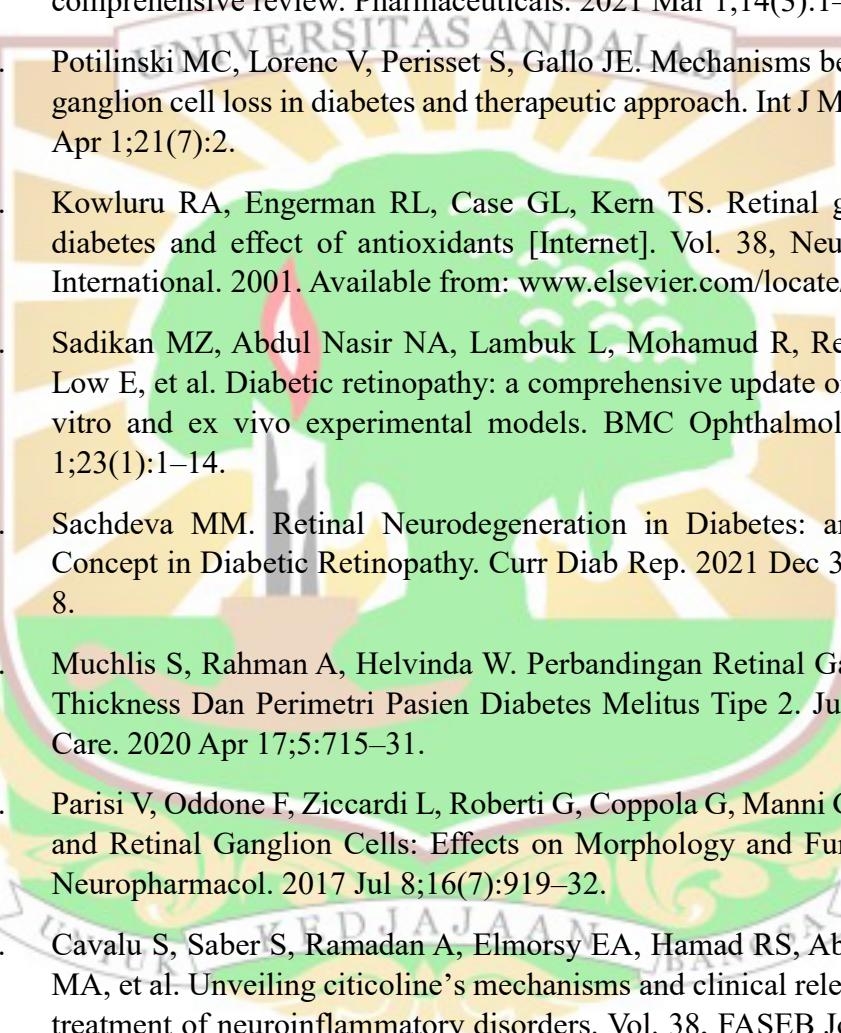


DAFTAR PUSTAKA

1. Rübsam A, Parikh S, Fort PE. Role of inflammation in diabetic retinopathy. *Int J Mol Sci.* 2018 Apr 1;19(4):1–31.
2. Magliano Dianna, Boyko EJ. IDF diabetes atlas. International Diabetes Federation; 2021. 1–5 p.
3. Rapuano CJ SJMCA. Basic Anatomy. In: Retina and Vitreous. San Francisco: American Academy of Ophthalmology; 2024. p. 5–19.
4. Kementrian Kesehatan Indonesia. Laporan Riskesdas 2018 Nasional. Jakarta: Badan Penelitian dan Pengembangan Kesehatan; 2018.
5. Sasongko MB, Widyaputri F, Agni AN, Wardhana FS, Kotha S, Gupta P, et al. Prevalence of Diabetic Retinopathy and Blindness in Indonesian Adults With Type 2 Diabetes. *Am J Ophthalmol.* 2017 Sep 1;181:79–87.
6. Halim A, Syumarti S, Rini M, Ratnaningsih N, Iskandar E, Sovani I, et al. Prevalence and Associated Factors of Diabetic Retinopathy in People with Type 2 Diabetes Attending Community Based Diabetic Retinopathy Screening in Greater Bandung, Indonesia. *International Journal of Retina.* 2022 Feb 22;5(1):1–9.
