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From Lab to Life-Saving: AI's Accelerator Role in Drug Discovery

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Abstract

The traditional drug discovery and development pipeline is notoriously time-consuming, expensive, and prone to high failure rates. This paper examines the transformative role of Artificial Intelligence (AI) in revolutionizing this process by acting as a powerful accelerator across multiple stages. We explore how AI-driven platforms, leveraging machine learning, deep learning, and computational biology, are dramatically reducing the time and cost associated with bringing new therapies to market. Specifically, we discuss key applications of AI, including target identification, where algorithms analyze vast biological datasets to pinpoint disease-related proteins and genes; compound screening, where AI-powered virtual screening rapidly evaluates billions of molecules to find promising drug candidates; and de novo drug design, where generative AI models create novel molecules from scratch with desired properties. Furthermore, AI's ability to accurately predict molecular properties, such as absorption, distribution, metabolism, excretion, and toxicity (ADMET), is helping to filter out flawed candidates early, thus improving success rates in preclinical and clinical trials. By automating repetitive tasks, accelerating data analysis, and uncovering non-obvious patterns, AI is not merely optimizing the existing process but fundamentally reshaping the future of pharmaceutical innovation, making the journey from laboratory to life-saving treatment faster and more efficient than ever before.

Keywords: artificial intelligence, drug discovery, drug development, machine learning, de novo drug design, target identification, ADMET prediction, computational biology

Introduction

The journey of a new drug from its initial concept to a life-saving therapy in a patient's hands is one of the most arduous and costly endeavors in modern science. This traditional process, which can take over a decade and cost billions of dollars, is a testament to the immense complexity of human biology and the high-stakes nature of pharmaceutical research. The conventional pipeline is characterized by a series of sequential, often manual, and resource-intensive stages: identifying a biological target for a disease, screening millions of compounds to find a potential hit, optimizing that compound for efficacy and safety, and then navigating a rigorous gauntlet of preclinical and clinical trials. Historically, the failure rate has been staggeringly high, with over 90% of all drug candidates failing during clinical development, often due to a lack of efficacy or unforeseen toxicity. This model, while responsible for countless medical breakthroughs, is no longer sufficient to meet the urgent and ever-growing global health challenges, from emerging infectious diseases to stubborn chronic conditions[1-22].

In response to these systemic inefficiencies, the pharmaceutical industry is undergoing a profound transformation, driven by the integration of Artificial Intelligence (AI). AI is not a singular solution but a suite of powerful computational tools that are uniquely suited to address the inherent complexities of drug discovery. At its core, AI excels at processing and finding patterns within vast, complex, and high-dimensional datasets a perfect match for the world of genomics, proteomics, and molecular chemistry. By leveraging machine learning, deep learning, and advanced computational techniques, AI is acting as a powerful accelerator, compressing timelines, reducing costs, and significantly improving the probability of success at every stage of the drug discovery and development pipeline. The paradigm is shifting from a slow, trial-and-error approach to a data-driven, predictive, and intelligent system that can navigate the immense chemical and biological search space with unprecedented speed and precision [23-39].

One of the most critical and challenging initial stages of drug discovery is target identification. Before a drug can be developed, researchers must first pinpoint the specific genes, proteins, or biological pathways that are responsible for a disease. This process has traditionally relied on decades of accumulated biological knowledge and painstaking laboratory experiments. AI is revolutionizing this stage by analyzing petabytes of omics data genomic sequences, protein structures, gene expression profiles, and clinical trial data to identify novel and non-obvious disease targets. Machine learning algorithms can sift through these datasets far more efficiently than humans, uncovering hidden connections and co-dependencies that suggest a protein's crucial role in a disease's progression. For example, AI can predict how different genetic mutations lead to specific protein malfunctions, guiding researchers to the most promising therapeutic targets.

Once a target is identified, the next major hurdle is finding a molecule that can interact with it effectively. This is where AI's role in compound screening and de novo drug design becomes truly transformative. In the past, high-throughput screening involved physically testing millions of chemical compounds against a target protein in a lab a process that is both expensive and time-consuming. AI-powered virtual screening can evaluate billions of molecules in a fraction of the time, using sophisticated algorithms to predict a molecule's binding affinity and other properties. This dramatically narrows down the list of candidates to a few thousand or even a few hundred, saving immense resources. Even more revolutionary are generative AI models, which can design entirely new molecules from scratch. These models, akin to those that generate realistic images or text, are given a set of desired properties (e.g., binding to a specific protein and being non-toxic), and they create novel chemical structures that have never been seen before. This bypasses the limitations of existing chemical libraries and opens up a vast, previously unexplored universe of potential drug candidates [40-56].

