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REVIEWER'S REPORT

Manuscript No.: 55301

Title: Study of Virulence Factors and Antimicrobial Susceptibility Pattern of Uropathogenic Escherichia coli in a Tertiary Care Hospital

Recommendation:

Accept as it is
Accept after minor revision.....
Accept after major revision ...Yes.....
Do not accept (*Reasons below*).....

Rating	Excel.	Good	Fair	Poor
Originality	•			
Techn. Quality		•		
Clarity		•		
Significance		•		

Reviewer Name: Dr. Sireesha Kuruganti

Date: 19/12/2025

Detailed Reviewer's Report

Detailed In-Depth Review of Manuscript: "Study of Virulence Factors and Antimicrobial Susceptibility Pattern of Uropathogenic Escherichia coli in a Tertiary Care Hospital"

Overall Assessment

This manuscript presents a well-structured prospective study investigating virulence factors and antibiotic susceptibility patterns of uropathogenic Escherichia coli (UPEC) in a tertiary care setting. The study is clinically relevant given the high prevalence of urinary tract infections (UTIs) and rising antibiotic resistance. However, the manuscript requires significant revisions to improve clarity, consistency, formatting, and scholarly rigor.

Section-by-Section Review with Line References

1. Title and Abstract (Lines 1–10)

- Title (Lines 1–3): Clear and descriptive.
- Abstract (Lines 4–10):
 - Briefly summarizes the aim, methods, results, and conclusions.

REVIEWER'S REPORT

- Issue: The abstract mentions the study period as “May 2025 to July 2025,” which appears to be a future date at the time of writing (unless this is a forward-dated submission). This should be corrected to reflect the actual study period.
- Suggestion: Specify the actual year of study completion.

2. Introduction (Lines 11–92)

- Lines 11–45: Provides a comprehensive background on UPEC, virulence factors, and clinical significance.
- Lines 46–92: Describes the pathogenesis of UPEC in detail.
- Issue: Some sentences are repetitive (e.g., lines 17–18 are duplicated).
- Suggestion: Condense and avoid redundancy. The introduction is lengthy; consider streamlining while retaining key points.

3. Materials and Methods (Lines 93–123)

- Lines 93–102: Clearly describes study design, sample collection, and virulence factor testing.
- Lines 103–123: Methods for hemagglutination and gelatin hydrolysis are well-explained with figures referenced.
- Issue: Lines 17–18 are repeated again in the methods section.
- Issue: The description of hemagglutination (lines 101–108) is clear but could be more concise.
- Suggestion: Merge repeated sentences and ensure all methodological details are consistent with CLSI guidelines.

4. Results (Lines 124–143)

- Lines 124–131: Presents demographic data and virulence factor distribution clearly.
- Lines 132–143: Antibiotic susceptibility data is presented in tables, which are easy to interpret.
- Issue: Table 1 and Table 2 are well-formatted, but Table 3 could be merged with the text for better flow.
- Issue: Percentages in Table 2 do not sum to 100%, which is fine as isolates may express multiple factors, but this should be clarified in the caption.

5. Discussion (Lines 144–192)

- Lines 144–152: Relates findings to existing literature appropriately.
- Lines 153–192: Compares virulence factor prevalence and resistance patterns with other studies.
- Issue: Some references are incomplete or incorrectly formatted (e.g., lines 194–308).
- Issue: The discussion is lengthy and could be better organized with subheadings (e.g., “Virulence Factors,” “Antibiotic Resistance,” “Clinical Implications”).

REVIEWER'S REPORT

- Suggestion: Strengthen the link between virulence factors and multidrug resistance, as stated in the conclusion.

6. Conclusion (Lines 179–192)

- Lines 179–182: Succinctly summarizes key findings.
- Suggestion: Expand slightly to emphasize the clinical implications of the study, such as guiding empiric therapy and the need for molecular studies.

7. References (Lines 193–308)

- Issue: Several references are incomplete, misformatted, or contain placeholder text (e.g., lines 194–308).
- Issue: Some citations in the text (e.g., lines 160–176) do not correspond correctly to the reference list.
- Suggestion: Use a consistent citation style (e.g., APA, Vancouver) and verify all entries for accuracy.

8. Formatting and Editorial Issues

- Lines 27–42: The repeated phrase “Human Factors in Incorporation” appears irrelevant and seems to be an editorial error.
- Line 45–92: The introduction continues onto page 2 with blank lines, disrupting flow.
- Figures and Tables: Figures are referenced but not included in the provided text. Ensure all figures are properly labeled and placed within the manuscript.
- Grammatical/Spelling Errors:
 - Line 22: “Haemagglutination” spelled inconsistently (sometimes “Hemagglutination”).
 - Line 136: “HEMAAGGLUTINATION” should be “HEMAGGLUTINATION.”
 - Line 172: “hydrolyzinggelatin” should be “hydrolyzing gelatin.”

Strengths

- Clinically relevant topic with clear objectives.
- Well-described laboratory methods.
- Data is clearly presented in tables.
- Good comparison with existing literature in the discussion.

REVIEWER'S REPORT

Major Recommendations for Revision

1. Correct dates in the abstract and methods (lines 15, 93).
2. Remove redundant text (lines 17–18, 27–42).
3. Reformat references and ensure accurate in-text citations.
4. Improve discussion structure with subheadings.
5. Proofread for spelling and consistency in terminology.
6. Ensure all figures are included and referenced appropriately.
7. Clarify the sum of percentages in Table 2.
8. Shorten the introduction and remove irrelevant repetitions.

Conclusion

This manuscript presents valuable data on UPEC virulence and resistance patterns. With thorough revisions—particularly in formatting, reference management, and structural clarity—it has the potential to be a strong contribution to the field of clinical microbiology and infectious diseases.