Review of: "Nrf2 attenuates the innate immune response after experimental myocardial infarction"

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In this study, the authors use Nrf2 knockout mice submitted to permanent ligation of left coronary artery to study the importance of the Nrf2 transcription factor in the inflammatory process occurring following myocardial infarction. They show that Nrf2 knockout mice have a pro-inflammatory phenotype, characterized by increased infiltration of leukocytes, especially neutrophils and monocytes, and higher expression of specific cytokines and chemokines. Furthermore, authors used publicly available (sc)RNA-seq and ChIP-seq data to investigate whether the Nrf2-regulated response is associated to specific leukocyte subsets. This data analysis suggests that the expression of Nrf2-regulated genes seems to be a feature of CCR2+ monocyte-derived cardiac resident macrophages.
However, this has still to be formally demonstrated in Nrf2 knockout mice (or leukocyte-specific Nrf2 knockout mice), as well as the impact on post infarct fibrosis and remodeling.

Additional comments
-In the Methods section, details regarding the Nrf2 knockout mouse model (total or cell-specific knockout) are not provided and difficult to find in the cited papers.
-Fig.1:"*Intracellular staining demonstrated increased protein expression of inflammatory cytokines and chemokines, IL-6, iNOS, CD11b and CCR2, in cardiac macrophages"*. Results are shown in Fig. 1E and not Fig. 1F.
-Fig.1. The number of monocytes is increased in the KO hearts after MI, while monocyte-derived macrophages (CCR2+) are not different. This should be discussed.
-How is the expression of the main pro- and anti-inflammatory cytokines (TNF-a, IL-1B, TGF-B1) in the infarct tissue of Nrf2 WT/KO?