

Subject: information about diagnostic tests for new coronavirus

Dear colleagues of the CNRL,

Further to the communication via ProMed, the HPA, WHO and ECDC websites, we want to inform you with some technical information related to diagnostics for the new Coronavirus:

* The clinical material of the patient at the HPA Colindale, London, UK, did not react with the specific detection assays which HPA Colindale uses for OC23, 229E, NL63 or SARS.

* The pan-Coronavirus primers as described by Emery et al (Emerg Infect Dis. 2004 Feb;10(2):311-6) and Vijgen et al. 2008 (Methods Mol Biol. 2008;454:3-12) should both work.

As these protocols will detect also the common human Coronaviruses, the RT-PCR product must be sequenced to identify the type of Coronavirus.

* Both Christian Drosten, University of Bonn, Germany and HPA Colindale are working in collaboration with Ron Fouchier at Erasmus MC, Rotterdam, the Netherlands, on more specific real-time assays based on the nucleocapsid gene and other targets, at the request of the WHO, with the intent of developing an improved assay which can be used for clinical diagnosis.

* Christian is also preparing transcripts for control material to be distributed by the University of Bonn.

* Ron plans to release the whole genome of the new Coronavirus today. The genome sequence is derived from cultured virus from the material of the first patient, that was submitted to Erasmus MC.

This could be usefully used to check in silico existing pan-coronavirus RT-PCR protocols.

* A phylogenetic tree constructed from partial sequence information from the polymerase gene (nsp12) has been published on the HPA website:

<http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/RespiratoryViruses/NovelCoronavirus/respPartialgeneticsequenceofnovelcoronavirus/>

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As soon as the protocol for specific detection of the new Coronavirus and the control material are available we will inform you with more specific information where this can be obtained.

Best regards,

Adam Meijer on behalf of the CNRL coordination team (Maria Zambon, John McCauley, Rod Daniels, myself)

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