Reviewer’s report

Title: Genetic and biochemical markers of hydroxyurea therapeutic response in sickle cell anemia

Version: 4 Date: 11 April 2013

Reviewer: Umberto Moscato

Reviewer’s report:

Discretionary Revisions

1) I must apologize to the authors, although the .pdf had sent the correct symbol: the symbol # is the result of an incorrect conversion in transposition within the website of the correct symbols # , # , # . The correct symbols indicated to correct the symbols smaller and/or more, with the statistical symbol less than or greater than or at most equal to .... This is because, as is well known to the authors, in statistics there is a degree of uncertainty in defining an absolute value equal to one another. Even more if we express the statistical significance compared to a small number of subjects.

Minor Essential Revisions

I thank the authors for correcting all my Minor Essential Revisions

Major Compulsory Revisions

1) Statistical Analysis:

a. I appreciated that the authors have answered my statistical questions and doubts proposed. I reiterate that the number of subjects enrolled in the study may be insufficient for meaningful conclusions without having defined with greater accuracy the sample size of the phenomenon, and as well accepted by the authors, the proper expression of alpha in this research. It is important that authors, for scientific accuracy, always define the limits of the research (hoping that this is carried out in scientific paper).

b. The corrections introduced in the section on statistical methods adopted clarifies the division between parametric and nonparametric tests reducing the methodological errors and possible confusion that could have been generated in the reader.

c. I want to note that in any case-control study, the sample to determine the sampling size necessary to achieve the desired alpha level of study is essential. This beyond the type of study or topic of the same. I appreciate the authors' intention of increasing the sample size in the extension study, although this issue has still not be a limitation of the study, especially if associated with the small number of subjects included in the study.

d. The definition of the use of parametric and nonparametric tests, as well as the
Pearson and the Spearman Test was corrected by the authors

Level of Interest

An article of importance in its field

Quality of Written English

Acceptable

Statistical Review

Updated and corrected

Declaration of Competing Interests

I declare that I have no competing interests

Report on the study and conclusions on scientific Article

1) The question posed by the authors is well defined
2) The methods for the study are appropriate and fairly well described.
3) The data are sound; despite the appreciable correction of paper carried and shared by the authors, there remain some statistics doubts: the number of enrolled in the study is just enough for a minimum statistical significance (but in other studies like this, the number of enrolled in the study is quite similar).
4) The manuscript complies with the relevant standards for reporting and data deposition, understanding some of the issues identified in this peer-review.
5) The discussion and conclusions are now well balanced and adequately supported by the data.
6) The title and abstract convey what they have been found.
7) The paper writing is acceptable

Conclusions of Report

The authors, accepting some limitations of the study, offered a clear answer to the doubts expressed by data in MCR. So, the scientific paper is interesting and acceptable for publication.

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