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for

Journal of Institute of Science and Technology (JIST)

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Aims and scope

Journal of Institute of Science and Technology (JIST) is a peer-reviewed, multidisciplinary, open access science journal published by the Institute of Science and Technology (IoST), Tribhuvan University (TU), Kathmandu, Nepal (established in NepJOL since 2007). JIST publishes two issues (June and December) in a year considering original research articles, review articles, short communications/reports/notes/checklist/comments and letter to the editor on diverse areas of Science and Technology, including botany, chemistry, computer/IT, computation, environment, geology, hydrology/meteorology, mathematics, microbiology, physics, statistics, zoology and allied fields or in multidisciplinary aspects. JIST is indexed in NepJOL (<https://www.nepjol.info/index.php/JIST>) and ranked TWO STARS by International Network for Advancing Science (INASP) Journal Publishing Practices and Standards (JPPS). JIST has online submission and tracking system promoting continuous publication of the articles.

Language

The manuscript should be written in English language, either US or British, but not in combination.

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Research Articles

These articles present original research, cover the results of recent research and findings across diverse fields of science and technology (S&T) which contribute to the foundation of scientific knowledge. They may include interdisciplinary investigations, as well as the replication and validation of previously conducted studies, thereby strengthening the reliability and scope of existing research. The length of the research article should be generally **4,000-7,000 words** inclusive of all parts of paper. Figures and tables are acceptable in a research article.

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Review (including systematic reviews and perspective) articles provide a comprehensive evaluation of clearly defined topics, new insights or perspectives covering the scope of the journal. Submissions are expected to include a critical and integrative synthesis of literature drawn from diverse sources and, where relevant, multiple languages. A rigorous meta-analysis should be conducted when appropriate to quantitatively assess patterns and evidence across studies. Review articles must go beyond summarizing existing knowledge by offering new insights, conceptual advances, future research directions, and potential resolutions to key debates or unresolved questions in S&T. The length of the review article should be generally **7,000-10,000 words** inclusive of all parts of the paper. Manuscripts that focus solely on publication trends or bibliometric patterns without substantive synthesis will not be considered.

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Use symbol § in case of equal contribution of authors (not more than two).

Authors are requested to follow the following format.

CARBAPENEM-RESISTANT AND METALLO-B-LACTAMASES PRODUCING ENTEROBACTERALES FROM CLINICAL SPECIMENS

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ABSTRACT

A concise single paragraph abstract with maximum of 250 words is required. The abstract should state briefly the objective of the research with background, novelty, materials/methods, results and conclusions and recommendations. Non-standard or uncommon abbreviations and references should be avoided, however, if essential they must be defined at their first mention in the abstract.

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Table should be presented as editable text, not as image. The tables should be marked with self-explanatory notes with table captions above the table. Fonts of the table and table caption should be in 10 font size, Times New Roman. Cite all tables in the manuscript text. Table number should be in sequence, using Arabic numerals – i.e., **Table 1.** , 2., 3., etc.

Citation in text write as Table 1 depicted.....

Graphical comparisons of TPC and TFC are presented in 1 and 2, respectively.

From Tables 3a, 3b, and 3c, it can be observed that both compounds had a good alignment in the binding site of EGFR.

For better interpretation it is shown via regression (Table 5, 6).

If it is in parenthesis write as follows (Table 1)

Citation in text as Table 1.

Format Table as below:

Table 1. Carbapenemase and MBL production among Enterobacterales

| Organism | MDR (%) | Carbapenem resistant (CRE) (%) | Carbapenemase positive (mCIM) (%) | MBL positive (eCIM) (%) |
|-------------------------|----------------|---------------------------------------|--|--------------------------------|
| <i>E. coli</i> | 54.92 | 4.75 | 5.76 | 2.37 |
| <i>K. pneumoniae</i> | 53.13 | 10.94 | 15.36 | 1.56 |
| <i>P. mirabilis</i> | 70.00 | 10.00 | 30.00 | 20 |
| <i>Morganella</i> spp. | 20.00 | 0 | 0 | 0 |
| <i>Citrobacter</i> spp. | 66.67 | 0 | 66.67 | 33.33 |
| <i>Serratia</i> spp. | 100.00 | 0 | 33.33 | 0 |
| <i>K. oxytoca</i> | 100.00 | 0 | 0 | 50.00 |
| <i>Salmonella</i> spp. | 66.67 | 0 | 0 | 0 |
| Total | 55.32 | 5.71 | 8.57 | 3.12 |

Figures

Figures, images, schematic diagram, illustrations and any other art works should be present in image format in JPEG, TIFF, PNG (at least 300 dpi resolution). Provide figure captions for each figure or group of figures. Cite all figures in the manuscript text. The figures should be marked with self-explanatory notes and figure legends. Figure captions should be given below the figure. Figure captions should be 10 font size. Figure number should be in sequence, using Arabic numerals– e.g.,

Figure 1. Detection of metallo- β -lactamase (MBL) production

Figure 2. Carbapenemase and MBL production among Enterobacterales

Citation in text write as Figure 1 depicted.....

