Reviewer’s report

Title: Lymphocyte and monocyte flow cytometry immunophenotyping as a diagnostic tool in uncharacteristic inflammatory disorders

Version: 1 Date: 21 April 2010

Reviewer: Martin Metz

Reviewer’s report:

In their well-written manuscript, the authors suggest a novel method of diagnosing patients with uncharacteristic inflammatory symptoms by evaluating various FACS measurements. Identification of the etiology of inflammatory processes is of great importance for the optimal treatment of patients and the findings by the authors may be of help in some unclear situations. There are, however, some questions arising after reading the manuscript.

Major Compulsory Revisions:

1.) The number of patients studied for each diagnosis is not stated in the methods, but only for some diagnoses within the text. Without this information it is difficult to assess the relevance of the authors’ findings.

2.) In the title and throughout the manuscript, the authors emphasize that their findings may be used in “uncharacteristic inflammatory disorders”. In contrast, the samples studied seem to be only from patients with characteristic inflammatory disorders, is that correct? It would be interesting to read about experience with samples from some of the patients with “longstanding fatigue or pain, or a prolonged fever”, could it be that cell surface markers are different in those patients? If the authors cannot provide information for these uncharacteristic cases I would suggest to rephrase the title, for example to “… as a diagnostic tool to differentiate between bacterial and viral infection and systemic autoimmunity”

3.) Procalcitonin is regularly used to differentiate between bacterial infections and viral infection or systemic autoimmunity. Can the authors comment on the advantage of their suggested markers vs. PCT?

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

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