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Personal information

Place and date of birth: Seville, Spain. 8 August 1969.

Citizenship: Spanish.

Degrees

B. Sc., Neural Science, Brown University, Providence, RI, 1992

M. A., Behavioral Genetics, University of Colorado, Boulder, 1997

Ph. D., Behavioral Genetics, University of Colorado, Boulder, 2000

Honors and awards

Student Bursary, Behavior Genetics Association, 1994, 1998.

Travel Grant, Graduate School, University of Colorado, 1995, 1996, 1998, 1999.

Non-Resident Tuition Differential Fellowship Award, University of Colorado, 1994-95, 1995-96, and 1996-97.

Thompson Award, for outstanding research accomplishment by an associate member, Behavior Genetics Association, Stockholm, Sweden, 1998.

Professional experience

1992-93 Research Technician, Center for Morphometric Analysis, Neuroscience Center, Massachusetts General Hospital, Harvard Medical School, Boston, MA.

1993-2000 Teaching Assistant, General Psychology (4 semesters), Statistics and Research Methods (7 semesters), Concepts in Behavioral Genetics (2 semesters), University of Colorado.

1994-2000 Research Graduate Assistant, Institute for Behavioral Genetics, University of Colorado.

2000-2001 Research Associate, Institute for Behavioral Genetics and Department of Psychology, University of Colorado.

2001-2002 Statistical consultant, University of Kansas.

2001-present Research Scientist, Bioinformatics and Statistical Genetics, Wellcome Trust Centre for Human Genetics, University of Oxford.

Other skills

Languages: Fluent in Spanish (Native tongue) and English. Basic Italian and French.

Computer skills: Programming in Fortran, Perl and Pascal; Knowledge of various statistical (SPSS, SAS, and Mx) and genetic (Sage, Genhunter, Merlin, QTDT, etc.) software packages. User experience in Macintosh, Windows, and Unix environments.

Articles

1. Gayán J., Smith S.D., Cherny S.S., Cardon L.R., Fulker D.W., Brower A.M., Olson R.K., Pennington B.F., and DeFries J.C. (1999). Quantitative trait locus for specific language and reading deficits on chromosome 6p. *American Journal of Human Genetics*, 64(1): 157-164.
2. Castles A., Datta H., Gayán J., and Olson R.K. (1999). Varieties of developmental reading disorder: genetic and environmental influences. *Journal of Experimental Child Psychology*, 72(2): 73-94.
3. Gayán J. and Olson R.K. (1999). Reading disability: evidence for a genetic etiology. *European Child and Adolescent Psychiatry*, 8(Suppl. 3):52-55.
4. Kuntsi J., Gayán J., and Stevenson J. (2000). Parents' and teacher's ratings of problem behaviours in children: genetic and contrast effects. *Twin Research*, 3(4):251-258.
5. Gayán J. (2001). La evolución del estudio de la dislexia (The evolution of research on dyslexia). *Anuario de Psicología*, 32(1):3-30.
6. Smith S.D., Kelley P.M., Askew J.W., Hoover D.M., Deffenbacher K.E., Gayán J., Brower A.M., Olson R.K. (2001). Reading disability and chromosome 6p21.3: Evaluation of MOG as a candidate gene. *Journal of Learning Disabilities*, 34(6):512-519.
7. Davis C.J., Gayán J., Knopik V.S., Smith S.D., Cardon L.R., Pennington B.F., Olson R.K., DeFries J.C. (2001). Etiology of reading difficulties and rapid naming: the Colorado Twin Study of Reading Disability. *Behavior Genetics*, 31(6):625-635.
8. Gayán J. and Olson R.K. (2001). Genetic and environmental influences on orthographic and phonological skills in children with reading disabilities. *Developmental Neuropsychology*, 20(2):483-507.
9. Fisher S.E., Francks C., Marlow A.J., MacPhie I.L., Newbury D.F., Cardon L.R., Ishikawa-Brush Y., Richardson A.J., Talcott J.B., Gayán J., Olson R.K., Pennington B.F., Smith S.D., DeFries J.C., Stein J.F. and Monaco A.P. (2002). Independent genome-wide scans identify a chromosome 18 quantitative-trait locus influencing dyslexia. *Nature Genetics*, 30(1):86-91.
10. Willcutt E.G., Pennington B.F., Smith S.D., Cardon L.R., Gayán J., Knopik V.S., Olson R.K., and DeFries J.C. (2002). Quantitative trait locus for reading disability on chromosome 6p is pleiotropic for attention-deficit/hyperactivity disorder. *American Journal of Medical Genetics (Neuropsychiatric Genetics)*, 114(3):260-268.
11. Kaplan D.E., Gayán J., Ahn J., Won T.-W., Pauls D., Olson R.K., DeFries J.C., Wood F., Pennington B.F., Page G.P., Smith S.D. and Gruen J.R. (2002). Evidence for linkage and association with reading disability on 6p21.3-22. *American Journal of Human Genetics*, 70(5):1287-1298.

