Reviewer's report

Title: C-reactive protein genetic variant is associated with diabetic retinopathy in Chinese type 2 diabetic patients

Version: 1 Date: 16 December 2014

Reviewer: Monika Buraczynska

Reviewer's report:

Major Compulsory Revisions:

1. In the Methods section: The information given about study groups is too sparse. The exact inclusion / exclusion criteria for the patient population should be given. In the study population 618 patients (61%) had diabetic retinopathy. This number is much higher than the prevalence of DR reported for Chinese population. Does that mean that T2DM patients were selected for diabetic retinopathy and not randomly selected? If so, it should be stated in the paper. There is no mention how many patients had diabetic nephropathy or whether there were any patients without DR but with DN? This is very important and could affect the interpretation of results. Also, there is no information on macrovascular complications in the study subjects.

2. The Results section of the manuscript is not very informative. For example, apart from the note that clinical characteristics of the samples (shouldn’t it be rather “patients” or “subjects”?) are shown in Table 1, there is no comment anywhere on this comparison between DR+ and DR- patients. Even in the table itself, they don’t indicate whether the differences were statistically significant (p values?).

3. Not all data are presented in the tables or even described in the text. The Authors claim that they examined the effect of rs2808629 on the DR severity. These results should be presented in the manuscript. How many patients had proliferative DR?

4. Table 1 has some shortcomings. Sample sizes, 593 for DR+ patients and 388 for DR-, are different from given in the Abstract and Participants subsection of Methods (618 for DR+ and 400 for DR-). Although it is stated somewhere that 37 samples were excluded, this information should also be given in the footnotes for the Table 1.

For the comparison of DR+ with DR-, the p-values should be included. For BMI the units should be kg/m² not years!

Minor Essential Revisions:

1. The results of the Hardy-Weinberg equilibrium test should be shown.

2. The Discussion section is more a summary of a literature, rather than the proper discussion of the study results. The Authors should include some more
comments on the biological role of CRP relevant to diabetes and its complications. Also, some useful papers could be added for the discussion purpose, for example Lim et al. IOVS 2010; 51 (9) : 4458.

3. Mentioning the limitations of the study, the Authors say that their sample size was relatively small, so the association detected could be a false positive. That’s why the power calculation results should be described in the Methods or Results. What would be the sample size required to observe a true effect?

Discretionary Revisions:

1. In this study the Authors did not include a control group of non-diabetic subjects to assure that the frequencies of the genotypes and alleles of the rs2808629 polymorphism in CRP gene are similar to reported in other studies of Asian populations. This would indicate that no technical errors were present.

2. The English language should be carefully edited.

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

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests.