DAFTAR PUSTAKA

Abdullahi W, Tripathi D, Ronaldson PT, 2018. Blood-brain barrier dysfunction in ischemic stroke: targeting tight junctions and transporters for vascular protection. American Journal of Physiology-Cell Physiology 315(3):343–356. Available at: https://doi.org/10.1152/ajpcell.00095.2018

Van Aken BC, et al, 2025. A cross-sectional study on the association between executive functions and social disabilities in people with a psychotic disorder. Schizophrenia Research: Cognition 40:100349. Available at: https://doi.org/10.1016/j.scog.2025.100349

Alfimova M, Plakunova VV, Golimbet VE, 2024. Learning Slope and Position Effects in Rey Auditory Verbal Learning Test: Diagnostic Value in Schizophrenia. Clinical Psychology and Special Education 13(3):186–204. Available at: https://doi.org/10.17759/cpse.2024130309

Antoniades M, et al, 2018. Verbal learning and hippocampal dysfunction in schizophrenia: A meta-analysis. Neuroscience & Biobehavioral Reviews 86:166–175. Available at: https://doi.org/10.1016/j.neubiorev.2017.12.001

Arnsten AFT, 2015. Stress weakens prefrontal networks: molecular insults to higher cognition. Nature Neuroscience 18(10):1376–1385. Available at: https://doi.org/10.1038/nn.4087

Ashendorf L, et al, 2008. Trail Making Test errors in normal aging, mild cognitive impairment, and dementia. Archives of Clinical Neuropsychology 23(2):129–137. Available at: https://doi.org/10.1016/j.acn.2007.11.005

Auton A, et al, 2015. A global reference for human genetic variation. Nature 526(7571):68–74. Available at: https://doi.org/10.1038/nature15393

Avram M, et al, 2019. Reduced striatal dopamine synthesis capacity in patients with schizophrenia during remission of positive symptoms. Brain 142(6)1813–1826. Available at: https://doi.org/10.1093/brain/awz093

Avram M, et al, 2020. Aberrant striatal dopamine links topographically with cortico-thalamic dysconnectivity in schizophrenia. Brain 143(11):3495–3505. Available at: https://doi.org/10.1093/brain/awaa296

Baddeley A, 2012. Working Memory: Theories, Models, and Controversies. Annual Review of Psychology 63(1):1–29. Available at: https://doi.org/10.1146/annurev-psych-120710-100422

Barch D, 2019. Mechanisms underlying cognitive impairment in schizophrenia and implications for treatment. Behavioral Neurosciences 44:1–21. Available at: https://doi.org/10.1007/7854_2019_97

Bellucco F, et al, 2014. PRODH Polymorphisms, Cortical Volumes and Thickness in Schizophrenia. PLoS ONE 9(2). Available at: https://doi.org/10.1371/journal.pone.0087686

Białoń M, Wąsik A, 2022. Advantages and Limitations of Animal Schizophrenia Models. International Journal of Molecular Sciences 23(11):5968. Available at: https://doi.org/10.3390/ijms23115968

Bocharova AV, et al, 2017. Association Study of Genetic Markers of Schizophrenia and Its Cognitive Endophenotypes. Available at: https://doi.org/10.1134/S1022795417010033

Borna A, et al, 2016. An Overview of the Factors Affecting the Results of Rey Auditory Verbal Learning Test. 5:282–289

Brébion G, et al, 2004. Semantic Organization and Verbal Memory Efficiency in Patients with Schizophrenia. Neuropsychology 18(2):378–383. Available at: https://doi.org/10.1037/0894-4105.18.2.378

Brugger SP, Howes OD, 2017. Heterogeneity and Homogeneity of Regional Brain Structure in Schizophrenia. JAMA Psychiatry 74(11):1104. Available at: https://doi.org/10.1001/jamapsychiatry.2017.2663

Bushman BJ, Anderson CA, 2002. Violent Video Games and Hostile Expectations: A Test of the General Aggression Model. Personality and

Social Psychology Bulletin 28(12):1679–1686. Available at: https://doi.org/10.1177/014616702237649

Cappelletti P, et al, 2018. Proline oxidase controls proline, glutamate, and glutamine cellular concentrations in a U87 glioblastoma cell line. PLoS One 13(4):1–20. Available at: https://doi.org/10.1371/journal.pone.0196283

Carvalho GA, et al, 2025. Neurobiology of L-proline: From molecules to behavior. Neuroscience 568:116–129. Available at: https://doi.org/10.1016/j.neuroscience.2025.01.036

Castle D, Buckley PF, 2015. Schizophrenia, Oxford Psychiatry Library 128.

