



The UGR carries out the first mapping study on the evolution of Coronavirus research

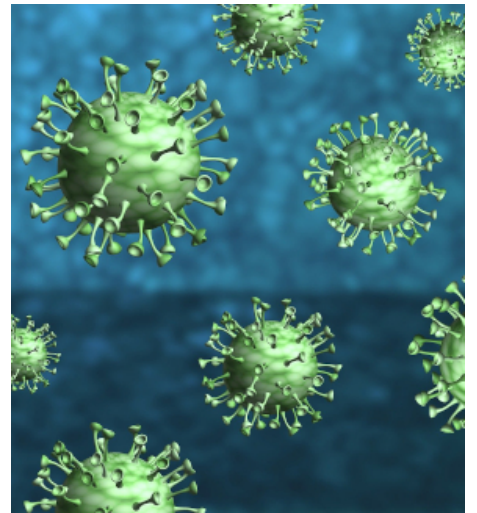
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Research news

The mapping exercise was carried out on 12,571 scientific papers published between 1970 and 2020. The last four months saw 1,009 publications, marking a historic high in this field of research

Researchers from the Universities of Granada and Cádiz have carried out the first bibliometric analysis of scientific papers dealing with different types and strains of Coronavirus and the citations and impact deriving from these publications. The analysis covered 12,571 articles published between 1970 and April 18, 2020. The last four months of this period saw 1,009 papers published—a historic high in this field of research.

To conduct this study of Coronavirus research in the scientific literature (with an emphasis on Covid-19), the researchers drew on the publications listed in the Core Collection of the Web of Science database covering the past 50 years.



Advanced bibliometric techniques, using SciMAT software, were applied to analyse the content of the 12,571 articles. The study provided a comprehensive conceptual study of the main types and strains of coronaviruses examined in this literature by quantifying the main bibliometric performance indicators, identifying the main authors, organizations, countries, sources, and areas of research, and evaluating the evolution of this field of research. A scientific map was created with this data to understand the corresponding intellectual framework and the main strands of research related to this topic.

This study, in which the universities of Barcelona and Zacatecas (Mexico) also participated, was prompted by the fact that the scientific output on the Coronavirus has witnessed extraordinary growth across multiple disciplines in recent months.

The health crisis caused by Covid-19 “has triggered a reaction from the scientific community in the search for solutions, which in turn has led to marked growth in the scientific literature focused on this topic,” explain the authors of this new study. Furthermore, “the multidisciplinary nature of Coronavirus research can be observed in the variety of fields it covers, from medicine to the social sciences, through computer science and information technology for the detection of behaviours, genetic markers, and evolutionary patterns. For all these reasons, scientific journals represent one of the primary sources of research, projects, and value-added information, which provides a new point of reference for conducting ground-breaking research on Covid-19”, the authors of this analysis observe.

Among the conclusions of this first bibliometric study on the Coronavirus research conducted since the first very publication in 1970 until the present day, is the fact that, in just four months of the year to date, there were 1,009 scholarly publications on this topic (8.03% of the total), which represents a historical peak in this field of research. The Coronavirus research includes papers co-authored by 35,359 researchers from 462 organizations and 145 countries. The publications have received more than 382,447 citations (including self-citations) according to the Web of Science Core Collection.

A correspondence was identified between the most productive authors and the most-cited, while the most productive countries in this type of published research were found to be the USA, China, the United Kingdom, Germany, the Netherlands, Canada, Japan, France, South Korea, Italy, and Taiwan.

This overarching analysis of the trajectory of Coronavirus research in scientific publications “offers a visual overview of the evolution and structure of this virus over the last 50 years and has helped to identify the topics that will attract the interest of

the future scientific community. Such topics include its genetic analysis, the neutralization of antibodies, its molecular characterization, the main proteinase of Coronavirus, proteolytic activation, its social and economic effects, and new research methods, among others.”

Bibliography:

Herrera-Viedma, Enrique; López-Robles, José-Ricardo; Guallar, Javier; Cobo, Manuel-Jesús (2020): ‘Global trends in coronavirus research at the time of Covid-19: A general bibliometric approach and content analysis using SciMAT’. *El Profesional de la Información*, 29(3), e290322. <https://doi.org/10.3145/epi.2020.may.22>

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