Reviewer's report

Title: Date of Origin of the SARS Coronavirus Strains

Version: 1 Date: 24 October 2003

Reviewer: Tuen Wai Ng

Reviewer's report:

General

A paper of considerable general medical or scientific interest as the method suggested to estimate the evolution rate of SARS coronavirus genome is quite simple and easy to implement. The findings are also matched with the empirical findings.

Discretionary Revisions (which the author can choose to ignore)

Minor Compulsory Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

1. On p.7, the equation before (fig.1 (a)), it seems to me that the subindex i and j are missing.

2. Figure 1(b) is supposed to illustrated the fact that there is a partition of strains into G^1 and G^2 such that every pair of starins S_i in G^1 and S_j in G^2 should share the root of the tree as their last common ancestor. I am a little bit confused here. Is S_0 the root of the three? If it is, then S_1 and S_2’s last common ancestor in fig 1(b) is clearly not S_0. It will be better to redraw the figure and include and indicate the classes G^1 and G^2.

3. Two models developed by the Monte Carlo Method were used to validate the proposed method. It would be helpful to some readers if the authors can include a reference to the Monte Carlo Method as well as a brief explanation of what it is.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

1. As mentioned in the paper, there are many kinds of date to be chosen for the sequence such as date of host death, sampling date and sequencing date, etc. Please explain why the date of death is chosen. This ceratinly affected the number of strains as well as which strains would be used to estimate the last common ancestor.

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of importance in its specialized field or of broad interest

Quality of written English: Needs some language corrections before being published

Statistical review: No
Declaration of competing interests:

None