Charlson FJ, et al, 2018. Global Epidemiology and Burden of Schizophrenia: Findings From the Global Burden of Disease Study 2016. Schizophrenia Bulletin 44(6):1195–1203. Available at: https://doi.org/10.1093/schbul/sby058

Cheng W, et al, 2021. Genetic Association between Schizophrenia and Cortical Brain Surface Area and Thickness. JAMA Psychiatry 78(9):1020–1030. Available at: https://doi.org/10.1001/jamapsychiatry.2021.1435

Chiu PW, et al, 2018. In vivo gamma-aminobutyric acid and glutamate levels in people with first-episode schizophrenia : A proton magnetic resonance spectroscopy study. Schizophrenia Research 193:295–303. Available at: https://doi.org/10.1016/j.schres.2017.07.021

Ciolek CH, Lee SY, 2020. Cognitive Issues in the Older Adult, in Gucciones Geriatric Physical Therapy. 4th edn. Elsevier 425–452. Available at: https://doi.org/10.1016/B978-0-323-60912-8.00019-1

Cippitelli A, et al, 2022. PPL-138 (BU10038): A bifunctional NOP/mu partial agonist that reduces cocaine self-administration in rats. Neuropharmacology 211:109045. Available at: https://doi.org/10.1016/j.neuropharm.2022.109045

Clelland CL, et al, 2012. and a Measure of Clinical Outcome, 131:139–145. Available at: https://doi.org/10.1016/j.schres.2011.05.006.Evidence

Clelland CL, et al, 2016. Evidence that COMT genotype and proline interact on negative-symptom outcomes in schizophrenia and bipolar disorder. Translational Psychiatry 6(9). Available at: https://doi.org/10.1038/TP.2016.157

Clinic M, 2011 Encyclopedia of Clinical Neuropsychology, Encyclopedia of Clinical Neuropsychology. Edited by J.S. Kreutzer, J. DeLuca, and B. Caplan. New York, NY: Springer New York. Available at: https://doi.org/10.1007/978-0-387-79948-3

Correia S, et al, 2015. Lowering the floor on trail making test Part B: Psychometric evidence for a new scoring metric. Archives of Clinical Neuropsychology 30(7):643–656. Available at: https://doi.org/10.1093/arclin/acv040

Crabtree GW, et al, 2016. Cytosolic Accumulation of L-Proline Disrupts GABA-Ergic Transmission through GAD Blockade. Cell Reports 17(2):570–582. Available at: https://doi.org/10.1016/j.celrep.2016.09.029

Damanik R, Effendy E, Surya HM, 2020. The relation of gene polymorphism interferon gamma+874 a/t and schizophrenia occurred in batak ethnicity. Open Access Macedonian Journal of Medical Sciences 8(A):70–75. Available at: https://doi.org/10.3889/oamjms.2020.3975

DeLuca GC, et al, 2015. Cognitive impairment in multiple sclerosis: clinical, radiologic and pathologic insights. Brain pathology 25(1):79–98. Available at: https://doi.org/10.1111/bpa.12220

Dhaka N, et al, 2020. Cognitive dysfunctions in patients with bipolar disorder: A comparative study from Western Rajasthan. Asian Journal of Medical Research 9(2):1–6. Available at: https://doi.org/10.47009/ajmr.2020.9.2.PY1

Diamond A, 2016. Why improving and assessing executive functions early in life is critical, in Executive function in preschool-age children: Integrating measurement, neurodevelopment, and translational research. Washington:

American Psychological Association 11–43. Available at: https://doi.org/10.1037/14797-002

Dietz AG, Goldman SA, Nedergaard M, 2020. Glial cells in schizophrenia: a unified hypothesis. The Lancet Psychiatry 7(3):272–281. Available at: https://doi.org/10.1016/S2215-0366(19)30302-5

Dinkes, 2019. Riset Kesehatan Dasar Provinsi Sumatera Barat Tahun 2018, Laporan Riskesdas Nasional 2018

Dito T, Ikrar T, 2014. The Neuroscience of Glutamate. Medical Journal of Indonesia 120:55–61

Doyon J, et al, 2018. Current issues related to motor sequence learning in humans. Current Opinion in Behavioral Sciences 20:89–97. Available at: https://doi.org/10.1016/j.cobeha.2017.11.012

Duarte M, et al, 2017. Hyperprolinemia as a clue in the diagnosis of a patient with psychiatric manifestations. Brain and Development 39(6):539–541. Available at: https://doi.org/10.1016/j.braindev.2017.01.008

Egerton A, et al, 2020. Glutamate in schizophrenia: Neurodevelopmental perspectives and drug development. Schizophrenia Research 223:59–70. Available at: https://doi.org/10.1016/j.schres.2020.09.013.

