**Reviewer’s report**

**Title:** transcriptomic analysis reveals new aspects of the chronic kidney disease-related immune dysfunction

**Version:** 1  **Date:** 25 October 2012

**Reviewer:** Theodoros Eleftheriadis

**Reviewer’s report:**

This is a very interesting and very well written study. Methodology and analysis of data are also very well conducted. Thus, the study is suitable for publication, providing that the authors correct or clarify some points.

**Major Compulsory Revisions**

1. The authors should refer a limitation of their study. They did not mention the usual medications, such as rHu-EPO, VDR activators and IV iron, used mainly in HD patients and to a lesser extend in predialysis CKD patients that can alter both inflammatory and acquired immunity response (reviewed by Eleftheriadis et al Seminars in Dialysis 20(5):440, 2007).

   For example VDR activators used for the treatment of secondary hyperparathyroidism decrease inflammatory response, while they improve adaptive immunity (reviewed by Eleftheriadis et al, Journal of Nephrology 23(5):514, 2009).

   Generally the pattern of gene expression up-regulation and down-regulation supports the opinions stated by the authors and this can help them to answer. However, an extensive comment about this limitation of the study, as well as the related data in the “patients” subsection are required.

**Minor Essential Revisions**

1. The title should be changed in order to emphasize the difference between predialysis CKD patients and HD patients. This was evaluated in the study, since the groups involved only CKD patients and HD patients and not healthy controls.

2. Authors emphasize the detrimental effects of blood contact with dialysis membrane. However the HD procedure has also desirable effects that should be noted. Removal of uremic toxins has been shown to have beneficial effects on T-cells function (Kaul et al, AJKD 35:611, 2000).

**Level of interest:** An article of outstanding merit and interest 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:

None declared.