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abstract

Research status and development trends of omics in neuroblastoma a bibliometric and visualization analysis

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Research status and development trends of omics in neuroblastoma a bibliometric and visualization analysis

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Introduction: Neuroblastoma (NB), a prevalent extracranial solid tumor in children, stems from the neural crest. Omics technologies are extensively employed in NB, and We analyzed published articles on NB omics to understand the research trends and hot topics in NB omics.

Methodology: We collected all articles related to NB omics published from 2005 to 2023 from the Web of Science Core Collection database. Subsequently, we conducted analyses using VOSviewer, CiteSpace, Bibliometrix, and the Bibliometric online analysis platform (<https://bibliometric.com/>).

Results: We included a total of 514 articles in our analysis. The increasing number of publications in this field since 2020 indicates growing attention to NB omics, gradually entering a mature development stage. These articles span 50 countries and 1,000 institutions, involving 3,669 authors and 292 journals. The United States has the highest publication output and collaboration with other countries, with Germany being the most frequent collaborator. Capital Medical University and the German Cancer Research Center are the institutions with the highest publication count. The Journal of Proteome Research and the Journal of Biological Chemistry are the most prolific journal and most co-cited journal, respectively. Wang, W, and Maris, JM are the scholars with the highest publication count and co-citations in this field. "Neuroblastoma" and "Expression" are the most frequent keywords, while "classification," "Metabolism," "Cancer," and "Diagnosis" are recent key terms. The article titled "Neuroblastoma" by John M. Maris is the most cited reference in this analysis.

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Conclusion: The continuous growth in NB omics research underscores its increasing significance in the scientific community. Omics technologies have facilitated the identification of potential biomarkers, advancements in personalized medicine, and the development of novel therapeutic strategies. Despite these advancements, the field faces significant challenges, including tumor heterogeneity, data standardization issues, and the translation of research findings into clinical practice.