Elvira SD, Hadisukanto G, 2017. Buku ajar psikiatri. 3rd edn. Jakarta: FKUI

Enwright JF, et al, 2016. Reduced Labeling of Parvalbumin Neurons and Perineuronal Nets in the Dorsolateral Prefrontal Cortex of Subjects with Schizophrenia. Neuropsychopharmacology 41(9):2206–2214. Available at: https://doi.org/10.1038/npp.2016.24

Erhardt S, et al, 2017. The kynurenine pathway in schizophrenia and bipolar disorder. Neuropharmacology 112:297–306. Available at: https://doi.org/10.1016/j.neuropharm.2016.05.020

Farah FH, 2018. Schizophrenia : An Overview. Asian Journal of Pharmaceutics 12(17)

Fatani BZ, Aldawod RA, Alhawaj FA, 2017. Schizophrenia : Etiology, Pathophysiology and Management : A Review. The Egyptian Journal of Hospital Medicine 69(6):2640–2646. Available at: https://doi.org/10.12816/0042241

Fazio F, et al, 2015. Xanthurenic Acid Activates mGlu2/3 metabotropic glutamate receptors and is a potential trait marker for schizophrenia. Scientific Reports 5(November):1–14. Available at: https://doi.org/10.1038/srep17799

Feng T, Tripathi A, Pillai A, 2020. Inflammatory Pathways in Psychiatric Disorders: the Case of Schizophrenia and Depression. Current Behavioral Neuroscience Reports 7(3):128–138. Available at: https://doi.org/10.1007/s40473-020-00207-4

Fichman Y, et al, 2015. Evolution of proline biosynthesis: enzymology, bioinformatics, genetics, and transcriptional regulation. Biological Reviews 90(4):1065–1099. Available at: https://doi.org/10.1111/brv.12146

Filipþcic IŠ, Filipþcic I, 2018. Schizophrenia and physical comorbidity. Psychiatria Danubina 30(October):S152–S157

Fricke-Galindo I, et al, 2022. Impact of COMT, PRODH and DISC1 Genetic Variants on Cognitive Performance of Patients with Schizophrenia. Archives of Medical Research 53(4):388–398. Available at: https://doi.org/10.1016/j.arcmed.2022.03.00

Friederici AD, 2015. White-matter pathways for speech and language processing. in 177–186. Available at: https://doi.org/10.1016/B978-0-444-62630-1.00010-X

Fujigaki H, et al, 2019. Linking phencyclidine intoxication to the tryptophan-kynurenine pathway: Therapeutic implications for schizophrenia. Neurochemistry International 125:1–6. Available at: https://doi.org/10.1016/j.neuint.2019.02.001

García-Gutiérrez MS, et al, 2020. Biomarkers in Psychiatry: Concept, Definition, Types and Relevance to the Clinical Reality. Frontiers in Psychiatry 11:1–14. Available at: https://doi.org/10.3389/fpsyt.2020.00432

Geljic M, et al, 2025. Visual integration deficits associated with psychosis are independent of diagnosis. Schizophrenia 11(1):58. Available at: https://doi.org/10.1038/s41537-025-00606-0

Georgiou R, Lamnisos D, Giannakou K, 2021. Anticholinergic Burden and Cognitive Performance in Patients With Schizophrenia: A Systematic Literature Review. Frontiers in Psychiatry 12. Available at: https://doi.org/10.3389/fpsyt.2021.779607

Ghasemvand F, et al, 2015. Relationship between polymorphisms in the proline dehydrogenase gene and schizophrenia risk. Genetics and Molecular Research 14(4):11681–11691. Available at: https://doi.org/10.4238/2015.October.2.1

Guedes de Pinho LM, Pereira AM, de S, Chaves CMCB, 2018. Quality of life in schizophrenic patients: the influence of sociodemographic and clinical characteristics and satisfaction with ocial support. Trends in Psychiatry and Psychotherapy 40(3):202–209. Available at: https://doi.org/10.1590/2237-6089-2017-0002

Guo X, et al, 2018. Proline dehydrogenase gene (PRODH) polymorphisms and schizophrenia susceptibility: a meta-analysis. Metabolic Brain Disease 33(1):89–97. Available at: https://doi.org/10.1007/s11011-017-0128-8

Hale JB, Hoeppner JAB, Fiorello CA, 2002. Analyzing Digit Span Components for Assessment of Attention Processes. Journal of Psychoeducational Assessment 20(2):128–143. Available at: https://doi.org/10.1177/07342829020200020

Harvey PD, 2019. Domains of cognition and their assessment. Dialogues in Clinical Neuroscience 21(3):227–237. Available at: https://doi.org/10.31887/DCNS.2019.21.3/pharvey

Harvey PD, et al, 2022. Cognitive dysfunction in schizophrenia: An expert group paper on the current state of the art. Schizophrenia Research: Cognition 29:100249. Available at: https://doi.org/10.1016/j.scog.2022.100249

Hasse-Sousa M, et al, 2023. The role of semantic clustering in the relationship between verbal memory and psychosocial functioning in schizophrenia and bipolar disorder: Possible distinct cognitive pathway compared to healthy controls. Journal of Affective Disorders 320: 330–339. Available at: https://doi.org/10.1016/j.jad.2022.09.077

Henriksen MG, Nordgaard J, Jansson LB, 2017. Genetics of Schizophrenia: Overview of Methods, Findings and Limitations. Frontiers in Human Neuroscience 11. Available at: https://doi.org/10.3389/fnhum.2017.00322

Hickok G, 2019. The architecture of speech production and the role of the frontal cortex in language. Neuron 105(2):236–247

Honors S, et al, 2011. Encyclopedia of Clinical Neuropsychology, Encyclopedia of Clinical Neuropsychology. Edited by J.S. Kreutzer, J. DeLuca, and B. Caplan. New York, NY: Springer New York. Available at: https://doi.org/10.1007/978-0-387-79948-3

