep 22, 2014. PMID: 25249546; PMCID: PMC4207718.

Mitchell MM, Woods R, Chi L-H, Schmidt RJ, Pessah IN, Kostyniak PJ, and LaSalle JM. Levels of select PCB and PBDE congeners in human postmortem brain reveal possible environmental involvement in 15q11-q13 duplication autism spectrum disorder. Environmental and Molecular Mutagenesis Published Online, Aug 29, 2012.

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Schmidt RJ, Hertz-Picciotto I, Hartiala J, Allayee H, Schmidt L, Hansen RL, Tassone F. (2012) Selected vitamin D metabolic gene variants and risk for autism spectrum disorders in the CHARGE Study. [Abstract] Journal of Womens Health: 21(10): 1000.

Schmidt RJ, Tancredi DJ, Ozonoff S, Hansen RL, Hartiala J, Allayee H, Schmidt LC, Tassone F, Hertz-Picciotto I. Maternal periconceptional folic acid intake and risk of autism spectrum disorders and developmental delay in the CHARGE (CHildhood Autism Risks from Genetics and Environment) case-control study. Am J Clin Nutr. Published Online May 30, 2012.

Schmidt RJ, Hansen RL, Hartiala J, Allayee H, Schmidt L, Tancredi DJ, Tassone F, Hertz-Picciotto I (2011). Prenatal vitamins, functional one-carbon metabolism gene variants, and risk for autism in the CHARGE Study. Epidemiology 22(4): 476-485. Published Online, May 24, 2011

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