Reviewer’s report

Title: Lack of associations between two previously identified susceptible single nucleotide polymorphisms of Interleukin-23 receptor gene and ankylosing spondylitis: a replication study in a Chinese Han population

Version: 4 Date: 22 January 2013

Reviewer: Bela Melegh

Reviewer’s report:

The objective of the study was to investigate the possible associations of two SNPs (rs1004819 and rs10889677) of IL-23R gene as potential AS susceptibility in a Chinese Han population, which SNPs had already been confirmed in British, Hungarian, and Portuguese AS population samples. Investigating a total of 195 AS patients and 203 normal controls the authors could not verify susceptibility nature of these SNPs, and concluded that this might be a population specific consequence.

The manuscript in general is well written, the used methods are sound, the statistical approaches are appropriate, the conclusion drawn are clear, and supported by the data presented in the study.

Critics, comments, with major compulsory revisions:

- The discussion is somewhat repetitive, as simple summarizes the aims, the results, and the conclusion.

- The authors should also compare their allele frequencies to findings of others references (refs 12-14). Add some comments to the discussion.

- Allele frequencies, linkage features from public domains (HapMap, Entrez, Ensemble) should also be reported shortly in the discussion to support the already verified differences of the IL23R gene's naturally occurring variants in different population, with special attention to the 2 SNPs investigated here.

- The authors state in the introduction that "Thus, IL-23R gene polymorphism may be implicated in the susceptibility to human autoimmune disease (paper of Safrany, Curr Med Chem. 2009;16(28):3766 should be inserted here, to help the reader with a supporting reference), such as AS."

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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'