

Review Form 3

Journal Name:	Asian Journal of Biochemistry, Genetics and Molecular Biology
Manuscript Number:	Ms_AJBGMB_129272
Title of the Manuscript:	TP53 Mutations Vulnerability and Its Impact on Metabolic Alterations in Prostate Cancer Progression
Type of the Article	Original Research Article

PART 1: Comments

	Reviewer's comment	Author's Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.	This manuscript addresses a significant gap in understanding the metabolic consequences of TP53 gain-of-function (GOF) mutations in prostate cancer progression. The findings highlight the impact of specific mutations (R175H and R273H) on critical metabolites, offering potential biomarkers for diagnosis and therapy. The study's robust methodology, particularly the metabolomics approach, provides valuable insights into the molecular underpinnings of therapy resistance in prostate cancer. These findings are crucial for developing targeted therapeutic strategies for advanced prostate cancer.	
Is the title of the article suitable? (If not please suggest an alternative title)	The title is clear but could be refined for precision and impact. Suggested alternative: "Impact of TP53 Gain-of-Function Mutations on Metabolic Reprogramming in Prostate Cancer Progression"	
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.	<p>The abstract is comprehensive but could benefit from minor adjustments for clarity and focus:</p> <ul style="list-style-type: none"> - Add a brief mention of the methodology (e.g., "Using advanced metabolomics analysis"). - Specify key implications of the findings for therapy. - Remove redundancies, such as restating the importance of TP53 mutations twice. <p>Suggested Revision: "Despite advancements in prostate cancer treatment, therapy resistance remains a significant challenge. This study explores the metabolic consequences of TP53 gain-of-function mutations (R175H and R273H) using metabolomics analysis. Key findings include the dysregulation of essential metabolites, such as α-ketoglutarate and spermidine, which support cancer cell survival and progression. These insights provide potential biomarkers for prognosis and therapeutic targeting in aggressive prostate cancer."</p>	
Is the manuscript scientifically, correct? Please write here.	<p>The manuscript is scientifically robust, with a well-documented methodology and clear presentation of results. However, some areas warrant improvement:</p> <ul style="list-style-type: none"> - Clarify how specific metabolic pathways are influenced by the identified metabolites. - Discuss the potential off-target effects or limitations of targeting the highlighted metabolites in clinical settings. 	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.	<p>The references are recent and relevant, with adequate coverage of the background and discussion. However, additional citations could enhance the study:</p> <ul style="list-style-type: none"> - Include more references on the role of TP53 in metabolic reprogramming beyond prostate cancer, such as "Mutant p53 rewires metabolic pathways in cancer" (Nature Reviews Cancer). - Cite studies exploring therapeutic interventions targeting metabolic pathways in prostate cancer. 	

Review Form 3

Is the language/English quality of the article suitable for scholarly communications?	The language is mostly suitable for scholarly communication. However, minor grammatical errors and redundancies should be addressed: <ul style="list-style-type: none">- Replace overly complex sentences with clearer constructions.- Ensure consistent use of technical terms, such as "gain-of-function" vs. "GOF."	
Optional/General comments	<ul style="list-style-type: none">- Figures and tables are well-constructed but could benefit from additional annotations to enhance readability.- Highlight the clinical relevance of the findings more explicitly in the discussion and conclusion sections.- Consider including a flowchart summarizing the metabolic changes associated with TP53 mutations to aid comprehension.	

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?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

Reviewer Details:

Name:	Kirolos Eskandar
Department, University & Country	Helwan University, Egypt