

## References

- Abney, M., McPeck, M. S., & Ober, C. (2001). Broad and narrow heritabilities of quantitative traits in a founder population. *American Journal of Human Genetics*, *68*, 1302–1307.
- American Psychiatric Association (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: American Psychiatric Association.
- Anderson, G. M. (2007). Measurement of plasma serotonin in autism. *Pediatric Neurology*, *36*(2), 138.
- Anderson, G. M. (2008). The potential role for emergence in autism. *Autism Research*, *1*, 18–31.
- Anderson, G. M. (2009). Conceptualizing autism: The role for emergence. *Journal of the American Academy of Child and Adolescent Psychiatry*, *48*, 688–691.
- Anderson, G. M., Horne, W. C., Chatterjee, D., & Cohen, D. J. (1990). The hyperserotonemia of autism. *Annals of the New York Academy of Sciences*, *600*, 331–342.
- Anderson, G. M., Stevenson, J. M., & Cohen, D. J. (1987). Steady-state model for plasma free and platelet serotonin in man. *Life Sciences*, *41*, 1777–1785.
- Anderson, G. M., Scahill, L., McCracken, J. T., McDougle, C. J., Aman, M. G., Tierney, E., et al. (2008). Effects of short- and long-term risperidone treatment on prolactin levels in children with autism. *Biological Psychiatry*, *61*, 545–550.
- Antzoulatos E., Gibbs T., Pugh J., et al. *Serotonin receptors in the autistic brain, international meeting for Autism research (IMFAR 2005)*. Boston, 2005.
- Bailey, A., LeCouteur, A., Gottesman, I., Bolton, P., Simonoff, E., Yuzda, E., et al. (1995). Autism as a strongly genetic disorder: Evidence from a British twin study. *Psychological Medicine*, *25*, 63–77.
- Blatt, G. J., Fitzgerald, C. M., Guptill, J. T., Booker, A. B., Kemper, T. L., & Bauman, M. L.

- (2001). Density and distribution of hippocampal neurotransmitter receptors in autism: An autoradiographic study. *Journal of Autism and Developmental Disorders*, *31*, 537–543.
- Brkanac, Z., Raskind, W. H., & King, B. H. (2008). Pharmacology and genetics of autism: Implications for diagnosis and treatment. *Personalized Medicine*, *5*, 599–607.
- Bubenik, G. A. (2002). Gastrointestinal melatonin: Localization, function, and clinical relevance. *Digestive Diseases and Sciences*, *47*, 2336–2348.
- Carneiro, A. M., & Blakely, R. D. (2006). Serotonin-, protein kinase C-, and Hic-5-associated redistribution of the platelet serotonin transporter. *The Journal of Biological Chemistry*, *281*, 24769–24780.
- Carneiro, A. M., Cook, E. H., Murphy, D. L., (2008). Interactions between integrin alphaIIb beta3 and the serotonin transporter regulate serotonin transport and platelet aggregation in mice and humans. *The Journal of Clinical Investigation*, *118*, 1544–1552.
- Chrousos, G. P., & Gold, P. W. (1992). The concepts of stress and stress system disorders. Overview of physical and behavioral homeostasis. *JAMA: The Journal of the American Medical Association*, *267*, 1244–1252.
- Chugani, D. C., Muzik, O., Behen, M., et al. (1999). Developmental changes in brain serotonin synthesis capacity in autistic and nonautistic children. *Annals of Neurology*, *45*, 287–295.
- Cook, E. H. (1990). Autism: Review of neurochemical investigation. *Synapse*, *6*, 292–308.
- Cook, E. H. (2001). Genetics of autism. *Child and Adolescent Psychiatric Clinics of North America*, *10*, 333–350.
- Cook, E. H., Jr., Arora, R. C., Anderson, G. M., et al. (1993). Platelet serotonin studies in hyperserotonemic relatives of children with autistic disorder. *Life Sciences*, *52*, 2005–

2015.