Huang X, et al, 2020. Increased Plasma Kynurenic Acid Levels are Associated with Impaired Attention/Vigilance and Social Cognition in Patients with Schizophrenia. Neuropsychiatric Disease and Treatment 16:263–271. Available at: https://doi.org/10.2147/NDT.S239763

Ivanova SA, et al, 2014. Glutamate Concentration in the Serum of Patients with Schizophrenia. Procedia Chemistry 10:80–85. Available at: https://doi.org/10.1016/j.proche.2014.10.015

Javitt DC, et al, 2012. Has an Angel Shown the Way? Etiological and Therapeutic Implications of the PCP/NMDA Model of Schizophrenia. Schizophrenia Bulletin 38(5):958–966. Available at: https://doi.org/10.1093/schbul/sbs069

Jun R, et al, 2022. Dysbindin-1, BDNF, and GABAergic Transmission in Schizophrenia. Frontiers in psychiatry 13:1–7. Available at: https://doi.org/10.3389/fpsyt.2022.876749

Kahn RS, et al, 2015. Schizophrenia. Nature Reviews Disease Primers 1. Available at: https://doi.org/10.1038/nrdp.2015.67

Karczewski KJ, et al, 2020. The mutational constraint spectrum quantified from variation in 141,456 humans. Nature 581(7809):434–443. Available at: https://doi.org/10.1038/s41586-020-2308-7

Karimian SS, Akbari MT, 2018. The Association of V427M Missense Mutation of the PRODH Gene with Schizophrenia in the Iranian Patients. Journal of Human Genetics and Genomics In Press(In Press):0–4. Available at: https://doi.org/10.5812/jhgg.83501

KEMENKES, 2018. Riset Kesehatan Dasar (RISKESDAS). Jakarta

Kemenkes RI, 2019. Profil Kesehatan Indonesia 2018 [Indonesia Health Profile 2018]

Kim JH, et al, 2012. Lack of association between proline dehydrogenase (oxidase) 1 polymorphisms and schizophrenia in a Korean population. Psychiatric genetics 22(3):153–154. Available at: https://doi.org/10.1097/ypg.0b013e32834c0c61

Kindler J, et al, 2020. Dysregulation of kynurenine metabolism is related to proinflammatory cytokines, attention, and prefrontal cortex volume in schizophrenia. Molecular Psychiatry 25(11):2860–2872. Available at: https://doi.org/10.1038/s41380-019-0401-9

Kruse AO, Bustillo JR, 2022. Glutamatergic dysfunction in Schizophrenia. Translational Psychiatry 12(1). Available at: https://doi.org/10.1038/s41398-022-02253-w

Kushwaha A, et al, 2024. Assessment of memory deficits in psychiatric disorders: A systematic literature review. Available at: https://doi.org/10.13140/RG.2.2.29959.82084

De la Serna E, et al, 2023. Relationship between cognition and age at onset of first-episode psychosis: comparative study between adolescents, young adults, and adults. European Child & Adolescent Psychiatry 32(4):639–649. Available at: https://doi.org/10.1007/s00787-021-01901-8

Laming D, 2019. Sensory memory: Part 1. Quarterly Journal of Experimental Psychology 73(3): 584–600

Leavitt V, Cirillo M, Cohen J, 2023. Hippocampal contributions to verbal learning and memory in psychosis: A multi-cohort meta-analysis. Neuropsychology 37(4):389–400

Lesh TA, 2020. Glutamate and dopamine dysfunction in schizophrenia and their association with cognitive impairments. Neuropsychopharmacology 45(1):145–155

Li CT, Yang KC, Lin WC, 2019. Glutamatergic Dysfunction and Glutamatergic Compounds for Major Psychiatric Disorders: Evidence From Clinical Neuroimaging Studies. Frontiers in Psychiatry 9. Available at: https://doi.org/10.3389/fpsyt.2018.00767

Li T, et al, 2008. PRODH gene is associated with executive function in schizophrenic families. American Journal of Medical Genetics Part B: Neuropsychiatric Genetics, 147B(5):654–657. Available at: https://doi.org/10.1002/ajmg.b.30648

Li W, Yue L, Xiao S, 2025. Demographic, biochemical, clinical, and cognitive symptom differences between smokers and non-smokers in Chinese older male patients with chronic schizophrenia. European Archives of Psychiatry and Clinical Neuroscience 275(1):193–199. Available at: https://doi.org/10.1007/s00406-024-01762-7

Li X, Zhou W, Yi Z, 2022. A glimpse of gender differences in schizophrenia. General Psychiatry 35(4):100823. Available at: https://doi.org/10.1136/gpsych-2022-100823

Linderholm K, 2016. Increased levels of kynurenic acid in the cerebrospinal fluid of patients with schizophrenia. Schizophrenia Bulletin 42(3):648–657. Available at: https://doi.org/10.1093/schbul/sbv205

