Review Form 3

Journal Name:	Microbiology Research Journal International
Manuscript Number:	**Ms_MRJI_127163**
Title of the Manuscript:	**Antimicrobial Resistance Profile of Salmonella enterica Isolated from Improved Poultry Breed Farming chain, Maharashtra, India**
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.	This manuscript is important for the scientific community as it provides valuable insights into the prevalence and antimicrobial resistance (AMR) patterns of *Salmonella* spp. in the poultry farming chain, specifically in Maharashtra, India. It highlights the need for continuous monitoring of AMR in foodborne pathogens, particularly in the context of improved poultry breeds, where the potential for disease transmission and resistance development is significant. The study's focus on specific genes associated with resistance and its findings on low resistance levels in the context of low antibiotic use could inform best practices for antimicrobial stewardship in poultry farming, a critical aspect for both animal and public health. I appreciate the thoroughness of the study, including the genotypic analysis of resistance markers, but I would have liked to see a deeper discussion on the broader implications of these findings for global poultry production systems, particularly in low-resource settings.	
Is the title of the article suitable? **(If not please suggest an alternative title)**	The title *"Antimicrobial Resistance Profile of Salmonella enterica Isolated from Improved Poultry Breed Farming Chain, Maharashtra, India"* is fairly clear and accurately reflects the main focus of the study, which is the antimicrobial resistance (AMR) profile of *Salmonella enterica* in a specific context (improved poultry breed farming) in a defined geographic region (Maharashtra, India). However, it could be refined to make it slightly more concise and to better highlight the key elements of the study. The best alternative title, in my opinion, is:**Antimicrobial Resistance in *Salmonella enterica* from Improved Poultry Farms in Maharashtra, India"**	

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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.	The abstract provides a good summary but can benefit from slight restructuring and added details to improve clarity, highlight the significance of the findings, and make the implications for AMR management in poultry farming more evident. The suggested abstract “Given the rising demand for poultry meat and concerns about antimicrobial resistance (AMR) in foodborne pathogens, this study aimed to investigate the prevalence and AMR profile of *Salmonella enterica* in poultry farming systems in Maharashtra, India. A total of 364 samples were collected from hatcheries, poultry farms, and backyard poultry systems. The prevalence rates of *Salmonella* were 4.83%, 6.36%, and 1.53%, respectively, with 15 isolates identified. These isolates were primarily identified as *Salmonella enterica* based on sequence analysis. Antimicrobial susceptibility testing revealed 100% resistance to erythromycin, 40% resistance to ceftazidime, and high sensitivity to ampicillin/sulbactam, amoxicillin/sulbactam, and enrofloxacin. The average multiple antibiotic resistance (MAR) index was 0.117. Genotypic analysis showed that all isolates carried the **blaTEM** gene, and all were positive for the **tetA** gene, indicating potential mechanisms of resistance. These findings highlight the importance of monitoring AMR in poultry farming systems and suggest that responsible antibiotic usage can help mitigate resistance risks, safeguarding both animal health and public safety."	
Are subsections and structure of the manuscript appropriate?	**Abstract**: Ensure it succinctly summarizes the study objectives, key results, and conclusions. **Introduction**: If not yet comprehensive, expand on the problem statement, research objectives, and significance of studying *Salmonella* in indigenous poultry. **Materials and Methods**: Should precede the *Results and Discussion* section, detailing sampling procedures, PCR protocols, and antimicrobial testing. **Results and Discussion**: • Maintain a clear separation between results and interpretation. If the journal permits, separate into distinct *Results* and *Discussion* sections. • Use tables and figures (e.g., Tables 3-4, Figs. 1-3) effectively and refer to them within the text to avoid redundancy.	
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.	This manuscript demonstrates scientific robustness and technical soundness through its comprehensive approach to investigating *Salmonella* prevalence, antimicrobial resistance, and genetic characterization in indigenous poultry. The use of molecular techniques, such as PCR and sequencing, ensures accurate identification and serotype confirmation of *Salmonella* isolates. Additionally, the study’s antimicrobial resistance analysis, including phenotypic and genotypic assessments, provides a thorough understanding of resistance patterns and their potential public health implications. The findings are supported by appropriate statistical methods and comparisons with existing literature, enhancing the reliability and validity of the conclusions.	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. -	he references in the manuscript appear to be relevant, but their recency varies. Several citations are relatively old, and some key references from recent years (2022–2024) are sparse, especially considering the rapidly evolving field of antimicrobial resistance and *Salmonella* research. For enhanced depth and updated context, I suggest including more recent studies such as: 1. **World Health Organization (WHO), 2023.** Reports on antimicrobial resistance trends. 2. **Centers for Disease Control and Prevention (CDC), 2023.** Updates on *Salmonella* prevalence and zoonotic risks. 3. **Koro et al., 2022.** Related to *Salmonella* in backyard poultry. 4. **Lai et al., 2023.** Latest insights into the genetic mechanisms of β-lactam resistance.	

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Minor REVISION comments **Is the language/English quality of the article suitable for scholarly communications?**	The language of the article is generally clear, but there are several areas where the quality of English could be improved to meet scholarly standards. Some sentences are overly complex, while others contain grammatical errors or awkward phrasing. For example, phrases such as *"in mandate to better assess the tangible infection"* and *"the findings are not in contrast"* could be rephrased for clarity and precision. Additionally, consistent use of tenses and proper scientific terminology is needed throughout the manuscript. A thorough language edit would enhance readability and ensure the manuscript meets the high standards expected in scholarly communication.	
Optional/General comments	The manuscript presents a significant contribution to understanding the prevalence, antimicrobial resistance, and genetic characterization of *Salmonella* in poultry systems. The study is well-structured, and the data are comprehensively analyzed. However, improving the flow of the discussion by aligning the findings more clearly with the existing literature would enhance its impact. In addition, providing more details about the sample collection methodology, geographic distribution, and potential limitations of the study could strengthen the manuscript. Overall, the study provides valuable insights into antimicrobial resistance trends and zoonotic risks in poultry production systems, which are critical for public health and disease management.	

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)*	

Reviewer Details:

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