- Cook, E., Leventhal, B. (1996). The serotonin system in autism. *Current Opinion in Pediatrics*, 8, 348–354.
- Cote, F., Fligny, C., Bayard, E., Launay, J. M., Gershon, M. D., Mallet, J., et al. (2007). Maternal serotonin is crucial for murine embryonic development. *Proceedings of the National Academy of Sciences of the United States of America*, 104, 329–334.
- Deutsch, S. I., Urbano, M. R., Neumann, S. A., Burket, J. A., & Katz, E. (2010). Cholinergic abnormalities in autism: Is there a rationale for selective nicotinic agonist interventions?. *Clinical Neuropharmacology*, 33, 114–120.
- Dykens, E. M., & Volkmar, F. R. (1997). Medical conditions associated with autism. In D. J. Cohen & F. R. Volkmar (Eds.), *Handbook of Autism and pervasive developmental 3s* (pp. 388–407) (2nd ed.). New York: Wiley.
- Erickson, C. A., Posey, D. J., Stigler, K. A., & McDougle, C. J. (2007). Pharmacologic treatment of autism and related disorders. *Pediatric Annals*, 36, 575–585.
- Ernst, M., Zametkin, A. J., Matochik, J. A., Pascualvaca, D., & Cohen, R. M. (1997). Reduced medial prefrontal dopaminergic activity in autistic children. *Lancet*, 350, 638.
- Erspamer, V., & Asero, B. (1952). Identification of enteramine, the specific hormone of the enterochromaffin cell system, as 5-hydroxytryptamine. *Nature*, 169, 800–801.
- Esbensen, A. J., & Greenberg, J. S. Seltzer MM, Aman MG. (2009). A longitudinal investigation of psychotropic and non-psychotropic medication use among adolescents and adults with autism spectrum disorders. *Journal of Autism and Developmental Disorders*, 39, 1339–

1349.

- Fatemi, S. H. (2001). Reelin mutations in mouse and man: From Reeler mouse to schizophrenia, mood disorders, autism and lissencephaly. *Molecular Psychiatry*, 6, 129–133.
- Fombonne, E. (2009). Epidemiology of pervasive developmental disorders. *Pediatric Research*, 65, 591–598.
- Folstein, S. E., & Rosen-Sheidley, B. (2001). Genetics of autism: Complex aetiology for a heterogeneous disorder. *Nature Reviews Genetics*, 2, 943–955.
- Folstein, S. E., & Rutter, M. (1977). Infantile autism: A genetic study of 21 twin pairs. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, 18, 297–321.
- Goldberg, J., Anderson, G. M., & Zwaigenbaum, L., et al. (2009). Cortical serotonin type-2 receptor density in parents of children with autism spectrum disorders. *Journal of Autism and Developmental Disorders*, 39, 97–104.
- Gottesman, I. I., & Hanson, D. R. (2005). Human development: Biological and genetic processes. *Annual Review of Psychology*, 56, 263–286.
- Gupta, A. R., & State, M. W. (2007). Recent advances in the genetics of autism. *Biological Psychiatry*, 61, 429–437.
- Happé, F., Ronald, A., & Plomin, R. (2006). Time to give up on a single explanation for autism. *Nature Neuroscience*, 9, 1218–1220.
- IGDA Workgroup, WPA (2003). IGDA. 8: Idiographic (personalized) diagnostic formulation. *The British Journal of Psychiatry. Supplement*, 45, s55–s57.
- Kanner, L. (1943). Autistic disturbances of affective contact. *Nervous Child*, 2, 217–243.
- King, B. H., Hollander, E., Sikich, L., et al. (2009). Lack of efficacy of citalopram in children with autism spectrum disorders and high levels of repetitive behavior: Citalopram

- ineffective in children with autism. *Archives of General Psychiatry*, 66, 583–590.
- Lam, K. S., Aman, M. G., & Arnold, L. E. (2006). Neurochemical correlates of autistic disorder: A review of the literature. *Research in Developmental Disabilities*, 27(3), 254–289.
- Launay, J. M., Burzstein, C., Ferrari, P., Dreux, C., Braconnier, A., Zarifian, E., et al. (2001). The genetics of autism. *Acta Psychiatrica Scandinavica*, 103, 411–427.
- Lord, C. (2011). Epidemiology: How common is autism? *Nature*, 474(7350), 166–168. doi: 10.1038/474166a.
- Lykken, D. T. (2006). The mechanism of emergences. *Genes, Brain & Behavior*, 5, 306–310.
- Martin, A., Scahill, L., Klin, A., & Volkmar, F. R. (1999). Higher-functioning pervasive developmental disorders: Rates and patterns of psychotropic drug use. *Journal of the American Academy of Child and Adolescent Psychiatry*, 38, 923–931.
- McBride, P. A., Anderson, G. M., Hertzog, M. E., Sweeney, M. E., Kream, J., Cohen, D. J., et al. (1989). Serotonergic responsivity in male young adults with autistic disorder: Results of a pilot study. *Archives of General Psychiatry*, 46, 213–221.
- McBride, P. A., Anderson, G. M., & Shapiro, T. (1996). Autism research; bringing together approaches to pull apart the disorder. *Archives of General Psychiatry*, 53, 980–983.
- McCracken, J. T., McGough, J., Shah, B., et al. (2002). Risperidone in children with autism and serious behavioral problems. *The New England Journal of Medicine*, 347, 314–321.
- McDougle, C. J., Erickson, C. A., Stigler, K. A., & Posey, D. J. (2005). Neurochemistry in the pathophysiology of autism. *The Journal of Clinical Psychiatry*, 66(Suppl. 10), 9–18.
- McDougle, C., Naylor, S., Cohen, D., et al. (1996). Effects of tryptophan depletion in drug-free adults with autistic disorder. *Archives of General Psychiatry*, 53, 993–1000.
- Meehl, P. E. (1979). A funny thing happened on the way to the latent entities. *Journal of*

