Journal Name:	Asian Journal of Pure and Applied Mathematics
Manuscript Number:	**Ms_AJPAM_1760**
Title of the Manuscript:	**NUMERICAL SOLUTIONS OF FRACTIONAL CHEMOTAXIS SYSTEM USING STOCHASTIC FRACTIONAL CHEMOTAXIS MODELS**
Type of the Article	

PART 1: Review Comments

Compulsory REVISION comments	**Reviewer's comment**	**Author's Feedback** *(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.		
Is the title of the article suitable? (If not please suggest an alternative title)		
Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.		
Are subsections and structure of the manuscript appropriate?		
Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.		
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. -		

Minor REVISION comments **Is the language/English quality of the article suitable for scholarly communications?**		
Optional/General comments	1. The abstract introduces the study well, but it could benefit from clearer definitions of key terms, like "anomalous diffusion" and "subdiffusion," for readers unfamiliar with the concepts. 2. The introduction provides a good background but could be improved by briefly stating the study's objectives and significance upfront to guide the reader. 3. The literature review touches on foundational models, yet it could be expanded to include more recent studies on stochastic fractional models in chemotaxis. 4. More detailed explanations of the mathematical concepts, such as fractional derivatives and the Grunwald-Letnikov approximation, would make the theoretical framework more accessible to a broader audience. 5. The paper could enhance readability by clearly numbering and formatting all equations, making it easier for readers to reference specific equations in their discussions. 6. Parameters like α, χ, and σ are central to the study but would benefit from a more thorough explanation of their biological relevance. 7. While the paper incorporates stochastic elements, an explanation of why specific stochastic processes (e.g., Wiener processes) are chosen would strengthen the methodology. 8. The finite difference method and Grunwald-Letnikov approximation are suitable choices, but the discussion could be expanded to address any potential limitations of these approaches. 9. The choices of parameter values for simulations are not fully justified. Discussing the criteria for these choices could help the reader understand the results better. 10. The paper presents results visually in Figure 1, but adding quantitative analysis to accompany the visuals could provide a deeper insight into the findings. 11. The paper compares the model with integer-order models; however, it would be helpful to show specific numerical examples or case studies illustrating these differences. 12. Although the paper mentions applications in cancer research and immunology, it could improve by providing more detailed examples or case studies in these fields. 13. The discussion would benefit from acknowledging the limitations of the proposed model, such as computational complexity or potential challenges in real-world implementation. 14. The paper mentions variable-order derivatives as a future direction but could expand on other potential avenues for further research, such as exploring other types of noise like Levy noise. 15. While the references cover seminal works, recent developments in stochastic fractional calculus and chemotaxis modeling might be missing. Including these could enhance the study's relevance. 16. Some sentences could benefit from language refinement to improve clarity, as technical papers benefit from concise and precise language. 17. The method for implementing the numerical solution, especially the Monte Carlo approach, is not fully explained. Including pseudo-code or a more detailed algorithm would be beneficial. 18. The paper would strengthen its conclusions by validating the model against empirical data or experimental studies, if available. 19. While results are described, more in-depth interpretation and discussion of their implications for biological systems would add value. 20. Consider adding more figures or tables, especially to show quantitative	

	differences between integer-order and fractional-order models. 21. The role of memory effects in cell migration is mentioned but could be explained more explicitly, especially how these effects are quantitatively modeled in the equations.	

PART 2:

	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)*
Are there ethical issues in this manuscript?	*(If yes, Kindly please write down the ethical issues here in details)*	

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