Reviewer's report

Title: Genes Associated with MUC5AC Expression in the Human Small Airway Epithelium

Version: 3 Date: 25 March 2012

Reviewer: Giulio Rossi

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Title: Genes associated with MUC5AC expression in the human small airway epithelium
Authors: Wang G et al.

In this work, the authors identified by gene expression profiling the genes significantly up-regulated in healthy nonsmokers subdivided in two groups: high MUC5AC expressors and low MUC5AC expressors.

At the end, the authors identified a list of 73 MUC5AC-associated genes with different roles in mucin composition and functions.
Identification of these genes could be helpful in selecting therapeutic targets in inhibiting mucus hypersecretion.

I have just a minor comment/curiosity about this paper.

Among up-regulated genes, the authors did not identify HER2/neu. In fact, some works have highlighted overexpression of HER2/neu in primary lung mucinous adenocarcinomas (so-called mucinous bronchioloalveolar carcinoma) (see Casali C et al J Thorac Oncol 2010; Zhang Y et al Clin Cancer Res 2012). These tumor entity is characterized by KRAS activating mutations as well as very high levels of MUC5AC production.

In light of the possible recognition of MUC5AC-related target genes, have the authors the possibility to comment this fact in the discussion section of the paper?

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
'I declare that I have no competing interests'