Liu Y, et al, 2019. GABA releases from parvalbumin-expressing and unspeci fi c GABAergic neurons onto CA1 pyramidal cells are differentially modulated by presynaptic GABA B receptors in mouse hippocampus. Biochemical and Biophysical Research Communications 520(2):449–452. Available at: https://doi.org/10.1016/j.bbrc.2019.10.044

Llinàs-Reglà J, et al, 2017. The Trail Making Test: Association With Other Neuropsychological Measures and Normative Values for Adults Aged 55 Years and Older From a Spanish-Speaking Population-Based Sample. Assessment 24(2):183–196. Available at: https://doi.org/10.1177/1073191115602552

Lonie JA, 2019. Predicting dementia using verbal fluency performance: Age, education, and gender-related differences. Journal of Alzheimers Disease 70(1):61–70

Lovelace MD, et al, 2016. Current Evidence for a Role of the Kynurenine Pathway of Tryptophan Metabolism in Multiple Sclerosis. Frontiers in Immunology 7. Available at: https://doi.org/10.3389/fimmu.2016.00246

Luvsannyam E, et al, 2022. Neurobiology of Schizophrenia: A Comprehensive Review. Cureus [Preprint]. Available at: https://doi.org/10.7759/cureus.23959

Madeira C, Alheira FV, Calcia MA, Silva, Thuany CS, et al, 2018. Blood Levels of Glutamate and Glutamine in Recent Onset and Chronic Schizophrenia. Frontiers in Psychiatry 9. Available at: https://doi.org/10.3389/fpsyt.2018.00713

Madeira C, Alheira FV, Calcia MA, Silva, Thuany CS, et al, 2018. Blood Levels of Glutamate and Glutamine in Recent Onset and Chronic Schizophrenia. Frontiers in Psychiatry 9:1–8. Available at: https://doi.org/10.3389/fpsyt.2018.00713

Mahmoud S, et al, 2019. Astrocytes Maintain Glutamate Homeostasis in the CNS by Controlling the Balance between Glutamate Uptake and Release. Cells 8(2):184. Available at: https://doi.org/10.3390/cells8020184

Malla A, Joober R, Garcia A, 2015. "Mental illness is like any other medical illness": a critical examination of the statement and its impact on patient care and society. Journal of Psychiatry and Neuroscience 40(3):147–150. Available at: https://doi.org/10.1503/jpn.150099

Mart L, Brea J, Rico S, 2021. Cognitive Deficit in Schizophrenia: From Etiology to Novel Treatments. International Journal of Molecular Sciences 22(18):9905. Available at: https://doi.org/10.3390/ijms22189905

Mccutcheon A, Krystal JH, Howes OD, 2020. Dopamine and glutamate in schizophrenia : biology. Symptoms and treatment 15–33. Available at: https://doi.org/10.1002/wps.20693

Mccutcheon RA, Keefe RSE, Mcguire PK, 2023. Cognitive impairment in schizophrenia : aetiology, pathophysiology, and treatment. Molecular Psychiatry 1–17. Available at: https://doi.org/doi.org/10.1038/s41380-023-01949-9

McCutcheon RA, Reis Marques T, Howes OD, 2020. Schizophrenia-An Overview. JAMA Psychiatry 77(2):201–210. Available at: https://doi.org/10.1001/jamapsychiatry.2019.3360

Mei YY, Wu DC, Zhou N, 2018. Astrocytic regulation of glutamate transmission in schizophrenia. Frontiers in Psychiatry 9:1–10. Available at: https://doi.org/10.3389/fpsyt.2018.00544

Merritt K, et al, 2016. Nature of Glutamate Alterations in Schizophrenia. JAMA Psychiatry 73(7):665. Available at: https://doi.org/10.1001/jamapsychiatry.2016.0442

Millan MJ, 2016. Cognitive dysfunction in psychiatric disorders: Characteristics, causes and the quest for improved therapy. Nature Reviews Drug Discovery 11(2):141–168

Mithaiwala MN, et al, 2021. Neuroinflammation and the Kynurenine Pathway in CNS Disease: Molecular Mechanisms and Therapeutic Implications. Cells 10(6):1548. Available at: https://doi.org/10.3390/cells10061548

Moran P, et al, 2016. Gene × Environment Interactions in Schizophrenia: Evidence from Genetic Mouse Models. Neural Plasticity 2016:1–23. Available at: https://doi.org/10.1155/2016/2173748

Mowry B, et al, 2022. Anticholinergic burden and cognitive impairment in schizophrenia: An overlooked association. Journal of Psychiatric Research 154:122–130. Available at: https://doi.org/10.1016/j.jpsychires.2022.08.014

Müller N, et al, 2019. The role of inflammation in schizophrenia. Frontiers in Neuroscience 13(665). Available at: https://doi.org/10.3389/fnins.2015.00372

Nakahara T, et al, 2022. Glutamatergic and GABAergic metabolite levels in schizophrenia-spectrum disorders: a meta-analysis of 1H-magnetic resonance spectroscopy studies. Molecular Psychiatry 27(1):744–757. Available at: https://doi.org/10.1038/s41380-021-01297-6