12. Knopik V.S., Smith S.D., Cardon L., Pennington B., Gayan J., Olson R.K. and DeFries J.C. (2002). Differential Genetic Etiology of Reading Component Processes as a Function of IQ. *Behavior Genetics*, 32(3):181-198.
13. Gayán J. and Olson R.K. (2003). Genetic and Environmental Influences on Individual Differences in Printed Word Recognition. *Journal of Experimental Child Psychology*, 84(2):97-123.
14. N.S. Wexler, J. Lorimer, J. Porter, F. Gomez, C. Moskowitz, E. Shackell, K. Marder, G. Penchaszadeh, S.A. Roberts, J. Gayán, D. Brocklebank, S.S. Cherny, L.R. Cardon, J. Gray, S.R. Dlouhy, S. Wiktorski, M.E. Hodes, P.M. Conneally, J.B. Penney, J. Gusella, J.H. Cha, M. Irizarry, D. Rosas, S. Hersch, Z. Hollingsworth, M. MacDonald, A.B. Young, J.M. Andresen, D.E. Housman, M. Mieja de Young, E. Bonilla, T. Stillings, A. Negrette, S.R. Snodgrass, M.D. Martinez-Jaurieta, M.A. Ramos-Arroyo, J. Bickham, J. Sanchez Ramos, F. Marshall, I. Shoulson, G.J. Rey, A. Feigin, N. Arnheim, A. Acevedo-Cruz, L. Acosta, J. Alvir, K. Fischbeck, L.M. Thompson, A. Young, L. Dure, C.J. O'Brien, J. Paulsen, A. Brickman, D. Krch, S. Peery, P. Hogarth, D.S. Higgins Jr., and B. Landwehrmeyer (2004). Venezuelan kindreds reveal that genetic and environmental factors modulate Huntington's disease age of onset. *Proceedings of the National Academy of Sciences of the United States of America*, 101(10):3498-3503.
15. Gayán J., Willcutt E.G., Fisher S.E., Francks C., Cardon L.R., Olson R.K., Pennington B.F., Smith S.D., Monaco A.P., and DeFries J.C. (inpress). Bivariate linkage scan for reading disability and attention-deficit/hyperactivity disorder localizes pleiotropic loci. *Journal of Child Psychology and Psychiatry*, .

Abstracts

1. Gayán J., Forsberg H., and Olson R.K. (1994). Genetic Influences on Subtypes of Dyslexia. *Behavior Genetics*, 24(6):513.
2. Gayán J., Olson R.K., Cardon L.R., Smith S.D., Fulker D.W., Kimberling W.J., Pennington B.F., and DeFries J.C. (1995). Quantitative Trait Locus for Different Measures of Reading Disability. *Behavior Genetics*, 25(3):266.
3. Filipek P.A., Pennington B.F., Holmes J.L., Leffly D., Kennedy D.N., Meyer J.W., Lang J.E., Gayán J., Galaburda A.M., Simon J.M., Filley C.M., Caviness V.S., and DeFries J.C. (1995). Developmental Dyslexia - Cortical and Subcortical Anomalies by Magnetic-Resonance Imaging-Based Morphometry. *Annals of Neurology*, 38(3):509 September 95.
4. Olson R.K. and Gayán J. (1996). Independent and shared genetic influences on orthographic and phonological skills. *Psychonomic Society*, 1:74.
5. Gayán J. and Olson R.K. (1997). Common and Specific Genetic Effects on Reading Measures. *Behavior Genetics*, 27(6):589-590.
6. Gayán J., Smith S.D., Cherny S.S., Cardon L.R., Fulker D.W., Kimberling W.J., Olson R.K., Pennington B.F., and DeFries J.C. (1998). Quantitative Trait Locus for Specific Language and Reading Deficits on Chromosome 6p. *Behavior Genetics*, 28(6):469.