Beyond the initial discovery phase, AI is proving invaluable in predicting the properties that determine a drug's success in later stages. The ability to predict a compound's ADMET (Absorption, Distribution, Metabolism, Excretion, and Toxicity) profile is a crucial factor in reducing the high failure rates in clinical trials. A promising drug candidate might be effective in a petri dish but fail in a living organism because it is not absorbed properly, is metabolized too quickly, or proves to be toxic. AI models, trained on extensive historical ADMET data, can predict these properties with high accuracy early in the discovery process. This allows researchers to filter out flawed candidates before they even enter preclinical trials, saving millions of dollars and countless hours of research. The result is a much more robust pipeline with a higher probability of success. The convergence of these AI-driven innovations is not just an optimization of the status quo; it is a fundamental re-engineering of the entire drug discovery process, promising to deliver life-saving therapies to patients at an unprecedented speed and scale [57-64].

Challenges:

Despite the immense promise of AI in drug discovery, its widespread implementation faces several significant challenges that must be addressed to unlock its full potential. These hurdles range from fundamental data-related issues to complex ethical, regulatory, and financial barriers.

1. Data-Related Challenges

AI's effectiveness is intrinsically tied to the quality and quantity of the data it's trained on. In drug discovery, this presents a major bottleneck.

- **Data Scarcity and Quality:** The universe of potential drug-like molecules is vast, yet high-quality experimental data is surprisingly limited. A significant

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portion of existing data is "dirty"it may be incomplete, inconsistent, or generated with varying protocols across different labs. This poor data quality can lead to inaccurate predictions and render AI models ineffective.

- **Data Silos and Incompatibility:** Pharmaceutical data often resides in disparate, proprietary silos. Data from a research lab, a clinical trial, and a public database may not be in a standardized format, making it incredibly difficult to integrate and use for training a comprehensive AI model. This lack of interoperability prevents a holistic view of a drug candidate's behavior.
- **Lack of "Negative" Data:** Drug discovery research and publication are heavily biased toward successful outcomes. Data on failed experiments compounds that did not bind to a target or had toxic effects are rarely published. However, this "negative" data is just as crucial as positive data for training an AI model to learn what *not* to do, a gap that severely limits its learning capacity.

2. Ethical and Regulatory Hurdles

The opaque nature of many AI models and the high-stakes nature of drug development create complex ethical and regulatory challenges.

- **The "Black Box" Problem:** Many of the most powerful AI models, particularly deep neural networks, operate as "black boxes." They can produce highly accurate predictions but cannot explain *how* they arrived at that conclusion. This lack of **explainability** is a major barrier to regulatory approval. Regulatory bodies like the FDA require a transparent, reproducible, and scientifically sound rationale for a drug's design and efficacy. Without a clear explanation, getting an AI-designed drug approved becomes a significant challenge.
- **Algorithmic Bias:** If an AI model is trained on a dataset that is not representative of a diverse patient population, it can learn and perpetuate existing biases. For instance, a model trained on data primarily from Caucasian males may be less effective in predicting drug responses in women or individuals of different ethnic backgrounds, potentially leading to health disparities.
- **Accountability and Intellectual Property:** When an AI autonomously designs a novel molecule, complex questions arise. Who owns the **intellectual property**? The AI developer, the pharmaceutical company, or the AI itself? Furthermore, if an AI-designed drug causes unforeseen harm, who is legally liable? Clear legal and ethical frameworks for these scenarios are currently lacking.

3. Adoption and Implementation Barriers

Even with the technical and ethical challenges addressed, the pharmaceutical industry faces practical hurdles in adopting AI[65,66].

