Reviewer's report

**Title:** Molecular Identification of Adenovirus Causing Respiratory Tract Infection in Pediatric Patients at the University of Malaya Medical Centre

**Version:** 1  **Date:** 2 January 2010

**Reviewer:** Adriana Kajon

**Reviewer's report:**

This paper represents an important initiative to characterize adenovirus strains isolated from children hospitalized with acute respiratory infection in Malaysia.

The collection of isolates representing 6 years of sampling is very limited but the findings are of interest to the field. The continuation of this work to include a more comprehensive typing such as genome typing by restriction enzyme analysis of sequencing of the fiber gene in addition to the hexon will add tremendous value to the data.

The following are recommendations and corrections for improvement:

**Major Compulsory Revisions**

1-On page 2, in the background section of the Abstract, the authors state that human adenoviruses "comprise of different species, subgenus and serotypes...". The use of terminology is incorrect and a review of the ICTV web site is recommended. The term "species" is now used INSTEAD of subgenus!

On page 2, in the Results paragraph, replacing "sequenced" by "typed by sequencing of the hexon gene" is recommended for clarity.

2-On page 3, first line, the term "species" is INCORRECTLY used. Type 3 WAS the most common SEROTYPE IDENTIFIED.

3-On page 9, the authors state that determining the serotype is important "for the determination of existing recombinant genotypes". It is VERY important that this statement is revised because the approach used in the paper to identify and characterize Ad strains is very limited and will unlikely identify recombinants. In addition, the statement that "recombinants genotypes are usually associated with the more pathogenic strains of Ad" is INCORRECT.

4-In the last sentence of the third paragraph, the wording is confusing. The hexon gene DOES NOT play a significant role in typing. It is the SEQUENCING of the hexon gene!

5-On page 11, there are 2 different literature citation systems used in the first paragraph and this needs to be corrected. The sentence starting with "Ad-B type 3 and 7 is poorly written.

6-As mentioned above, the study provides a benchmark for future studies of
adenovirus infections in the country, NOT classification!

7-On table 2, the word University is incorrectly spelled in the title.

8-The 2 figures show redundant data. Figure 2 is more informative and suffices to display the findings.

Minor Essential Revisions

1-The authors should clarify what they mean by "common" RTI.

2-In the last line of the Conclusions paragraph on page 3, the future studies proposed are NOT of Ad classification but of Ad identification and molecular characterization.

3-On page 4, first line the words "common infection" should be deleted.

4-On page 5, line 6, rewording the sentence to read "determination of the partial sequence of the hexon gene" is recommended for clarity.

5-On page 5, line 11, the sentence should be reworded to read "Nasal aspirates from infants and children..."

6-On page 7, in the last paragraph, deletion of the word "isolated" is needed.

7-On page 8, the Genbank accession # for the Guangzhou, Ad3 strain or the published paper need to be referenced.

8-On page 10, third paragraph, it is not clear what the authors mean by "The two proteins showed their EVOLUTIONARY roles".

Discretionary Revisions

1-On page 6, line 2, the use of "cytopathic" instead of Cytopathologic is recommended.

2-On page 10, first paragraph, the authors state that the higher percentage of Ad-C isolation is a reflection of Ad-C endemicity. What does this mean? It may be a good idea to discuss that the Ad-C serotypes also cause persistent infections and that this may be also a possible reason for an increased isolation from the upper respiratory tract.

3-On table 1, what does Viral fever" mean?

4-In the last line, on page 10, it is redundant to mention the endemicity of the Ad-C again.

Level of interest: An article of limited interest

Quality of written English: Needs some language corrections before being published
**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I have no competing interests