

Reagan Richardson

BIOL 294

Prof. Janet Rinehart-Kim

11 September 2020

Primary and Review Article Analysis

Out of the two articles given, the primary article is “Isolation and Characterization of a Novel Bat Coronavirus Closely Related to the Direct Progenitor of Severe Acute Respiratory Syndrome Coronavirus” by Yang et al. (2016). In this study, Yang and team were able to isolate a novel bat coronavirus that shared many genetic similarities to the severe acute respiratory syndrome (Sars-CoV) coronavirus (Yang et al. 2016). Most notably, this virus uses ACE2 as a receptor, which means that this newly discovered coronavirus can infect bats and humans (Yang et al. 2016). In this way, since Yang published original findings about the characteristics of coronaviruses, this study of a new coronavirus is a primary article. On the other hand, the review article is “Bat Coronaviruses in China” by Fan et al. (2019). By providing an overview of facts and current research from multiple sources, Fan was able to synthesize the information about Bat coronavirus strains, outbreaks in China, and the predictions of future coronavirus outbreaks (Fan et al. 2019). In this way, Fan did not present original information about Bat coronaviruses, which makes this informative article a review article.

According to the Cornell University Library, a primary or empirical article is a type of research article that presents new, original findings. These articles usually undergo a peer-review process and are published in scholarly journals (Cornell University Library). In addition, most primary articles found in scientific journals are organized into sections that include the introduction, methods, results, discussion, and references (Cornell University Library). Therefore, there is a detailed format that primary research articles follow in order to convey a sense of professionalism and objectivity to an audience.

Similarly, a secondary or review article is another type of research article; however, secondary sources summarize the findings from other sources (Cornell University Library). Although secondary articles do not present new information, they provide a synopsis on a topic for those interested in conducting research about that topic (Cornell University Library). In this way, by examining multiple perspectives and opinions of a topic of interest, review articles pull information from all over the world to keep the audience informed about the most recent research.

Although secondary articles could technically be peer-reviewed, primary articles must undergo a peer-review process before being published in a scholarly journal and presented to the academic community. First off, after a scientist makes a discovery and writes a draft of his/her findings, the article is presented to an editor of a scholarly journal (Cornell University Library). If the editor believes that this article could be added to the journal, the article is then forwarded to a board of reviewers who are experts in the same field of research as the author (Cornell University Library). These individuals judge the article based on its significance, data-collection methods, organization, and relevance to the topic of interest (Cornell University Library). At this stage for the article, there are three outcomes: approved, approved with revisions, or rejection (Cornell University Library). After the article is sent back to the editor, the editor makes the final decision on whether to publish or reject the article (Cornell University Library). Overall, the peer review process lasts from a few months to over a year, and it takes time to determine whether a study can enter the ongoing discussion of scientific research (Cornell University Library).

Works Cited:

Fan, Yi et al. "Bat Coronaviruses in China." *Viruses*: 1-14 (2019): *MDPI*.

Yang, Xing-Lou et al. "Isolation and Characterization of a Novel Bat Coronavirus Closely Related to the Direct Progenitor of Severe Acute Respiratory Syndrome Coronavirus." *American Society for Microbiology* 90.6 (2016): 3253-3256.

Cornell University Library. "Tutorial: Scholarly Literature Types: Primary vs. Secondary Articles." *Cornell University Library*, <https://guides.library.cornell.edu/scholit>. Accessed 10 Sept. 2020.

Cornell University Library. "Tutorial: Scholarly Literature Types: Peer Review." *Cornell University Library*, <https://guides.library.cornell.edu/scholit>. Accessed 10 Sept. 2020.