- **Financial Investment:** While AI promises long-term cost savings, the initial investment in building the necessary computational infrastructure, data pipelines, and a team of specialized AI scientists and engineers is substantial. This can be a major barrier, especially for smaller biotech companies.
- **Talent Gap:** A successful AI drug discovery team requires a rare combination of expertise: computational biology, data science, medicinal chemistry, and pharmacology. The demand for these interdisciplinary experts far outstrips the supply, creating a significant talent gap.
- **Resistance to Change:** The traditional pharmaceutical industry has a deeply ingrained, risk-averse culture built on decades of established practices. Introducing AI, which can challenge established workflows and decision-making processes, can be met with skepticism and resistance from experienced scientists and managers who may be reluctant to trust a machine's predictions over their own intuition and expertise.

Future Works:

Future work in AI-driven drug discovery will focus on overcoming current limitations and integrating AI more seamlessly into the entire drug development lifecycle. This will require advancements in technology, a shift in data-sharing paradigms, and the establishment of robust regulatory frameworks.

1. Advancing AI and Data Integration

- **Beyond the Black Box:** A primary focus will be on developing more explainable AI **(XAI)** models. While current deep learning models are powerful, their lack of transparency is a major hurdle for regulatory approval. Future work will aim to create models that not only predict outcomes but can also provide a clear, human-understandable rationale for their predictions. This will build trust with both scientists and regulatory bodies.
- **Creating Foundational Models for Biology:** The future will see the rise of large-scale, pre-trained AI models for biology, similar to the large language models like GPT. These "biological foundation models" will be trained on vast, multi-modal biological data—from genomic sequences to protein structures and clinical trial outcomes—to understand the fundamental rules of life. They'll then be fine-tuned for specific tasks, such as designing a drug for a specific cancer or predicting a patient's response to a particular therapy.
- **The "Lab in a Loop" Paradigm:** The ideal future state involves a **virtuous cycle** where AI and experimental biology work in a continuous feedback loop. AI models

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will generate novel hypotheses and molecular designs, which will be rapidly tested in automated, high-throughput labs. The data from these experiments will then be fed back into the AI models to refine their predictive capabilities, accelerating the discovery process in an iterative, self-improving cycle.

2. Evolving Data Sharing and Collaboration

- **Breaking Down Data Silos:** Future efforts must focus on creating **standardized data platforms** and promoting a culture of data sharing. Initiatives like federated learning, which allows AI models to be trained on decentralized data without moving sensitive patient information, will become crucial. This will enable pharmaceutical companies and academic institutions to collaborate and train more robust and comprehensive AI models.
- **Public-Private Partnerships:** Collaborative research consortia between pharmaceutical companies, AI startups, and academic institutions will become the norm. These partnerships can pool resources and expertise to tackle complex, "undruggable" targets and address diseases where traditional research has stalled.

3. Policy and Regulatory Reform

- **Establishing AI-Specific Regulatory Pathways:** Regulatory bodies like the FDA will need to evolve. Future work will involve establishing specific guidelines for the validation and approval of AI-designed and discovered drugs. This will include criteria for validating AI models themselves, ensuring they are robust, unbiased, and capable of generating reproducible results.
- **Addressing IP and Accountability:** Clear legal frameworks will be needed to define the ownership of intellectual property created by AI systems. Additionally, new liability models will be required to determine who is responsible if an AI-designed drug causes harm. These frameworks will be critical for fostering innovation while ensuring patient safety and accountability.

Conclusion:

The infusion of Artificial Intelligence into drug discovery is not merely an incremental improvement; it is a fundamental paradigm shift that promises to reshape the entire pharmaceutical industry. The traditional model, characterized by its high costs, lengthy timelines, and staggering failure rates, is yielding to a new era of data-driven, predictive, and intelligent innovation. AI's ability to analyze vast biological datasets, identify novel targets, rapidly screen billions of molecules, and even design new compounds from scratch is already accelerating the journey from a lab-bench hypothesis to a potential life-saving treatment. The early-stage success of AI-designed drugs in clinical trials, with significantly reduced timelines, stands as compelling evidence of this transformation.

However, the path forward is not without its obstacles. The "black box" nature of many AI models, coupled with challenges in data quality, interoperability, and the scarcity of "negative" experimental data, presents significant technical and ethical hurdles. The pharmaceutical industry, with its inherent risk-averse culture, must also navigate the complexities of regulatory frameworks, intellectual property, and the need for a new generation of interdisciplinary talent.

