Reviewer’s report

Title: A novel pancoronavirus RT-PCR assay: frequent detection of human coronavirus NL63 in children hospitalized with respiratory tract infections in Belgium

Version: 1 Date: 23 November 2004

Reviewer: Christian Drosten

Reviewer’s report:

Elien Moes and colleagues summarise in this article the results of a molecular diagnostic study on HCoV-NL63 prevalence in Belgium. Experimentation and presentation are very clear. All tables and figures are appropriate. The study confirms earlier findings on prevalence rates in the winter months, suggests the presence of at least two subtypes on a phylogenetic basis, and provides an improved set of primers for universal coronavirus detection.

I only have a few specific comments which the authors will surely be able to resolve.

Page 5, first paragraph. Was it observed experimentally that the primers of Stephenson et al. do not amplify NL63, or is this only assumed from the presence of 7 mismatches?

Next paragraph/Figure 2. Can the authors tell how much virus was amplified in each lane? Even a relative measure of some of the viruses’ quantities, including NL63, would be helpful since diagnostic use of the assay is proposed in the discussion section.

Page 10, 2nd last paragraph. Authors speculate that the current circulation of NL63 might suppress 229E. Is there any evidence for cross-neutralisation between the two viruses? Even if such data should not exist, it would be good to briefly address the phenomenon in the discussion.

What next?: Accept after minor essential revisions

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:

I declare that I have no competing interests