Namavar Y, et al, 2021. Psychiatric phenotypes associated with hyperprolinemia: A systematic review. American Journal of Medical Genetics Part B: Neuropsychiatric Genetics 186(5):289–317. Available at: https://doi.org/10.1002/ajmg.b.32869

Natarajan SK, et al, 2012. Proline dehydrogenase is essential for proline protection against hydrogen peroxide-induced cell death, Free Radical Biology and Medicine. Available at: https://doi.org/10.1016/j.freeradbiomed.2012.07.002

Niedzwiecki A, Goyal A, 2020. The kynurenine pathway in Alzheimers and other neurodegenerative diseases. Journal of Neuroscience Research 98(1):3–15

Olsson SK, et al, 2019. Effects of pharmacological inhibition of kynurenine aminotransferase II on cognitive function in rodent models of schizophrenia. Journal of Psychopharmacology 33(7):857–867

Oosterman JM, et al, 2021, Cognitive reserve relates to executive functioning in the old–old. Aging Clinical and Experimental Research 33(9):2587–2592. Available at: https://doi.org/10.1007/s40520-020-01758-y

Orrico-Sánchez A, et al, 2020. Epidemiology of schizophrenia and its management over 8-years period using real-world data in Spain. BMC Psychiatry 20(1)1–9. Available at: https://doi.org/10.1186/s12888-020-02538-8

Parellada E, Gassó P, 2021. Glutamate and microglia activation as a driver of dendritic apoptosis: a core pathophysiological mechanism to understand schizophrenia. Translational Psychiatry 11(1):271. Available at: https://doi.org/10.1038/s41398-021-01385-9

Parkway P, 2020. General Variant Classification Assertion Criteria General Information

Parrott JM, OConnor JC, Powder K, 2021. Environmental factors, kynurenine pathway, and their role in brain health. Brain, Behavior, and Immunity 93:104–113

Pashler H, Johnston JC, Ruthruff E, 2017. Attention and performance. Annual Review of Psychology 68:43–68

Patriarca EJ, et al, 2021. The Multifaceted Roles of Proline in Cell Behavior. Frontiers in Cell and Developmental Biology 9:1–28. Available at: https://doi.org/10.3389/fcell.2021.728576

Patterson JC, McIntosh AM, Spencer MD, 2018. Neuroinflammatory gene expression in the dorsolateral prefrontal cortex of individuals with schizophrenia: a postmortem study. Lancet Psychiatry 5(1):22–31

Pedraz-petrozzi B, et al, 2020. Effects of inflammation on the kynurenine pathway in schizophrenia — a systematic review. 1–18

Perhimpunan Dokter Spesialis Kedokteran Jiwa Indonesia, 2011. Konsensus Penatalaksanaan Gangguan Skizofrenia, Perhimpunan Dokter Spesialis Kedokteran Jiwa Indonesia 94

Perkovic MN, et al, 2017. Theranostic biomarkers for schizophrenia. International Journal of Molecular Sciences 18(4):1–38. Available at: https://doi.org/10.3390/ijms18040733

Peters BD, et al, 2012. White Matter Development in Adolescence: Diffusion Tensor Imaging and Meta-Analytic Results. Schizophrenia Bulletin 38(6):1308–1317. Available at: https://doi.org/10.1093/schbul/sbs054.

Plitman E, et al, 2017. Kynurenic Acid in Schizophrenia: A Systematic Review and Meta-analysis. Schizophrenia Bulletin 43(4):764–777. Available at: https://doi.org/10.1093/schbul/sbw221

Plitman E, et al, 2021. Glutamate in schizophrenia: From pathophysiology to targets for novel antipsychotic treatments. Neuroscience & Biobehavioral Reviews 127:105–118. Available at: https://doi.org/10.1016/j.neubiorev.2021.04.022

Posner MI, Rothbart MK, Tang YY, 2019. Developing self-regulation in early childhood. Trends in Neurosciences 42(6):395–405

Qin X, Chen J, Zhou T, 2021. 22Q11.2 Deletion Syndrome and Schizophrenia. Acta Biochimica et Biophysica Sinica 52(11):1181–1190. Available at: https://doi.org/10.1093/abbs/gmaa113

Rabin LA, Paolillo E, Barr WB, 2020. Stability in test-retest reliability of verbal fluency measures in cognitively healthy older adults. Journal of the International Neuropsychological Society2 26(8):813–823

Rees E, et al, 2020. Schizophrenia, glutamate, and the genomics of cognitive impairment. Neuroscience & Biobehavioral Reviews 118:426–439. Available at: https://doi.org/10.1016/j.neubiorev.2020.08.003

Réus GZ, et al, 2018. The inhibition of the kynurenine pathway prevents behavioral disturbances and oxidative stress in the brain of adult rats subjected to an animal model of schizophrenia. Progress in Neuro-Psychopharmacology and Biological Psychiatry 81:55–63. Available at: https://doi.org/10.1016/j.pnpbp.2017.10.009

Riglin L, et al, 2017. Schizophrenia risk alleles and neurodevelopmental outcomes in childhood: a population-based cohort study. The Lancet Psychiatry 4(1):57–62. Available at: https://doi.org/10.1016/S2215-0366(16)30406-0

Roberts J, Stewart C, Kearney S, 2016. Management of the behavioural manifestations of Hunter syndrome. British Journal of Nursing 25(1):22–30. Available at: https://doi.org/10.12968/bjon.2016.25.1.22.