References:

1. Panahi O. (2025). Smart Implants: Integrating Sensors and Data Analytics for Enhanced Patient Care. Dental. 7(1):22.
2. Kevin Thamson, Omid Panahi (2025). Bridging the Gap: AI as a Collaborative Tool Between Clinicians and Researchers. J. of Bio Adv Sci Research, 1(2):1-08.
3. Kevin Thamson, Omid Panahi (2025). Challenges and Opportunities for Implementing AI in Clinical Trials. J. of Bio Adv Sci Research, 1(2):1-08. WMJ/JBASR-113.
4. Kevin Thamson, Omid Panahi (2025). Ethical Considerations and Future Directions of AI in Dental Healthcare. J. of Bio Adv Sci Research, 1(2):1-07.
5. Kevin Thamson, Omid Panahi (2025). Bridging the Gap: AI, Data Science, and Evidence-Based Dentistry. J. of Bio Adv Sci Research, 1(2):1-13. WMJ/JBASR-115.
6. Omid Panahi, Mohammad Zeinalddin (2025). The Future of Orthodontics: AI-Powered Diagnosis and Treatment. J. of Bio Adv Sci Research, 1(2):1-07.
7. Omid Panahi, Mohammad Zeinalddin (2025). The Digital Smile: How AI is Revolutionizing Orthodontics. J. of Bio Adv Sci Research, 1(2):1-06. WMJ/JBASR-117.
8. O. Panahi. (2025). Deep Learning in Diagnostics, Journal of Medical Discoveries, 2(1).
9. O. Panahi. (2025). Algorithmic Medicine, Journal of Medical Discoveries, 2(1);.

Citation: Patrik James Kennet, Soren Falkner, (2025). From Lab to Life-Saving: AI's Accelerator Role in Drug Discovery, J. Clinical Case Reports and Clinical Practice. 1(3): dx.doi.org/CCRCP/PP.0008