7. Rapuano C SJMC. The Eye. In: Fundamentals and Principles of Ophthalmology. San fransisco: American Academy of Ophthalmology; 2024. p. 87–100.
8. Oshitari T. Advanced Glycation End-Products and Diabetic Neuropathy of the Retina. *Int J Mol Sci.* 2023 Feb 1;24(3):1–18.
9. Oshitari T. Neurovascular impairment and therapeutic strategies in diabetic retinopathy. Vol. 19, *International Journal of Environmental Research and Public Health.* MDPI; 2022. p. 1–19.
10. Oshitari T. The pathogenesis and therapeutic approaches of diabetic neuropathy in the retina. *Int J Mol Sci.* 2021 Aug 2;22(16):1–17.
11. Oshitari T. Diabetic retinopathy: neurovascular disease requiring neuroprotective and regenerative therapies. *Neural Regen Res.* 2022 Apr 1;17(4):795–6.
12. Kim US, Mahroo OA, Mollon JD, Yu-Wai-Man P. Retinal Ganglion Cells—Diversity of Cell Types and Clinical Relevance. Vol. 12, *Frontiers in Neurology.* United States: Frontiers Media S.A.; 2021. p. 1–20.
13. Watson AB. A formula for human retinal ganglion cell receptive field density as a function of visual field location. *J Vis.* 2014;14(7):1.

- 
14. Tang Z, Chan MY, Leung WY, Wong HY, Ng CM, Chan VTT, et al. Assessment of retinal neurodegeneration with spectral-domain optical coherence tomography: a systematic review and meta-analysis. *Eye* (Basingstoke). 2021 May 1;35(5):1317–25.
 15. Simó R, Stitt AW, Gardner TW. Neurodegeneration in diabetic retinopathy: does it really matter? *Diabetologia*. 2018 Sep 1;61(9):1902–12.
 16. Oddone F, Rossetti L, Parravano M, Sbardella D, Coletta M, Ziccardi L, et al. Citicoline in ophthalmological neurodegenerative disease: A comprehensive review. *Pharmaceuticals*. 2021 Mar 1;14(3):1–26.
 17. Potilinski MC, Lorenc V, Perisset S, Gallo JE. Mechanisms behind retinal ganglion cell loss in diabetes and therapeutic approach. *Int J Mol Sci*. 2020 Apr 1;21(7):2.
 18. Kowluru RA, Engerman RL, Case GL, Kern TS. Retinal glutamate in diabetes and effect of antioxidants [Internet]. Vol. 38, *Neurochemistry International*. 2001. Available from: www.elsevier.com/locate/neuint
 19. Sadikan MZ, Abdul Nasir NA, Lambuk L, Mohamud R, Reshidan NH, Low E, et al. Diabetic retinopathy: a comprehensive update on in vivo, in vitro and ex vivo experimental models. *BMC Ophthalmol*. 2023 Dec 1;23(1):1–14.
 20. Sachdeva MM. Retinal Neurodegeneration in Diabetes: an Emerging Concept in Diabetic Retinopathy. *Curr Diab Rep*. 2021 Dec 31;21(12):1–8.
 21. Muchlis S, Rahman A, Helvinda W. Perbandingan Retinal Ganglion Cell Thickness Dan Perimetri Pasien Diabetes Melitus Tipe 2. *Jurnal Human Care*. 2020 Apr 17;5:715–31.
 22. Parisi V, Oddone F, Ziccardi L, Roberti G, Coppola G, Manni G. Citicoline and Retinal Ganglion Cells: Effects on Morphology and Function. *Curr Neuropharmacol*. 2017 Jul 8;16(7):919–32.
 23. Cavalu S, Saber S, Ramadan A, Elmorsy EA, Hamad RS, Abdel-Reheim MA, et al. Unveiling citicoline's mechanisms and clinical relevance in the treatment of neuroinflammatory disorders. Vol. 38, *FASEB Journal*. John Wiley and Sons Inc; 2024.
 24. Parisi V, Barbano L, Di Renzo A, Coppola G, Ziccardi L. Neuroenhancement and neuroprotection by oral solution citicoline in non-arteritic ischemic optic neuropathy as a model of neurodegeneration: A randomized pilot study. *PLoS One*. 2019 Jul 1;14(7).