Robertson IH, Garavan H, 2016. Vigilant attention. Psychological Science 10(2):82–88

Robison AJ, Thakkar KN, Diwadkar VA, 2020. Cognition and Reward Circuits in Schizophrenia: Synergistic, Not Separate, Biological Psychiatry: 87(3):204–214. Available at: https://doi.org/10.1016/j.biopsych.2019.09.021

Sadock BJ, Sadock VA, 2017. Schizophrenia and Other Psychotic Disorders, in Kaplan and Sadocks Comprehensive Textbook of Psychiatry. 10th edn. Wolters Kluwer Health 3613–4004

Sartorius N, 2018. Comorbidity of mental and physical disorders: a key problem for medicine in the 21st century. Acta Psychiatrica Scandinavica 137(5):369–370. Available at: https://doi.org/10.1111/acps.12888

Sathyasaikumar KV, et al, 2022. Tryptophan Challenge in Healthy Controls and People with Schizophrenia: Acute Effects on Plasma Levels of Kynurenine, Kynurenic Acid and 5-Hydroxyindoleacetic Acid. Pharmaceuticals 15(8)-1003. Available at: https://doi.org/10.3390/ph15081003

Savitz J, 2020. The kynurenine pathway: a finger in every pie. Molecular Psychiatry 25(1):131–147. Available at: https://doi.org/10.1038/s41380-019-0414-4

Schultz S, North S, Shields CG, 2007. Schizophrenia: A review, (July).

Schwarcz R, et al, 2012. Kynurenines in the mammalian brain: when physiology meets pathology. Nature Reviews Neuroscience 13(7):465–477. Available at: https://doi.org/10.1038/nrn3257

Schwieler L, et al, 2022. Neuroinflammation and kynurenine pathway in schizophrenia: a translational perspective. Biological Psychiatry Global Open Science 2(4):351–360. Available at: https://doi.org/10.1016/j.bpsgos.2022.05.005

Sehgal SA, 2017. Pharmacoinformatics and molecular docking studies reveal potential novel Proline Dehydrogenase (PRODH) compounds for Schizophrenia inhibition. Medicinal Chemistry Research 26(2):314–326. Available at: https://doi.org/10.1007/s00044-016-1752-2

Sharma A, Markon K, Clark LA, 2020. Toward a theory of executive function: A multidimensional framework for assessing executive function across domains. Journal of Clinical and Experimental Neuropsychology 42(1):23–25

Siever LJ, Davis KL, 2004. The Pathophysiology of Schizophrenia Disorders: Perspectives From the Spectrum. American Journal of Psychiatry 161(3):398–413. Available at: https://doi.org/10.1176/appi.ajp.161.3.398

Song J, et al, 2014. Peripheral glutamate levels in schizophrenia: Evidence from a meta-analysis. Neuropsychobiology 70(3):133–141. Available at: https://doi.org/10.1159/000364828

Squire LR, Wixted JT, 2016, The cognitive neuroscience of human memory since H.M. Annual Review of Neuroscience 39:433–45

Stępnicki P, Kondej M, Kaczor AA, 2018. Current concepts and treatments of schizophrenia. Molecules 23(8). Available at: https://doi.org/10.3390/molecules23082087

Stilo SA, Murray RM, 2019. Non-Genetic Factors in Schizophrenia, Current Psychiatry Reports 21(100). Available at: https://doi.org/https://doi.org/10.1007/s11920-019-1091-3

Stone TW, Darlington LG, 2016, The kynurenine pathway as a therapeutic target in cognitive and neurodegenerative disorders British Journal of

Pharmacology 173(6):1060–1077. Available at: https://doi.org/10.1111/bph.12230

Suhery D, Sari YO, Fitria N, 2023. Analisa Hubungan Biaya Total dan Lama Rawatan Penggunaan Risperidon dan Quetiapin pada Pasien Skizofrenia Paranoid di RS Jiwa Prof HB Saanin Padang. Jurnal Farmasi Higea 15(1):32. Available at: https://doi.org/10.52689/higea.v15i1.51

Suvisaari J, et al, 2018. Is It Possible to Predict the Future in First-Episode Psychosis?. Frontiers in Psychiatry 9. Available at: https://doi.org/10.3389/fpsyt.2018.00580

Tanner JJ, 2019. Structural Biology of Proline Catabolic Enzymes. Antioxidants & Redox Signaling 30(4):650–673. Available at: https://doi.org/10.1089/ars.2017.7374

Trifu SC, Vlăduţi A, Trifu AI, 2020. Genetic aspects in schizophrenia. Receptoral theories. Metabolic theories. Romanian Journal of Morphology and Embryology 61(1):25–32. Available at: https://doi.org/10.47162/RJME.61.1.03

