



A Scientometric analysis of CGRP and CGRP receptors in migraine research: trends, impact, and therapeutic potential

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Calcitonin gene-related peptide (CGRP) and CGRP receptors, present in the trigeminovascular system, are found in high concentrations in the jugular plasma during headache attacks. Therefore, the use of CGRP antagonists is being evaluated as a treatment for migraines. In this context, this study aimed to outline information on the state of the art about the relationship between CGRP and CGRP receptors with headaches, as well as the therapeutic approaches that explore this relationship through a scientometric analysis. Published literature from Web of Science database (webofscience.com/wos) was screened following the PRISMA protocol, and 1127 publications that matched the descriptors "headache" or "migraine" and "calcitonin gene-related peptide" in their title and/or abstract were selected. We excluded all review papers, all studies prior to 2014, and those that were not in English or outside this research's scope, leaving 314 original articles. For the analysis of the information, the number of publications in the last decade, country, research areas, journal of publication, and the journal's impact factor were evaluated. In this perspective, there has been an increase in relevance on the subject since 2020, as 215 out of the 314 selected articles, representing 68.5% of the publications in the last 10 years, were published during this period. Additionally, of 166 articles that provided the first author's institutional address, 62 were published in the USA (19.7% of the total publications). This finding suggests a special contribution of this country in this subject, followed by Italy and Denmark, the second and third largest producers, respectively. The research areas most interested in the relationship between CGRP and headache are neuroscience and pharmacology, with 54.1% and 17.9% of the studies, respectively. The average impact factor of all journals analyzed was 8.346, ranging from 0,20 to 202.73, indicating the significance of the CGRP receptors in further knowledge and development of new treatments for migraines.