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BIOL294-Genetics

Rinehart-Kim

Writing Assignment #2: Article Types

Firstly, primary articles, also known as empirical studies, are the first publications of the original research discoveries. These are written by the researchers who carried out the studies themselves. In this way, someone searching for information regarding the topic can find it and directly or indirectly observe the data. New knowledge can be gained through the observation of quantitative or qualitative data. Additionally, the shared analysis of the study is brought to light in the document. This article has sections including an Introduction, Methods, Results, and Discussion.

In contrast, a review article is a secondary source that explains, describes, and interprets primary sources. Scientifically, review articles help synthesize existing research regarding a specific topic. It may include a summary to ease the amount of reading needed to obtain the necessary information. Meaning, reading a review article aids the need to get the idea of the research, it does not capture the entirety of said article. Such sources include encyclopedias, literary reviews, commentaries, or journal/book discussions that analyze the original works of others.

Consequently, the scientific peer review process is defined as a quality test for research articles. A researcher writes of their discovery and submits it to a scholarly journal in hopes of publication. Once approved, it is sent to a group of expert reviewers to evaluate the quality. The literal meaning is applied; peers, or people working in the same research area, judge the content and evaluate it. A series of questions are asked about the article to assist in weighing the article's worth and approving it to be published in the research journal, such as regarding the importance,

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methodology quality, logic of conclusions, and originality. The peers make recommendations to the author, expecting them to make revisions. Ultimately, however, the editor of the research decides whether to include the work.

Thus comes the analysis of the two articles at hand: Base editing of hematopoietic stem cells rescues sickle cell disease in mice (Newby et al.) and Hematopoietic Stem Cell Gene-Addition/Editing Therapy in Sickle Cell Disease (Germino-Watnick et al.). It was concluded that the article by Newby et al. is the primary article, due to the nature of the formatting, such as the extended data graphs. The initial formatting also stood out as a primary research article, since it starts with a summary of the procedure's findings before diving into the results, methods, and then analyses. Additionally, the article was derived from the Department of Health & Human Services' Public Access, which states that their access includes—but is not limited to—peer-reviewed articles. In comparison, it was concluded that the article by Germino-Watnick et al. was the review article because of the significantly shorter length, presumably due to the objective of analyzing and summarizing. The layout included an abstract, introduction, followed by an explanatory graphic and conversation. Besides the formatting, there was the obvious display of the word *Review* italicized above the title, as well as a section titled “Academic Editors” below the citation. When quickly researching on their website, MDPI (Multidisciplinary Digital Publishing Institute), based in Switzerland, states that every single open-access journal on their site has been verified peer-reviewed with well-known academic publishers.

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