Uno Y, Coyle JT, 2019. Glutamate hypothesis in schizophrenia. Psychiatry and Clinical Neurosciences 73(5):204–215. Available at: https://doi.org/10.1111/pcn.12823

Utami MSS, et al, 2024. Adaptation of Rey Auditory Verbal Learning Test for Indonesia: Its Validity and Reliability. Acta Neuropsychologiica 22:15–34

Valle R, 2020. Schizophrenia in ICD-11: Comparison of ICD-10 and DSM-5. Revista de Psiquiatria y Salud Mental 13(2):95–104. Available at: https://doi.org/10.1016/j.rpsm.2020.01.001

Vallianatou K, et al, 2021. Changes in Changes in Brain Glutamate on Switching to Clozapine in Treatment-Resistant SchizophreniaBrain Glutamate on Switching to Clozapine in Treatment

Volkan K, 2020. Schizophrenia: Epidemiology, Causes, Neurobiology, Pathophysiology, and Treatment. Journal of Health and Medical Sciences 3(4). Available at: https://doi.org/10.31014/aior.1994.03.04.143

Walter EE, et al, 2016. Genetic Consideration of Schizotypal Traits: A Review. Frontiers in Psychology 7. Available at: https://doi.org/10.3389/fpsyg.2016.0176

Wang CY, et al, 2010. Cigarette Smoking in Patients with Schizophrenia in China: Prospective, Multicentre Study. Australian & New Zealand Journal of Psychiatry 44(5):456–462. Available at: https://doi.org/10.3109/00048670903493348

Watson DR, et al, 2012. A voxel based morphometry study investigating brain structural changes in first episode psychosis. Behavioural Brain Research 227(1):91–99. Available at: https://doi.org/10.1016/j.bbr.2011.10.034

Weinstein G, 2018. Neuroanatomical correlates of phonemic and semantic verbal fluency in older adults: A magnetic resonance imaging study. Cognitive Neuroscience 9(2):43–52

WHO, 2022. Schizophrenia, WHO. Available at: https://www.who.int/news-room/fact-sheets/detail/schizophrenia (Accessed: 1 August 2022)

Wonodi I, et al, 2018. Downregulated kynurenine 3-monooxygenase gene expression and enzyme activity in schizophrenia and genetic association with cognitive function. The Journal of Neuroscience 38(2):740–752. Available at: https://doi.org/10.1001/archgenpsychiatry.2011.71

Wonodi I, 2020. Peripheral kynurenine pathway markers in schizophrenia: A meta-analysis of human studies. Schizophrenia Research 220:248–257. Available at: https://doi.org/https://doi.org/10.1016/j.schres.2020.02.023

World Health Organization (WHO), 2022. ICD-11

Wyse ATS, Netto CA, 2011. Behavioral and neurochemical effects of proline. Metabolic Brain Disease 26(3):159–172. Available at: https://doi.org/10.1007/s11011-011-9246-x

Yao Y, Han W, 2022. Proline Metabolism in Neurological and Psychiatric Disorders. Molecules and Cells. 45(11):781–788. Available at: https://doi.org/10.14348/molcells.2022.0115

Yelamanchi SD, et al, 2016, A pathway map of glutamate metabolism. Journal of Cell Communication and Signaling 69–75. Available at: https://doi.org/10.1007/s12079-015-0315-5

Yoon SC, et al, 2016. Linkage and Association Analyses of Schizophrenia with Genetic Variations on Chromosome 22q11 in Koreans. 630–636

Yue W, Huang H, Duan J, 2022. Potential diagnostic biomarkers for schizophrenia. Medical Review 2(4):385–416. Available at: https://doi.org/10.1515/mr-2022-0009

Zelazo PD, 2020. Executive Function and Psychopathology: A Neurodevelopmental Perspective. Annual Review of Clinical Psychology 16(1):431–454. Available at: https://doi.org/10.1146/annurev-clinpsy-072319-024242

Zhang J, 2019. Cognitive Functions of the Brain: Perception, Attention and Memory. Available at: http://arxiv.org/abs/1907.02863

Zhang X, et al, 2021. Delayed recall and interference effects in schizophrenia: Evidence from verbal learning tasks. Journal of Psychiatric Research 135:217–224. Available at: https://doi.org/10.1016/j.jpsychires.2021.07.019

Zhang Z, et al, 2019. Elevated cleavage of neuregulin-1 by beta-secretase 1 in plasma of schizophrenia patients. Progress in Neuro-Psychopharmacology and Biological Psychiatry 90:161–168. Available at: https://doi.org/10.1016/j.pnpbp.2018.11.018

Zhou J, et al, 2022. Working memory deficits in children with schizophrenia and its mechanism, susceptibility genes, and improvement: A literature review. Frontiers in Psychiatry 13. Available at: https://doi.org/10.3389/fpsyt.2022.899344


UNIVERSITAS ANDALAS
UNTUK
KEDJAJAAN
BANGSA