7. Gayán J. and Olson R.K. (1999). Behavioral Genetic Analyses of Individual Differences in Printed Word Recognition, Phonological and Orthographic Coding, Phoneme Awareness, and IQ. *Behavior Genetics*, 29(5):356.
8. Cross R.J., Gayán J., DeFries, J.C. and Olson R.K. (2001). Differential Genetic Etiology of Reading Disability as a Function of Processing Speed. *Behavior Genetics*, 31(5):450.
9. Davis C.J., Gayán J., Knopik V.S., Smith S.D., Cardon L.R., Pennington B.F., Olson R.K. and DeFries, J.C. (2001). Reading Difficulties and Rapid Naming: Bivariate Twin and Genetic Linkage Analyses. *Behavior Genetics*, 31(5):451.
10. Davis C.J., Fisher S.E., Francks C., MacPhie I.L., Gayán J., Smith S.D., Cardon L.R., Pennington B.F., Olson R.K., Monaco A.P., and DeFries J.C. (2002). Bivariate Linkage Analyses for Reading Difficulties and Rapid Naming. *Behavior Genetics*, 32(6):462.
11. Fisher S.E., Francks C., Marlow A.J., MacPhie I.L., Newbury D.F., Cardon L.R., Ishikawa-Brush Y., Richardson A.J., Talcott J.B., Gayán J., Olson R.K., Pennington B.F., Smith S.D., DeFries J.C., Stein J.F. and Monaco A.P. (2002). Quantitative trait analysis of the entire genome in large samples of dyslexic sib-pairs from the UK and US. *Behavior Genetics*, 32(6):464.
12. Gayán J., Kaplan D.E., Ahn J., Won T.-W., Pauls D., Olson R.K., DeFries J.C., Wood F., Pennington B.F., Page G.P., Smith S.D. and Gruen J.R. (2002). Fine Mapping Linkage and Association Analyses of Reading Disability in the 6p21.3-22 Region. *Behavior Genetics*, 32(6):465-466.
13. J. Gayán and The U.S.-Venezuela Collaborative Research Project (2004). Genetic and environmental factors influence Huntington's disease age of onset. *Behavior Genetics*, 34(6):640.
14. Gayán J., Willcutt E.G., Fisher S.E., Francks C., Cardon L.R., Olson R.K., Pennington B.F., Smith S.D., Monaco A.P., and DeFries J.C. (2004). Bivariate linkage scan for reading disability and attention-deficit/hyperactivity disorder. *Behavior Genetics*, 34(6):640.

Book chapters

1. Olson R.K., Datta H., Gayán J., and DeFries J.C. (1999). A Behavioral-Genetic Analysis of Reading Disabilities and Component Processes. In R.M. Klein and P.A. McMullen (Eds.), *Converging Methods for Understanding Reading and Dyslexia* (p. 133-151). MIT Press, Cambridge, MA.
2. Olson R.K. and Gayan J. (2001). Brains, Genes, and Environment in Reading Development. In S. Neuman and D. Dickinson (Eds.). *Handbook of Early Literacy Research* (p. 81-94). The Guilford Press, New York, NY.
3. Compton D.L., Davis C.J., DeFries J.C., Gayán J. and Olson R.K. (2001). Genetic and Environmental Influences on Reading and RAN: An Overview of Results from the Colorado Twin Study. In M. Wolf (Ed.). *Conference proceedings of Dyslexia Research Foundation Conference in Extraordinary Brain Series: Time, Fluency, and Developmental Dyslexia* (pp. 277-303). York Press, Baltimore.

