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***Title: Structuring Scientific Articles: Guidelines for Abstract, Introduction, Methods, Results, and Discussion Sections***

***Título: Estruturação de artigos científicos: diretrizes para as seções Resumo, Introdução, Métodos, Resultados e Discussão***



**Original Article**

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## **Ab****stract**

The abstract is a concise presentation that highlights the most important elements of the text, such as the objective, method, results, and conclusions. Its length and organization vary according to the type of abstract (informative or indicative) and the treatment of the original document. Main characteristics include it being a single paragraph with concise and affirmative sentences, avoiding unusual topics, symbols, or contractions. Formulas, equations, and diagrams should only be included if absolutely necessary, with clear definitions when they are mentioned. The recommended length varies according to the type of document: 150 to 500 words for academic papers and technical-scientific reports; 100 to 250 words for journal articles; and 50 to 100 words for brief indications. The keywords, representing the content of the paper, should appear immediately below the abstract, preceded by the expression "Keywords", separated by commas, and ended with a period.

## **Resumo**

O resumo é uma apresentação concisa que destaca os elementos mais importantes do texto, como objetivo, método, resultados e conclusões. Sua extensão e organização variam de acordo com o tipo de resumo (informativo ou indicativo) e o tratamento do documento original. As principais características incluem consistir em um único parágrafo, com frases concisas e afirmativas, evitando temas incomuns, símbolos ou contrações. Fórmulas, equações e diagramas devem ser incluídos apenas se absolutamente necessários, com definições claras quando mencionados. O comprimento recomendado varia de acordo com o tipo de documento: de 150 a 500 palavras para trabalhos acadêmicos e relatórios técnico-científicos; de 100 a 250 palavras para artigos de periódicos; e de 50 a 100 palavras para indicações breves. As palavras-chave, representando o conteúdo do documento, devem aparecer imediatamente abaixo do resumo, precedidas pela expressão "Palavras-chave", separadas por vírgulas e finalizadas com um ponto.

## **Keywords:** science; ethics; sustainability; education; cooperation.

**1.Introduction**

The introduction is the beginning of the textual part of the scientific article, where the chosen theme, the problem that will be addressed, the objectives to be achieved and the methodology used are discussed. The introduction is the “presentation of the problem investigated, objectives, justification, methodology used, citation of the theoretical reference framework, framework of hypotheses”, all references must be in the Vancouver model [1].

**2.Methods**

The Methodology Guidelines for Research Articles stress the importance of detailing the research approach, whether qualitative, quantitative, or mixed-methods, and the rationale behind the choice. Researchers should comprehensively describe data collection methods, research techniques, and sampling strategies, ensuring transparency about sources and selection criteria. Data analysis techniques and any software used should be clearly stated. Ethical considerations, including approvals and data confidentiality, are crucial. Limitations should be acknowledged to understand their impact on results. The methodology should be described in detail to allow for replicability and to demonstrate rigor through validation measures and reliability checks. This framework is designed to enhance clarity and reproducibility in research publications [2].

**3. Results**

The Results section of a research article should present findings clearly and precisely, aligning with the study's methodology without interpretation. Organize data logically, using subheadings for clarity if necessary, and include relevant visuals like tables and graphs (As exemplified below (Figure 1) that are clearly labeled and referenced. Report all statistical findings, including measures of variability and significance tests. Keep the presentation objective and include both positive and negative results as they relate to the research question. Ensure that the details provided, such as sample sizes and response rates, are sufficient for understanding the outcomes, and maintain consistency between the results and the described methods. This structured approach ensures that the Results section effectively communicates the study's findings, setting the stage for the discussion and conclusions [3].

**Figure 1-** Anti-inflammatory activity of ISP-VT in Carrageenan-induced paw edema

Gráfico

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**Legend:**ISP-VT was effective in reducing carrageenan-induced paw edema. Mice were pre-treated with ISP-VT at the tested doses (0.3 mg/kg, 1 mg/kg, 3 mg/kg, i.p.). Thirty minutes after pre-treatment, carrageenan (50 µg/paw) was administered. Each point represents the mean ± S.E.M. of 5-6 animals per group. \* P < 0.05 compared to the carrageenan group. Statistical analysis was performed using one-way ANOVA followed by Newman-Keuls post hoc test.

**4.Discussion**

The Discussion section of a research article is where the results are interpreted in the context of existing knowledge and the study's hypotheses. Begin by contextualizing the results, discussing how they relate to the initial research questions or hypotheses, and comparing them with findings from other studies to highlight similarities or differences. Interpret the findings in depth, exploring their broader implications and how they advance understanding in the field. Acknowledge any limitations of the study, discussing how these might affect the results or their generalizability. This transparency helps build trust and provides a realistic view of the research's impact. Based on the results and limitations, suggest areas for future research that could address remaining uncertainties or identified gaps. Discuss both the theoretical frameworks that support your findings and their practical implications for real-world applications. Conclude with a summary that encapsulates the key findings and their implications, reinforcing the significance of the research and its contribution to the field. This approach ensures that the Discussion section effectively bridges research findings with their relevance, offering a comprehensive analysis of the study’s impact [4].

**5 Conclusion**

The conclusion of a research article is a critical section where the main findings are synthesized, their significance is highlighted, and their contribution to the field is emphasized. A well-crafted conclusion should restate the key results, linking them back to the research objectives and hypotheses. It is important to discuss the broader implications of these findings, both in terms of theoretical advancements and practical applications, while acknowledging the limitations of the study that may affect the interpretation or generalizability of the results. By addressing these limitations, the conclusion provides transparency and sets the stage for future research directions. Additionally, the conclusion should emphasize the uniqueness of the study and its relevance to the scientific community or practical fields, ensuring it leaves a lasting impression of its importance.

**6 Referênces**

[1] Hein DW. Molecular genetics and function of NAT1 and NAT2: role in aromatic amine metabolism and carcinogenesis. Mutat Res. 2002;506(1-2):65-77.

[2]Brown LM, Turner PH. Molecular pathways in cancer research. Oncol J. 2018;22(4):200-210.

[3]Johnson A, Roberts L, Elkins P. Effects of climate change on marine life. Mar Biol. 2017;64(2):103-112.

[4]Davis H, Monaghan P. Recent advances in cardiac surgery. Cardiovasc Surg. 2019;31(1):15-25.