

[Back](#)

The role of apolipoproteins as genetic biomarkers in schizophrenia: A systematic review

[Medical Journal of Malaysia](#) • Article • 2026[Zani, Wan Noorainna Fatimi Wan Mohd](#)^a; [Abd Rahim, Nour El Huda](#)^b [✉](#); [Talib, Norlelawati A.](#)^a; [Jalil, Mohd Asyraf Abdull](#)^b; [Kaderi, Mohd Arifin](#)^c; [+5 authors](#)^aDepartment of Pathology and Laboratory Medicine, Kulliyyah of Medicine, International Islamic University Malaysia, Pahang, Kuantan, Malaysia[Show all information](#)

0

Citations [🔔](#)[Full text](#) [Export](#) [Save to list](#)[Document](#) [Impact](#) [Cited by \(0\)](#) [References \(105\)](#) [Similar documents](#)

Abstract

Introduction: Schizophrenia is a complex mental disorder involving genetic, environmental, and neurodevelopmental factors. Despite significant progress in identifying several genetic contributors to schizophrenia, the role of apolipoprotein in lipid metabolism, neurodevelopment, and neuroprotection remains underexplored. This systematic review aims to synthesise existing genetic studies on apolipoproteins associated with schizophrenia to clarify their potential role in the disorder's pathogenesis. **Materials and Methods:** A comprehensive literature review was conducted using the PubMed and Scopus databases, involving studies published from 2004 to 2023, and limited to English. Keywords included "schizophrenia," "apolipoprotein," "genetic," and "genetics." Non-research publications such as books, reviews, editorials, letters to editors, short communications, book series, chapters, and conference proceedings were excluded from this review. Only peer-reviewed journal articles were selected to ensure the reliability and credibility of the systematic review. **Results:** A total of 41 articles were included in the review, with four key themes identified. The themes addressed specific aspects of apolipoproteins in schizophrenia, including their role in schizophrenia susceptibility, lipid metabolism, and cognitive functions within the disorder. This review presents a novel synthesis of these studies, focusing on the underexplored roles of apolipoprotein genes, including APOE, APOL, APOD, APOA, APOC, APOER2, and APOBEC, in schizophrenia. **Conclusion:** This systematic review provides a comprehensive understanding of the genetics of apolipoprotein in schizophrenia, particularly in relation to lipid metabolism. The findings suggest future research directions to enhance the understanding of schizophrenia pathogenesis and highlight the importance of targeted research to identify specific genetic biomarkers for therapeutic interventions. © 2026, Malaysian Medical Association. All rights reserved.

Author keywords

apolipoprotein; Genetics; lipid metabolism; schizophrenia; systematic review

Corresponding authors

Corresponding author

N.E.H. Abd Rahim

Affiliation

Department of Basic Medical Sciences, Kulliyyah of Medicine, International Islamic University Malaysia, Pahang, Kuantan, Malaysia

Email address

elhuda@iium.edu.my

© Copyright 2026 Elsevier B.V., All rights reserved.

Abstract

[Author keywords](#)[Corresponding authors](#)

About Scopus

[What is Scopus](#)[Content coverage](#)[Scopus blog](#)[Scopus API](#)[Privacy matters](#)[Language](#)

[日本語版を表示する](#)

[查看简体中文版本](#)

[查看繁體中文版本](#)

[Просмотр версии на русском языке](#)

Customer Service

[Help](#)

[Tutorials](#)

[Contact us](#)

ELSEVIER

[Terms and conditions](#) ↗ [Privacy policy](#) ↗ [Cookies settings](#)

All content on this site: Copyright © 2026 [Elsevier B.V.](#) ↗, its licensors, and contributors. All rights are reserved, including those for text and data mining, AI training, and similar technologies. For all open access content, the relevant licensing terms apply.

