

Review of: "Emerging Omicron Subvariants EG.5 and BA.2.86: Implications for COVID-19 Immunity and Surveillance"

Richard Creager

Potential competing interests: No potential competing interests to declare.

This article appears to be a summary of the literature on the evolution of SARS-CoV-2 variants, specifically the emergence of Omicron and its subvariants. The authors appear to have done a detailed literature search, and the article would be a good reference for researchers interested in the evolution of the virus. I suggest the authors consider the following for improving the paper:

1. The article is quite long (34 pages). While it is comprehensive, a more succinct approach would be more impactful and more likely to increase readership.
2. The article is actually a review of the literature. The authors appear to have reviewed sequence data in various gene sequence databases (e.g., GISAID), but it wasn't clear how they performed the analysis. It is suggested that they include a Methods section in the paper that describes their experimental approach to analyzing the databases.
3. Most notably, the paper lacks a section that describes the limitations of their approach. It is well known that many of the sequences in GISAID are not of high quality. Low Q scores can lead to increased false-positive variant calls, resulting in inaccurate conclusions. In addition, many geographies have either stopped sequencing COVID-19 variants or sequence a small percentage of isolates. Furthermore, sequencing is a slow process, taking several weeks (or months) for the sequence information to be published in GISAID. Therefore, there is a significant lag in the reporting of circulating variants.
4. The authors also focus exclusively on neutralizing antibodies. Vaccines also elicit cellular immunity mechanisms, which may offer significant protection to newly emerging variants.