10. Panahi, O., Rezaei, S., Marzi, M., & Sana, F. A. (2011). Helicobacter pylori & oral cavity inflammation. Journal of Pharmaceutical and Clinical Sciences, 2, 13–15.
11. Dr. Omid Panahi. (2025). Forging a Healthier Future Through Responsible AI in Families and Communities. Archives of Community and Family Medicine.; 8(1): 21-30.
12. Panahi O. (2025). Smart Implants: Integrating Sensors and Data Analytics for Enhanced Patient Care. Dental. 7(1):22.
13. Omid P. (2011). Relevance between gingival hyperplasia and leukemia. Int J Acad Res. 3: 493–449.
14. Panahi O. (2025). The Future of Healthcare: AI, Public Health and the Digital Revolution. Medi Clin Case Rep J, 3(1):763-766.
15. Panahi, P., Maragheh, H. K., Abdolzadeh, M., & Sharifi, M. (2008). A novel schema for multipath video transferring over ad hoc networks. In 2008 The Second International Conference on Mobile Ubiquitous Computing, Systems, Services and Technologies, 77–82.
16. Omid P. (2024). Empowering Dental Public Health: Leveraging Artificial Intelligence for Improved Oral Healthcare Access and Outcomes. JOJ Pub Health.; 9(1): 555754. DOI: 10.19080/JOJPH.2024.09.555754.
17. Omid Panahi. “AI: A New Frontier in Oral and Maxillofacial Surgery". Acta Scientific Dental Sciences 8.6 (2024): 40-42.
18. Omid P, Evil Farrokh E. Beyond the Scalpel: AI, Alternative Medicine, and the Future of Personalized Dental Care. J Complement Med Alt Healthcare. 2024; 13(2): 555860. DOI: 10.19080/JCMAH.2024.12.555860.
19. Panahi, O., & Farrokh, S. (2025). The use of machine learning for personalized dental-medicine treatment. Global Journal of Medical and Biomedical Case Reports, 1, 001.
20. Panahi O. (2024). AI in Surgical Robotics: Case Studies. Austin J Clin Case Rep.; 11(7): 1342.
21. Panahi O, Zeinaldin M. Digital Dentistry: Revolutionizing Dental Care. J Dent App: 10 (1):1121.
22. Panahi O, et al. (2025). Smart Robotics for Personalized Dental Implant Solutions. Dental. 7(1):21.
23. Panahi, O, Arab, M. S, Tamson, K. M. (2011). GINGIVAL ENLARGMENT AND RELEVANCE WITH LEUKEMIA. International Journal of Academic Research. 3(2).
24. Panahi O. The evolving partnership: surgeons and robots in the maxillofacial operating room of the future. J Dent Sci Oral Care. 2025;1(1):1–7.
25. Omid Panahi, Sevil Farrokh. Building Healthier Communities: The Intersection of AI, IT, and Community Medicine. Int J Nurs Health Care. 2025; 1(1):1-4.
26. Panahi, P., Maragheh, H. K., Abdolzadeh, M., & Sharifi, M. (2008). A novel schema for multipath video transferring over ad hoc networks. In 2008 The Second International Conference on Mobile Ubiquitous Computing, Systems, Services and Technologies (pp. 77–82). IEEE. https://doi.org/10.1109/UBICOMM.2008.15.
27. Panahi, D. U., & HOC, A. (2025). Networks: Applications. *Challenges, Future Directions, Scholars' Press, ISBN*, 978-3.
28. Omid Panahi (2024). Teledentistry: Expanding Access to Oral Healthcare. Journal of Dental Science Research Reviews & Reports. SRC/JDSR-203.
29. Omid P, Reza S. (2024). How Artificial Intelligence and Biotechnology are Transforming Dentistry. Adv Biotech & Micro.18(2): 555981. DOI: 10.19080/AIBM.2024.17.555981.
30. Omid Panahi*and Reza Safaralizadeh. (2024). AI and Dental Tissue Engineering: A Potential Powerhouse for Regeneration. Mod Res Dent. 8(2).MRD.000682..DOI:10.31031/MRD.2024.08.000682.
31. Omid P. (2024). Artificial Intelligence in Oral Implantology, Its Applications, Impact and Challenges. Adv Dent & Oral Health. 17(4): 555966. DOI: 10.19080/ADOH.2024.17.555966.
32. Omid Panahi. (2024). “AI Ushering in a New Era of Digital Dental-Medicine". Acta Scientific Medical Sciences 8.8: 131-134.
33. Panahi, O., & Zeinaldin, M. (2024). AI-Assisted Detection of Oral Cancer: A Comparative Analysis. *Austin J Pathol Lab Med*, *10*(1), 1037.
34. Panahi, O. (2025). Wearable Sensors and Personalized Sustainability: Monitoring Health and Environmental Exposures in Real-Time. European Journal of Innovative Studies and Sustainability, 1(2), 1 1-19. https://doi.org/10.59324/ejiss.2025.1(2).02
35. Omid Panahi, Sevil Farrokh. USAG-1-Based Therapies: (2024). A Paradigm Shift in Dental Medicine. Int J Nurs Health Care.1(1):1-4.
36. Omid Panahi, Sevil Farrokh. (2024). Can AI Heal Us? The Promise of AI-Driven Tissue Engineering. Int J Nurs Health Care. 1(1):1-4.
37. O. Panahi. (2025). Algorithmic Medicine, Journal of Medical Discoveries, 2(1).
38. O. Panahi. (2025). Deep Learning in Diagnostics, Journal of Medical Discoveries, 2(1).
39. Omid P, Soren F (2025). The Digital Double: Data Privacy, Security, and Consent in AI Implants West J Dent Sci 2(1): 108.

Citation: Patrik James Kennet, Soren Falkner, (2025). From Lab to Life-Saving: AI's Accelerator Role in Drug Discovery, J. Clinical Case Reports and Clinical Practice. 1(3): dx.doi.org/CCRCP/PP.0008

