Reviewer’s report

Title: Translating information encoded in a network of inflammation proteins into clinically-meaningful knowledge of myocardial infarction

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Reviewer: Qing Kenneth Wang

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Minor essential revisions:
Azuaje et al assembled a network of protein interactions relevant to inflammation in myocardial infarction (MI), referred to as My-Inflamome. Inflammation is critical to MI. Thus, a systems-based study on inflammation related to MI is highly significant. The manuscript was well-written, and contains interesting results. The study uncovered some potential candidate gene expression markers (TRAF2, SHKBP1 and UBC) with high discriminatory capability. The authors can try to address the following points to improve the manuscript.

1. Throughout the manuscript, it was not clear whether the authors focused on MI itself or complications of MI, specifically left ventricular dysfunction and/or heart failure. The authors should clarify the point and make necessary revisions in the title, abstract and throughout the manuscript accordingly.

2. It may be important to discuss whether inflammation markers studied by the authors are more likely to be causes of MI or consequences of MI.

3. If a high-traffic node is more likely to be a biomarker for post-MI, it was surprising that none of the best known inflammation biomarkers for post-MI were contained in the list of top-10 high-traffic nodes. Furthermore, the known inflammation biomarkers appeared to be in low (or medium)-traffic nodes. The question is which group of nodes is more likely to be the biomarkers. Can authors search public gene expression databases or collaborate with other investigators who have performed microarray analyses to provide some experimental support to their predictions?

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:
'I declare that I have no competing interests'