 25. Eshaq RS, Aldalati AMZ, Alexander JS, Harris NR. Diabetic retinopathy: Breaking the barrier. Vol. 24, *Pathophysiology*. Elsevier B.V.; 2017. p. 229–41.

26. Ansari P, Tabasumma N, Snigdha NN, Siam NH, Panduru RVNRS, Azam S, et al. Diabetic Retinopathy: An Overview on Mechanisms, Pathophysiology and Pharmacotherapy. *Diabetology*. 2022 Mar 1;3(1):159–75.
27. Halim A, Syumarti S, Rini M, Ratnaningsih N, Iskandar E, Sovani I, et al. Prevalence and Associated Factors of Diabetic Retinopathy in People with Type 2 Diabetes Attending Community Based Diabetic Retinopathy Screening in Greater Bandung, Indonesia. *International Journal of Retina*. 2022 Feb 22;5(1):1.
28. Duh EJ, Sun JK, Stitt AW. Diabetic retinopathy: Current understanding, mechanisms, and treatment strategies. Vol. 2, *JCI Insight*. American Society for Clinical Investigation; 2017.
29. Sun K ashraf MAP. Diabetic Retinopathy: Etiologic Mechanisms and Genetics. In: Ryan's Retina. 7th ed. Cleveland: Elsevier; 2022. p. 1049–62.
30. Brownlee M. Biochemistry and molecular cell biology of diabetic complications. *Nature* [Internet]. 2001;414:813–20. Available from: www.nature.com
31. Boccuni I, Fairless R. Retinal Glutamate Neurotransmission: From Physiology to Pathophysiological Mechanisms of Retinal Ganglion Cell Degeneration. *Life*. 2022 May 1;12(5):1–33.
32. Jambou R, El-Assaad F, Combes V, Grau GE. Citicoline (CDP-choline): What role in the treatment of complications of infectious diseases. *International Journal of Biochemistry and Cell Biology*. 2009 Jul;41(7):1467–70.
33. Gareri P, Castagna A, Cotroneo AM, Putignano S, De Sarro G, Bruni AC. The role of citicoline in cognitive impairment: Pharmacological characteristics, possible advantages, and doubts for an old drug with new perspectives. *Clin Interv Aging*. 2015 Sep 3;10:1421–9.
34. Grieb P. Neuroprotective properties of citicoline: Facts, doubts and unresolved issues. *CNS Drugs*. 2014 Mar;28(3):185–93.
35. Carnevale C, Manni G, Roberti G, Micera A, Bruno L, Cacciamani A, et al. Human vitreous concentrations of citicoline following topical application of citicoline 2% ophthalmic solution. *PLoS One*. 2019 Nov 14;14(11):1–12.
36. Matteucci A, Varano M, Gaddini L, Mallozzi C, Villa M, Pricci F, et al. Neuroprotective effects of citicoline in in vitro models of retinal neurodegeneration. *Int J Mol Sci*. 2014 Apr 14;15(4):6286–97.

37. García-López C, García-López V, Matamoros JA, Fernández-Albarral JA, Salobrar-García E, de Hoz R, et al. The Role of Citicoline and Coenzyme Q10 in Retinal Pathology. *Int J Mol Sci.* 2023 Mar 1;24(6):1–23.
38. Álvarez-Sabín J, Román GC. The role of citicoline in neuroprotection and neurorepair in ischemic stroke. *Brain Sci.* 2013;3(3):1395–414.
39. Javaid S, Farooq T, Rehman Z, Afzal A, Ashraf W, Rasool MF, et al. Dynamics of choline-containing phospholipids in traumatic brain injury and associated comorbidities. Vol. 22, International Journal of Molecular Sciences. MDPI; 2021.
40. Lai AKW, Lo ACY. Animal models of diabetic retinopathy: Summary and comparison. *J Diabetes Res.* 2013;2013:1.
41. Furman BL. Streptozotocin-Induced Diabetic Models in Mice and Rats. *Curr Protoc.* 2021 Apr 1;1(4):1–21.
42. Ali A. Effective Dose Of Streptozotocin For Induction Of Diabetes Mellitus And Associated Mortality Rate In Wistar Albino Rats. *Pakistan Journal of Medicine and Dentistry.* 2019 Nov 5;1–6.
