



## David Randal Hessel, Ph.D.

### Philosophy of Care

My philosophy is first to be a good listener, to really appreciate the patient's perspective, their developmental background, and to approach children and those with disabilities at their level. I enjoy using humor and a casual style to connect with these patients. I always try to bring knowledge of disabilities through scientific inquiry into the assessment process.

### Clinical Interests

Dr. Hessel is a clinical psychologist offering assessment, treatment recommendations and consultation to individuals with neurodevelopmental disorders. He has special clinical interest and expertise in fragile X-associated disorders, autism, ADHD, Down syndrome and intellectual disability.

### Research/Academic Interests

Dr. Hessel directs the Translational Psychophysiology and Assessment Laboratory (T-PAL) at the MIND Institute to investigate the emotional psychophysiology of children with neurodevelopmental disorders, and to develop novel outcome measures for clinical trials. He also conducts collaborative studies with other researchers, investigating brain imaging, molecular genetics and neuropsychology in an effort to understand links between genetics, brain function and behavior. His research focus is primarily on fragile X-associated disorders, such as fragile X syndrome and fragile X-associated tremor ataxia syndrome (FXTAS). His lab has contributed to the refinement or development of cognitive and behavioral assessments for people with disabilities.

**Title** Professor, Division of Clinical Psychiatry

**Specialty** Clinical Psychology, Neurodevelopmental Disorders, Autism

**Department** [Psychiatry and Behavioral Sciences](#)

**Division** Psychiatry  
Clinical Psychologist

**Center/Program Affiliation** [UC Davis MIND Institute](#)  
[Center for Neuroscience](#)

**Address/Phone** UC Davis MIND Institute, 2825 50th St. Sacramento, CA 95817

**Additional Phone** Clinic Phone: 916-703-0300  
Physician Referrals: 800-4-UCDAVIS (800-482-3284)

**Education** Ph.D., Child Clinical Psychology and Developmental Psychology, University of Washington, Seattle WA 1997  
M.S., Child Clinical Psychology, University of Washington, Seattle WA 1995  
B.A., UCLA, Los Angeles CA 1989



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**Internships** Lucile Packard Children's Hospital/Children's Health Council, Stanford University School of Medicine, Stanford CA 1996-1997

**Fellowships** UC Berkeley, Berkeley CA 1997-1998

**Board Certifications** Psychologist

**Professional Memberships** American Psychological Association  
International Society for Autism Research

**Honors and Awards** The John Merck Fun's Developmental Disabilities Translational Research Program Scholar, 2012  
Jarrett Cole Clinical Award, National Fragile X Foundation, for "Dedicated Service to Families in the Worldwide Fragile X Community", 2012  
Dean's Team Award for Excellence, UC Davis School of Medicine, 2009  
UC Davis finalist – John Merck Scholars Program, Biology of Developmental Disabilities in Children, 2008  
UC Davis Academic Senate Research Travel Award, 2008

**Select Recent Publications** Zafarullah M, Durbin-Johnson B, Fourie ES, Hessel DR, Rivera SM, Tassone F. Metabolomic Biomarkers Are Associated With Area of the Pons in Fragile X Premutation Carriers at Risk for Developing FXTAS. *Front Psychiatry*. 2021 Aug 16;12:691717. doi:10.3389/fpsy.2021.691717. PMID:34483988.

Kaat AJ, McKenzie FJ, Shields RH, LaForte E, Coleman J, Michalak C, Hessel DR. Assessing processing speed among individuals with intellectual and developmental disabilities: A match-to-sample paradigm. *Child Neuropsychol*. 2022 Jan;28(1):1-13. doi:10.1080/09297049.2021.1938987. Epub 2021 Jun 14. PMID:34126855.

Hessel D, Libero L, Schneider A, Kerns C, Winder-Patel B, Heath B, Lee J, Coleman C, Sharma N, Solomon M, Nordahl CW, Amaral DG. Fear Potentiated Startle in Children With Autism Spectrum Disorder: Association With Anxiety Symptoms and Amygdala Volume. *Autism Res*. 2021 Mar;14(3):450-463. doi:10.1002/aur.2460. Epub 2020 Dec 29. PMID:33372389.

Solomon M, Gordon A, Iosif AM, Gedder R, Krug MK, Mundy P, Hessel D. Using the NIH Toolbox to Assess Cognition in Adolescents and Young Adults with Autism Spectrum Disorders. *Autism*



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Res. 2021 Mar;14(3):500-511. doi:10.1002/aur.2399. Epub 2020 Oct 2. PMID:33006263.

Westmark CJ, Kniss C, Sampene E, Wang A, Milunovich A, Elver K, Hessel D, Talboy A, Picker J, Haas-Givler B, Esler A, Gropman AL, Uy R, Erickson C, Velinov M, Tartaglia N, %26amp%3B Berry-Kravis EM. Soy-based infant formula is associated with an increased prevalence of comorbidities in fragile X syndrome. *Nutrients*. 2020;12(10):3136. doi:10.3390/nu12103136.

Zafarullah M, Palczewski G, Rivera SM, Hessel DR, Tassone F. Metabolic profiling reveals dysregulated lipid metabolism and potential biomarkers associated with the development and progression of Fragile X-Associated Tremor/Ataxia Syndrome (FXTAS). *FASEB J*. 2020 Dec;34(12):16676-16692. doi:10.1096/fj.202001880R. Epub 2020 Nov 1. PMID:33131090.

Scott H, Harvey DJ, Li Y, McLennan YA, Johnston CK, Shickman R, Piven J, Schweitzer JB, Hessel D. Cognitive Training Deep Dive: The Impact of Child, Training Behavior and Environmental Factors within a Controlled Trial of Cogmed for Fragile X Syndrome. *Brain Sci*. 2020 Sep 25;10(10):E671. doi:10.3390/brainsci10100671. PMID:32992879.

Luu S, Province H, Berry-Kravis E, Hagerman R, Hessel D, Vaidya D, Lozano R, Rosselot H, Erickson C, Kaufmann WE, Budimirovic DB. Response to Placebo in Fragile X Syndrome Clinical Trials: An Initial Analysis. *Brain Sci*. 2020 Sep 11;10(9):629. doi:10.3390/brainsci10090629. PMID:32932789.

Schneider A, Summers S, Tassone F, Seritan A, Hessel D, Hagerman P %26amp%3B Hagerman RJ. Women with fragile X-associated tremor/ataxia syndrome. *Movement Disorders Clinical Practice*. 2020 Aug 31;7(8):910-919. doi:10.1002/mdc3.13084.

Zafarullah M, Tang H, Durbin-Johnson B, Fourie E, Hessel D, Rivera SM, %26amp%3B Tassone F. FMR1 locus isoforms: Potential biomarker candidates in fragile X-associated tremor/ataxia syndrome (FXTAS). *Scientific Reports*. 2020 Jul 6;10 (1):11099.



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