

Review Form 1.7

Journal Name:	Asian Journal of Research in Infectious Diseases
Manuscript Number:	Ms_AJRID_111071
Title of the Manuscript:	Investigating Transferrin: Deciphering its Complex Mechanisms in Cellular Iron Regulation and Implications in Health and Disease
Type of the Article	Review article

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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments 1. Is the manuscript important for scientific community? (Please write few sentences on this manuscript) 2. Is the title of the article suitable? (If not please suggest an alternative title) 3. Is the abstract of the article comprehensive? 4. Are subsections and structure of the manuscript appropriate? 5. Do you think the manuscript is scientifically correct? 6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form. <u>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</u>	<p>The manuscript is significant as it provides a detailed assessment of transferrin, a key glycoprotein in iron transport and regulation. It explores its diverse forms, structures, synthesis mechanisms, and role in various metabolic processes. This could enhance understanding of iron regulations in cells and its implications in health conditions like hemochromatosis and atransferrinemia.how ever See Optional/General comments for more detail and improvement of the manuscript.</p> <p>The title appears suitable as it accurately reflects the manuscript's focus on transferrin and its role in iron regulation and health implications.</p> <p>The abstract is comprehensive, covering key aspects of the study including the importance of transferrin in iron transport, its different forms, and its implications in health and disease.</p> <p>The manuscript seems well-structured, with clear sections including an introduction, overview of transferrins, structure, synthesis, and the clinical significance of transferrin how ever See Optional/General comments for more detail and improvement of the manuscript.</p>	Okay
Minor REVISION comments 1. Is language/English quality of the article suitable for scholarly communications?	See Optional/General comments	
Optional/General comments	<p>The following questions needs to be addressed for an excellent and citable review paper.</p> <ol style="list-style-type: none">1. Transferrin's Role in Iron Regulation: How does transferrin maintain balance in cellular iron levels without causing toxicity?2. Comparative Functionality: Can you compare transferrin's iron-binding capacity with other iron-regulating proteins?3. Structural Aspects: How do the structural differences in transferrin's N and C lobes affect its iron-binding and releasing mechanisms?4. Synthesis Pathways: What are the primary pathways for transferrin synthesis in different tissues, and how do they vary?5. Receptor Interactions: Can you elaborate on how the transferrin receptor facilitates iron uptake in cells?6. Molecular Binding: How does transferrin's binding with bicarbonate ions influence its iron-binding efficiency?7. Impact of pH Levels: How do variations in pH levels affect transferrin's iron-binding and	

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	<p>release?</p> <p>8. Metal Ions Binding: Besides iron, what other metal ions can bind to transferrin, and what is the significance of this binding?</p> <p>9. Transferrin Testing: What are the best practices for transferrin level testing in clinical settings, and how do they correlate with iron homeostasis?</p> <p>10. Therapeutic Applications: How can understanding transferrin's mechanisms contribute to treatments for iron-related disorders?</p> <p>11. Gene Expression Analysis: Could further gene expression analysis provide deeper insights into transferrin's roles in different physiological conditions?</p> <p>12. Amino Acid Composition and Variation: How do variations in amino acid sequences of transferrin among different species impact its functionality?</p> <p>13. Transferrin's Role in Immunity: Can you detail how transferrin's iron-binding capacity contributes to antimicrobial defense?</p> <p>14. Macrophage Activation: How does transferrin contribute to the activation of macrophages in immune responses?</p> <p>15. Iron Overload Conditions: How does transferrin respond in conditions of iron overload, such as hemochromatosis?</p> <p>16. Potential for Bioengineering: Could modifications to transferrin's structure lead to improved therapeutic agents?</p> <p>17. Environmental Influence on Transferrin: How do environmental factors like pollutants affect transferrin function in aquatic organisms?</p> <p>18. Diagnostic Potential of Transferrin: Can transferrin levels be effectively used as a diagnostic marker for specific diseases?</p> <p>19. Evolutionary Perspective: How has transferrin evolved across different species, and what does this say about its biological importance?</p> <p>20. Research Gaps: What are the major gaps in current research on transferrin, and how might future studies address them?</p> <p>21. English language: Please do not start a sentence with numerals or uncommon acronyms or abbreviations. However, common acronyms like DNA or NMR are exceptions.</p> <p>22. English language: Any uncommon abbreviation should be fully spelled out on the first instance.</p> <p>23. Formatting: The author should strictly adhere to the journal category-specific subheadings.</p> <p>24. Results: Data should be concise and should not be repeated in the text, figures and tables</p> <p>25. References: You have included many of the very old and outdated citations. Make sure to maintain about 60% citations from recent five years to support your results.</p> <p>26. References: List of references carries many inconsistencies, which include incomplete information. Some journal titles are either missing or not abbreviated, and may be many others. Please strictly adhere to the journal guidelines for citation and listing of references.</p>	
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PART 2:

	Reviewer's comment	Author's comment <i>(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
Are there ethical issues in this manuscript?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	