Reviewer's report

Title: Beta2-Adrenergic receptor promoter haplotype influences the severity of acute viral respiratory tract infection during infancy: a prospective cohort study

Version: 2  Date: 2 July 2015

Reviewer: Lahcen WAKRIM

Reviewer's report:

Summary:
This report documents whether #2-Adrenergic receptor (ADRB2) polymorphisms associated with a response to asthma therapy during an asthma exacerbation is also associated with the severity of viral respiratory infections during infancy. This report has value since it demonstrate that genotype may be predictive of severity of acute respiratory tract infections and allow to potentially identify a subset of infants who may respond to beta-agonist therapy.

In my first review, I notified 3 points to revise by the author, one as Major Compulsory Revisions, on as Discretionary Revisions and one as Minor Essential Revisions.

1- Major Compulsory Revisions
The authors divided the studied population into two ethnic groups, Caucasians and African Americans, without explaining the raison of this separation. If there is a valid reason, they should be based on this difference to discuss their findings that promoter haplotype CCA was associated with a decreased BSS in African Americans while in Caucasians, no similar protective relationship was identified. I consider that the authors have answered this point sufficiently by discussing this point in line 273 to 281 of the manuscript.

2- Discretionary Revisions
Authors should have included in their study a control population consisting of infants who have the same eligibility conditions and visited the hospital for other diseases than presumed viral bronchiolitis or respiratory tract infection. I think this control population could strengthen the associations between the genetic variants in ADRB2 and the severity of infant acute respiratory viral infections. Maybe, the author chooses to ignore this point.

3 - Minor Essential Revisions
The following references: 9-10-11-12-15-20-21-22-25-26-27-29-32-38 and 45 must be removed from the list of references. They are not mentioned nowhere in the manuscript.

For this point, I realized that these references were mentioned in the first version of the manuscript as [7-13], [14-16], [19-23], [24-30], [28-34], [37-39], [44-46]. Sorry, I didn’t pay attention.

So, these author’s responses are sufficiently well to allow the revised manuscript to be published.