

Special Issue

LLMs and AI Agents in Biomedical and Health Sciences

Message from the Guest Editors

The SI explores the growing impact of large language models (LLMs) and AI agents in biomedical and health sciences. Moving beyond traditional predictive models, these systems can integrate diverse biomedical data, perform multi-step reasoning, interact with humans, and adapt to dynamic clinical and research environments. We welcome contributions on LLM-based clinical and scientific reasoning, multimodal and agentic AI systems, retrieval-augmented generation (RAG), tool-using agents, and methods that enhance safety, transparency, and trustworthiness. The aim is to highlight methodological innovations, practical applications, and real-world deployments in clinical care, biomedical research, public health, and healthcare operations. The SI also seeks to establish best practices for evaluating and governing LLMs and AI agents, particularly in high-stakes biomedical settings. Interdisciplinary submissions bridging AI, medicine, biomedical informatics, and health systems are strongly encouraged. By focusing on interactive, context-aware, and system-level intelligence, this issue advances responsible development and adoption of next-generation AI in healthcare and biomedical discovery.

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Deadline for manuscript submissions

22 December 2026



AI

an Open Access Journal
by MDPI

Impact Factor 5.0
CiteScore 6.9



mdpi.com/si/268355

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Message from the Editor-in-Chief

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