Conference presentations

- Gayán J., Forsberg H., and Olson R.K. Genetic Influences on Subtypes of Dyslexia. Paper presented at the *24th Annual Meeting of the Behavior Genetics Association*, Barcelona, Spain, 7-10 July 1994.
- Gayán J., Olson R.K., Cardon L.R., Smith S.D., Fulker D.W., Kimberling W.J., Pennington B.F., and DeFries J.C. Quantitative Trait Locus for Different Measures of Reading Disability. Poster presented at the *25th Annual Meeting of the Behavior Genetics Association*, Richmond, Virginia, USA, 31 May-1 June 1995.
- Gayán J., Datta H.E., Castles A.E., and Olson R.K. The Etiology of Group Deficits in Word Decoding across levels of Phonological Decoding and Orthographic Coding. Paper presented at the *1997 Annual Meeting of the Society for the Scientific Study of Reading*, Chicago, Illinois, USA 22-24 March 1997.
- Gayán J. and Olson R.K. Common and Specific Genetic Effects on Reading Measures. Poster presented at the *27th Annual Meeting of the Behavior Genetics Association*, Toronto, Ontario, Canada, 10-13 July 1997.
- Gayán J., Smith S.D., Cherny S.S., Cardon L.R., Fulker D.W., Kimberling W.J., Olson R.K., Pennington B.F., and DeFries J.C. Genetic Influences and Linkage on Chromosome 6p for Specific Language and Reading Deficits. Paper presented at the *International Symposium on Genetics of Reading and Spelling Disability*, Marburg, Germany, 6-8 March 1998.
- Gayán J., Smith S.D., Cherny S.S., Cardon L.R., Fulker D.W., Kimberling W.J., Olson R.K., Pennington B.F., and DeFries J.C. A Genetic Locus for Deficits in Component Reading Skills. Paper presented at the *1998 Annual Meeting of the Society for the Scientific Study of Reading*, San Diego, California, USA, 17-19 April 1998.
- Gayán J., Smith S.D., Cherny S.S., Cardon L.R., Fulker D.W., Kimberling W.J., Olson R.K., Pennington B.F., and DeFries J.C. Quantitative Trait Locus for Specific Language and Reading Deficits on Chromosome 6p. Paper presented at the *28th Annual Meeting of the Behavior Genetics Association*, Stockholm, Sweden, 7-10 June 1998.
- Gayán J. and Olson R.K. Genetic and Environmental Influences on Individual Differences in IQ, Phoneme Awareness, Word Recognition, Phonological and Orthographic Coding. Poster presented at the *1999 Annual Meeting of the Society for the Scientific Study of Reading*, Montreal, Canada, 23-25 April 1999.
- Gayán J. and Olson R.K. Behavioral Genetic Analyses of Individual Differences in Printed Word Recognition, Phonological and Orthographic Coding, Phoneme Awareness, and IQ. Poster presented at the *29th Annual Meeting of the Behavior Genetics Association*, Vancouver, Canada, 4-7 July 1999.
- Gayán J. and Olson R.K. Genetic and Environmental Influences on Group Deficits in Reading Disability. Paper presented at the *2001 Annual Meeting of the Society for the Scientific Study of Reading*, Boulder, Colorado, USA, May 31-June 3 2001.
- Gayán J., Kaplan D.E., Ahn J., Won T.-W., Pauls D., Olson R.K., DeFries J.C., Wood F., Pennington B.F., Page G.P., Smith S.D. and Gruen J.R. (2002). Fine Mapping Linkage and Association Analyses of Reading Disability in the 6p21.3-22 Region. Poster presented at the

32th Annual Meeting of the Behavior Genetics Association, Keystone, Colorado, USA, 3-6 July 2002.

J. Gayán and The U.S.-Venezuela Collaborative Research Project (2004). Genetic and environmental factors influence Huntington's disease age of onset. Paper presented at the *34th Annual Meeting of the Behavior Genetics Association*, Aix-en-Provence, France, 27-30 June 2004.

Gayán J., Willcutt E.G., Fisher S.E., Francks C., Cardon L.R., Olson R.K., Pennington B.F., Smith S.D., Monaco A.P., and DeFries J.C. (2004). Bivariate linkage scan for reading disability and attention-deficit/hyperactivity disorder. Paper presented at the *34th Annual Meeting of the Behavior Genetics Association*, Aix-en-Provence, France, 27-30 June 2004.

Conferences and workshops attended

Sixth International Workshop on the Methodology of Twin and Family Studies, Boulder, Colorado, USA, March 1994

24th Annual Meeting of the Behavior Genetics Association, Barcelona, Spain, July 1994

25th Annual Meeting of the Behavior Genetics Association, Richmond, Virginia, USA, May-June 1995

1997 Annual Meeting of the Society for the Scientific Study of Reading, Chicago, Illinois, USA, March 1997

27th Annual Meeting of the Behavior Genetics Association, Toronto, Ontario, Canada, July 1997

International Symposium on Genetics of Reading and Spelling Disability, Marburg, Germany, March 1998

1998 Annual Meeting of the Society for the Scientific Study of Reading, San Diego, California, USA, April 1998

28th Annual Meeting of the Behavior Genetics Association, Stockholm, Sweden, June 1998

48th Annual Meeting of the American Society of Human Genetics, Denver, Colorado, USA, October 1998

Twelfth International Workshop on the Methodology of Twin and Family Studies, Boulder, Colorado, USA, March 1999

1999 Annual Meeting of the Society for the Scientific Study of Reading, Montreal, Canada, April 1999

29th Annual Meeting of the Behavior Genetics Association, Vancouver, Canada, July 1999

Second International Meeting on the Genetic Epidemiology of Complex Traits, Cambridge, England, April 2000

The Future of Behavioural Genetics in a Post-Genomics World, Hinxton, England, March 2001

2001 Annual Meeting of the Society for the Scientific Study of Reading, Boulder, Colorado, USA, May-June 2001

32th Annual Meeting of the Behavior Genetics Association, Keystone Resort, Colorado, USA,
July 2002

34th Annual Meeting of the Behavior Genetics Association, Aix-en-Provence, France, June 2004

Refereed for journals

American Journal of Human Genetics

American Journal of Medical Genetics (Neuropsychiatric Genetics)

Behavior Genetics

Child Development

Journal of Child Psychology and Psychiatry

Journal of Medical Genetics

Neurogenetics

Scientific Studies of Reading

References

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