43. Bertolucci E, Conti M, Mettivier G, Montesi MC, Russo P. BETAvieW: a digital b-imaging system for dynamic studies of biological phenomena. Vol. 478, Nuclear Instruments and Methods in Physics Research A. 2002.
44. Wang Q, So C, Qiu C, Zhang T, Yang K, Pan F. Diminished light sensitivities of ON alpha retinal ganglion cells observed in a mouse model of hyperglycemia. *Exp Eye Res.* 2024 Nov 1;248:1.
45. Salam H. Perbandingan Efek Pemberian Coenzyme Q10 Dan Citicoline Terhadap Densitas Sel Ganglion Retina Pada Ethambutol Induced Optic Neuropathy. [Padang]: Universitas Andalas; 2025.
46. Chan Chi Chao. Animal Models of Ophthalmic Disease [Internet]. Switzerland: Springer; 2016. 67–83 p. Available from: <http://www.springer.com/series/5332>
47. Nusanti S, Sari RI, Siregar NC, Sidik M. The Effect of Citicoline on Ethambutol Optic Neuropathy: Histopathology and Immunohistochemistry Analysis of Retina Ganglion Cell Damage Level in Rat Model. *Journal of Ocular Pharmacology and Therapeutics.* 2022 Oct 1;38(8):584–9.
48. Matamoros JA, Rubio-Casado S, Fernández-Albarral JA, Martínez-López MA, Salobrar-García E, Marco EM, et al. Neuroprotective Effect of the Combination of Citicoline and CoQ10 in a Mouse Model of Ocular Hypertension. *Antioxidants.* 2025 Jan 1;14(1).

49. García-López C, García-López V, Matamoros JA, Fernández-Albarral JA, Salobrar-García E, de Hoz R, et al. The Role of Citicoline and Coenzyme Q10 in Retinal Pathology. Vol. 24, International Journal of Molecular Sciences. Multidisciplinary Digital Publishing Institute (MDPI); 2023.
50. Anshari HL. Perbandingan Kadar Tnf-A Pada Vitreus Tikus Model Diabetik Dengan Pemberian Vitamin D3. [Padang]: Universitas Andalas; 2024.
51. Kitamura Y, Bikbova G, Baba T, Yamamoto S, Oshitari T. In vivo effects of single or combined topical neuroprotective and regenerative agents on degeneration of retinal ganglion cells in rat optic nerve crush model. *Sci Rep*. 2019 Dec 1;9(1).
52. Parisi V, Ziccardi L, Barbano L, Giorno P, Varano M, Parravano M. Citicoline and Vitamin B12 Eye Drops in Type 1 Diabetes: Results of a 36-Month Pilot Study Evaluating Macular Electrophysiological Changes. *Adv Ther*. 2021 Jul 1;38(7):3924–36.
53. Zhou J, Chen B. Retinal Cell Damage in Diabetic Retinopathy. Vol. 12, *Cells*. MDPI; 2023.
54. Pillar S, Moisseiev E, Sokolovska J, Grzybowski A. Recent Developments in Diabetic Retinal Neurodegeneration: A Literature Review. Vol. 2020, *Journal of Diabetes Research*. Hindawi Limited; 2020.
55. Bianco L, Arrigo A, Aragona E, Antropoli A, Berni A, Saladino A, et al. Neuroinflammation and neurodegeneration in diabetic retinopathy. Vol. 14, *Frontiers in Aging Neuroscience*. Frontiers Media S.A.; 2022.
56. Matyja E et al. CDP-choline protects motor neurons against apoptotic changes in a model of chronic glutamate excitotoxicity in vitro. *Folia Neuropathol*. 2008;46 (2):139–48.
57. Bogdanov P, Sampedro J, Solà-Adell C, Simó-Servat O, Russo C, Varela-Sende L, et al. Effects of liposomal formulation of citicoline in experimental diabetes-induced retinal neurodegeneration. *Int J Mol Sci*. 2018 Aug 20;19(8).
58. Parravano M, Ziccardi L, Barbano L, Giorno P, Varano M, Parisi V. Citicoline and Vitamin B12 Eye Drops in Type 1 Diabetes: Results of a 36-Month Pilot Study Evaluating Macular Electrophysiological Changes. *Adv Ther*. 2021 Jul 1;38(7):3924–36.