Graphical comparisons of TPC and TFC are presented in 1 and 2, respectively.

From Figures 3a, 3b, and 3c, it can be observed that both compounds had a good alignment in the binding site of EGFR.

For better interpretation it is shown via regression (Fig. 5, 6).

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The purpose of research should be reflected in the introduction. State the questions you sought to answer and provide pertinent and adequate background information of previous findings for those questions. It should provide a clear and concise overview of the research topic, its significance, and the context.

MATERIALS AND METHODS

Provide sufficient details of materials and methods to ensure the reproducibility or repeatability of the study. A clear description of experimental design, sampling procedures, and statistical procedures should be described. Include model numbers and manufacturer for all specialized equipment used, where applicable. Previously published methods should be cited appropriately, and only relevant modifications should be described. For mathematical expression and equations, please follow articles of latest issues.

For subheadings follow the examples given below:

Study area (Bold)

Anaerobic *Peptinophilus asaccharolyticus* (bold)

Population of Bengal tiger (bold)

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Results should be clear and state concisely. Present the results logically in text, tables and figures but do not interpret your findings.

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Differentiate the results of your study from data obtained from other secondary sources. Interpret your results, relate them to the results of previous research findings, and discuss the implications of your results.

CONCLUSION

State clearly the main conclusions of the research and give a clear explanation of the importance and relevance. This section should be based on your findings and standalone.

ACKNOWLEDGMENTS

Acknowledgments must be placed after the main text. Acknowledge only those who have made significant contribution to the study. Many contributions, such as technical help, financial support, sources of materials, and people who have contributed intellectually to the development of the manuscript justify acknowledgements. Do not acknowledge anyone who has no contribution.

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The authors should mention the contributions to the work by each author. For instance, the section should cover but not be limited to: conceptualization, project administration, fieldwork, laboratory works, resources, funding, supervision, data analysis, writing original drafts, review and editing.
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FUNDING

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Tiko Kuhl: <http://orcid.org/0000-0002-3179-129X>

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In main text of manuscript write as below:

Table S1. Search strategies

Table S2. Data collected from the study

Table S3. PRISMA 2020 checklist

In supplementary file format as below:

CARBAPENEM-RESISTANT AND METALLO-B-LACTAMASES PRODUCING ENTEROBACTERALES FROM CLINICAL SPECIMENS

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SUPPLEMENTRY

Table S1. Search strategies

Table S1. A.....

REFERENCES

Citations

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Single author: The author's last name and the year of publication, e.g., (Sharma, 2008) or Sharma (2008).

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Journal articles

- Sharma, C. M. (2008). Freshwater fishes, fisheries, and habitat prospects of Nepal. *Aquatic Ecosystem Health & Management*, 11(3), 289–297. <https://doi.org/10.1080/14634980802317329>
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Book

- Gotelli, N. J., & Ellison, A. M. (2004). *A primer of ecological statistics*. Sinauer Associates.
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- Sayyed, R. A., Singh, A., & Ilyas, N. (Eds.). (2022) *Antifungal Metabolites of Rhizobacteria for Sustainable Agriculture* (p. 380). Springer Nature Switzerland AG.

Book chapters

- Richter, M. (2001). Density functional theory applied to 4f and 5f elements and metallic compounds. In K. H. J. Buschow (Ed.), *Handbook of Magnetic Materials* (pp. 87–228), Vol. 13, Elsevier, Amsterdam, Netherlands.
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- Sharma, C. M., Borgström, R., & Rosseland, B. O. (2010). Biomanipulation in Lake Årungen, Norway: A tool for biological control. In A. Ansari, S. Gill, G. Lanza, & W. Rast (Eds.), *Eutrophication: Causes, consequences and control* (pp. 295–323). Springer. https://doi.org/10.1007/978-90-481-9625-8_15

Report

Bhattarai, J. (2019). Investigation on physico-chemical and sintering properties of ceramic tiles and bricks available in local market of Kathmandu Valley. The University Grants Commission-Nepal, Sanothimi, Bhaktapur, Nepal. p. 121.

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Swar, D. B. (2008). History of rainbow trout (*Oncorhynchus mykiss*) introduction in Nepal. In T. B. Gurung (Ed.), Proceedings of the first national workshop on scaling up rainbow trout (*Oncorhynchus mykiss*) farming strategies in Nepal (pp. 21–24), Kathmandu, Nepal.

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Pyakurel, U. (2016). *Evacuation planning problem with contraflow approach*. PhD Dissertation, Central Department of Mathematics, Institute of Science and Technology, Tribhuvan University, Nepal.

Bhattarai, J. (1998). *Tailoring of corrosion-resistant tungsten alloys by sputtering*. MSc Thesis, Department of Materials Science, Faculty of Engineering, Tohoku University, Japan.

Webpage on a website with a group author

Centers for Disease Control and Prevention. (2018, January 23). People at high risk of developing flow-related complications. <https://www.cdc.gov/flu/highrisk/index.htm>

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