40. Panahi, O. (2023). Ketenci Çay F. NanoTechnology. *Regenerative Medicine and Tissue Bio-Engineering. Acta Sci Dent Sci*, *7*(4), 118-122.
41. Panahi, P., Bayılmış, C., Çavuşoğlu, U., &Kaçar, S. (2021). Performance evaluation of lightweight encryption algorithms for IoT-based applications. *Arabian Journal for Science and Engineering*, *46*(4), 4015-4037.
42. Panahi, U., & Bayılmış, C. (2023). Enabling secure data transmission for wireless sensor networks based IoT applications. *Ain Shams Engineering Journal*, *14*(2), 101866.
43. Omid Panahi, and Uras Panahi. (2025). AI-Powered IoT: Transforming Diagnostics and Treatment Planning in Oral Implantology. J AdvArtifIntell Mach Learn. 1(1): 1-4.
44. Panahi, P., & Dehghan, M. (2008). Multipath Video Transmission Over Ad Hoc Networks Using Layer Coding And Video Caches. In *ICEE2008, 16th Iranian Conference On Electrical Engineering,(May 2008)* (pp. 50-55).
45. Baki koyuncu, pejman panahi, (2014). Kalman Filtering of Link Quality Indicator Values for Position Detection by Using WSNS, Int'l Journal of Computing, Communications & Instrumentation Engg. (IJCCIE), volume 1.
46. Panahi P. (2009). Providing consistent global sharing service over VANET using new plan. In 14th International CSI Computer Conference. IEEE. 213-218.
47. Dr Uras Panahi, Redes AD HOC: Aplicações, Desafios, Direcções Futuras, Edições Nosso Conhecimento, ISBN: 978-620-8-72962-2.
48. Dr Uras Panahi, Sieci AD HOC: Zastosowania, wyzwania, przyszłe kierunki, Wydawnictwo Nasza Wiedza, ISBN: 978-620-8-72967-7.
49. Dr Uras Panahi, Reti AD HOC: Applicazioni, sfide e direzioni future, Edizioni Sapienza, ISBN: 978-620-8-72965-3.
50. Dr Uras Panahi, Redes AD HOC: Aplicaciones, retos y orientaciones futuras, Ediciones Nuestro Conocimiento, ISBN: 978-620-8-72966-0.
51. Dr Uras Panahi, Réseaux AD HOC: Applications, défis et orientations futures, Editions Notre Savoir, ISBN: 978-620-8-72964-6.
52. Dr Omid Panahi, Dr Faezeh Esmaili, Dr Sasan Kargarnezhad Künstliche (2024).
53. O. Panahi. (2025). The Future of Medicine: Converging Technologies and Human Health. *Journal of Bio-Med and Clinical Research*. *RPC Publishers*. 2(1).
54. O. Panahi. (2025). Nanomedicine: Tiny Technologies, Big Impact on Health. *Journal of Bio-Med and Clinical Research*. *RPC Publishers*.2(1).
55. O. Panahi. (2025). The Age of Longevity: Medical Advances and The Extension of Human Life. *Journal of Bio-Med and Clinical Research*.*RPC Publishers*. 2(1).
56. Panahi O. (2025). Predictive Health in Communities: Leveraging AI for Early Intervention and Prevention. Ann Community Med Prim Health Care. 2025; 3(1): 1027.
57. Panahi, O. (2025). Digital Health Equity: Leveraging IT and AI for Community Well-being. *Ann Community Med Prim Health Care*, *3*(1), 1028.
58. Koyuncu, B., Gokce, A., & Panahi, P. (2015). The use of the Unity game engine in the reconstruction of an archeological site. In 19th Symposium on Mediterranean Archaeology (SOMA 2015) (pp. 95–103).
59. Koyuncu, B., Meral, E., & Panahi, P. (2015). Real time geolocation tracking by using GPS+GPRS and Arduino based SIM908. IFRSA International Journal of Electronics Circuits and Systems (IIJECS), 4(2), 148–150.
60. Koyuncu, B., Uğur, B., & Panahi, P. (2013). Indoor location determination by using RFIDs. International Journal of Mobile and Adhoc Network (IJMAN), 3(1):7–11.
61. Omid Panahi. (2025). The Impact of Artificial Intelligence in Medical Diagnosis. Int J Nurs Health Care. 2(1):1-4.
62. Omid Panahi. (2025). The AI Revolution in Healthcare. Int J Nurs Health Care., 2(1):1-4.
63. Omid Panahi. (2025). Beyond the Bedside: How Future Tech is Revolutionizing Medical Care. Int J Nurs Health Care, 2(1):1-4.
64. Panahi, O. (2025). Secure IoT for Healthcare. European Journal of Innovative Studies and Sustainability, 1(1), 17-23.
65. Omid Panahi. (2025). The Algorithmic Clinician: AI's Transformative Role in Modern Medicine. Int J Nurs Health Care. 2(1):1-4.
66. Omid Panahi* and Zahra Shahbazpour. (2025). Healthcare Reimagined: AI and the Future of Clinical Practice. Am J Biomed Sci & Res. 27(6) AJBSR.MS.ID.003617, DOI: 10.34297/AJBSR.2025.27.003617.

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