*Personality Assessment*, 43, 564–577.

- Minderaa, R. B., Anderson, G. M., Volkmar, F. R., Harcherik, D., Akkerhuis, G. W., & Cohen, D. J. (1989). Neurochemical study of dopamine functioning in autistic and normal subjects. *Journal of the American Academy of Child and Adolescent Psychiatry*, 28, 200–206.
- Minderaa, R. B., Anderson, G. M., Volkmar, F. R., Akkerhuis, B. S., & Cohen, D. J. (1994). Noradrenergic and adrenergic functioning in autism. *Biological Psychiatry*, 36, 237–241.
- Minschew, N. J., Sweeney, J. A., & Bauman, M. L. (1997). Neurological aspects of autism. In D. J. Cohen & F. Volkmar (Eds.), *Handbook of aut and pervasive dev dis* (pp. 344–369) (2nd ed.). New York: Wiley.
- Mulder, E. J., Anderson, G. M., Kema, I. P., et al. (2004). Platelet serotonin levels in pervasive developmental disorders and mental retardation: Diagnostic group differences, within-group distribution, and behavioral correlates. *Journal of the American Academy of Child and Adolescent Psychiatry*, 43, 491–499.
- Mulder, E. J., Anderson, G. M., Kemperman, R. F., et al. (2009). Urinary excretion of 5-hydroxyindoleacetic acid, serotonin and 6-sulphatoxymelatonin in normoserotonemic and hyperserotonemic autistic individuals. *Neuropsychobiology*, 61(27–32), 2009.
- Murphy, D. G., Daly, E., Schmitz, N., et al. (2006). Cortical serotonin 5-HT<sub>2A</sub> receptor binding and social communication in adults with Asperger's syndrome: An *in vivo* SPECT study. *The American Journal of Psychiatry*, 163, 934–936.
- Narayan, M., Srinath, S., Anderson, G. M., et al. (1993). Cerebrospinal fluid levels of homovanillic acid and 5-hydroxyindoleacetic acid in autism. *Biological Psychiatry*, 33, 630–635.
- Nazeer, A. (2011). Psychopharmacology of autistic spectrum disorders in children and

- adolescents. *Pediatric Clinics of North America*, 58, 85–97.
- Oblak, A. L., Gibbs, T. T., & Blatt, G. J. (2011). Reduced GABAA receptors and benzodiazepine binding sites in the posterior cingulate cortex and fusiform gyrus in autism. *Brain Research*, 22(1380), 218–228.
- Novotny, S., Hollander, E., Allen, A., et al. (2000). Increased growth hormone response to sumatriptan challenge in adult autistic disorders. *Psychiatry Research*, 94, 173–177.
- Osterling, J., & Dawson, G. (1994). Early recognition of children with autism: A study of first birthday home video tapes. *Journal of Autism and Developmental Disorders*, 24, 247–257.
- Perry, E. K., Lee, M. L., Martin-Ruiz, C. M., Court, J. A., Volsen, S. G., Merrit, J., et al. (2001). Cholinergic activity in autism: Abnormalities in the cerebral cortex and basal forebrain. *The American Journal of Psychiatry*, 158, 1058–1066.
- Pickett, J., & London, E. (2005). The neuropathology of autism: A review. *Journal of Neuropathology & Experimental Neurology*, 64, 925–935.
- Polleux, F., & Lauder, J. M. (2004). Toward a developmental neurobiology of autism. *Mental Retardation & Developmental Disabilities Research Reviews*, 10, 303–317.
- Posey, D. J., Erickson, C. A., & McDougle, C. J. (2008). Developing drugs for core social and communication impairment in autism. *Child and Adolescent Psychiatric Clinics of North America*, 17, 787–801.
- Purcell, A. E., Jeon, O. H., Zimmerman, A. W., Blue, M. E., & Pevsner, J. (2001). Postmortem brain abnormalities of the glutamate neurotransmitter system in autism. *Neurol*, 57, 1618–1628.
- Rapin, I. (2002). The autism-spectrum disorders. *The New England Journal of Medicine*, 347,

302–303.

- Rapport, M. M., Green, A. A., & Page, I. H. (1948). Serum vasoconstrictor, serotonin; isolation and characterization. *The Journal of Biological Chemistry*, *176*, 1243–1251.
- Risch, N., Spiker, D., Lotspeich, L., Nouri, N., Hinds, D., Hallmayer, J., et al. (2000). Genetic studies of autism: From the 1970s into the millennium. *Journal of Abnormal Child Psychology*, *28*, 3–14.
- Rutter, M., Bailey, A., Bolton, P., & LeCouteur, A. (1994). Autism and known medical conditions: Myths and substance. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, *35*, 311–322.
- Santangelo, S. L., & Tsatsanis, K. (2005). What is known about autism: Genes, brain, and behavior. *American Journal of Pharmacogenomics*, *5*, 71–92.
- Scahill, L., & Lord, C. (2004). Subject selection and characterization in clinical trials in children with autism. *CNS Spectrums*, *9*, 22–32.
- Schain, R. J., & Freedman, D. X. (1961). Studies on 5-hydroxyindole metabolism in autistic and other mentally retarded children. *The Journal of Pediatrics*, *58*, 315–320.
- Sebat, J., Lakshmi, B., Malhotra, D., Troge, J., Lese-Martin, C., Walsh, T., et al. (2007). Strong association of de novo copy number mutations with autism. *Science*, *316*, 445–449.
- Shoaf, S. E., Carson, R. E., Hommer, D., et al. (2000). The suitability of [11C]-alpha-methyl-L-tryptophan as a tracer for serotonin synthesis: Studies with dual administration of [11C] and [14C] labeled tracer. *Journal of Cerebral Blood Flow and Metabolism: Official Journal of the International Society of Cerebral Blood Flow and Metabolism*, *20*, 244–252.



- Steffenburg, S., Gillberg, C., Hellgren, L., Andersson, L., Gillberg, I. C., Jakobsson, G., et al. (1989). A twin study of autism in Denmark, Finland, Iceland, Norway and Sweden. *Journal of Child Psychology & Psychiatry & Allied Disciplines*, *30*, 405–416.
- The Autism Genome Project Consortium (2007). Mapping autism risk loci using genetic linkage and chromosomal rearrangements. *Nature Genetics*, *39*, 319–328.
- Tordjman, S., Anderson, G. M., McBride, P. A., Hertzog, M. E., Snow, M. E., Hall, L. M., et al. (1997). Plasma B-endorphin, adrenocorticotropin hormone, and cortisol in autism. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, *38*, 705–715.
- Tordjman, S., Anderson, G. M., Pichard, N., Charbuy, H., & Touitou, Y. (2005). Nocturnal excretion of 6-sulphatoxymelatonin in children and adolescents with autistic disorder. *Biological Psychiatry*, *57*, 134–138.
- Volkmar, F. R., Klin, A., Schultz, R., Rubin, E., & Bronen, R. (2000). Clinical Case Conference: Asperger's Disorder. *The American Journal of Psychiatry*, *157*, 262–267.
- Volkmar, F. R., & Nelson, D. S. (1990). Seizure disorders in autism. *Journal of the American Academy of Child and Adolescent Psychiatry*, *1*, 127–129.
- Waterhouse, L., Fein, D., & Modahl, C. (1996). Neurofunctional mechanisms in autism. *Psychological Review*, *103*, 457–489.
- Weiss, L. A., Veenstra-VanderWeele, J., Abney, M., et al. (2004). Genome-wide association study identifies ITGB3 as a QTL for whole blood serotonin. *European Journal of Human Genetics*, *12*(11), 949–954.
- Wing, L., & Wing, J. K. (1971). Multiple impairments in early childhood autism. *Journal of Autism & Childhood Schizophrenia*, *1*, 256–266.

World Health Organization (1992). *The ICD-10 classification of mental and behavioral disorders: Clinical descriptions and diagnostic guidelines*. Geneva: World Health Organization.