Supplemental Figure 1: Serum parameters in allograft recipients according to baseline serum ferritin levels. Serum iron (A), transferrin saturation (TSAT) (B), total iron binding capacity (TIBC) (C), C-Reactive Protein (CRP) (D), and hemoglobin levels (Hb) (E) distribution in the cohort patients assessed on the day of renal transplantation. High ferritin group: patients within the 4th quartile (>600 ng/ml; n=38). Low ferritin group: patients in the 1st, 2nd and 3rd quartiles (<600 ng/ml; n=109). (F, G) Death-censored graft survival up to eight years in >50 year-old patients (F) in <50 year-old patients (G). ns= not significant; ** P<0.01; and *** P <0.00
Supplemental Figure 2: HFE-dependent local and circulating alterations in IRI. (A) Representative Masson’s trichrome staining of kidneys from WT and Hfe<sup>-/-</sup> mice after renal IRI or sham surgery (X100 magnification). (B) Representative immunostaining for the detection of GR1<sup>+</sup> or CD11b<sup>+</sup> cell infiltrates in frozen sections of WT and Hfe<sup>-/-</sup> mice 24h after IRI (X400 magnification). (C) MCP-1 and TNF-α in kidney extracts from sham-operated or IRI-subjected WT and Hfe<sup>-/-</sup> mice. n=4 mice per group. Mobilization of blood monocytes (D) and neutrophils (E) 24h after IRI or sham-surgery in WT or Hfe<sup>-/-</sup> mice; n=7-10 mice per group. Values are mean± SEM; Mann-Whitney t-test; *, P < 0.05; **, P < 0.01; ***, P < 0.001.
Supplemental Figure 3: Evaluation of cell morphology and function of macrophages differentiated in the presence of growing concentrations of iron. (A) Impaired inflammatory macrophage recruitment. Mice were injected IP for 10 days with saline or iron sucrose solution (Venofer®) before LPS challenge. Representative dot plot analysis (gated on CD45+Ly6G- cells) of inflammatory macrophages (SPM; CD11blowF4/80lowLy6G-Ly6C-) and resident macrophages (LPM; CD11bhighF4/80highLy6G-Ly6C+). Numbers adjacent to boxed areas indicate percent of SPM (lower gate) and LPM (upper gate) (B and C). Bone-marrow derived macrophages (BMM) were differentiated in the absence or in the presence of iron (Fe-NTA at 20 or 60µM) for 7 days. (B) May-Grünwald-Giemsa staining of iron-treated and non-treated cells. (C) At day 7 of culture, cells were stimulated overnight with LPS (150ng/ml) and stained for CD11b and F4/80 macrophage markers. (D) Impaired macrophage inflammatory responses. BMM were differentiated in the absence or presence of iron. At day 7 of culture, cells were stimulated overnight with poly-IC or PGN and macrophage activation was evaluated by CD86 expression. (E) BMM were differentiated in the absence or in the presence of 60µM FeCl3-NTA from day 0 or day 4 of culture (when 90% were fully differentiated, data not shown). At day 7 of culture, cells were stimulated overnight with LPS (150ng/ml) and macrophage activation was evaluated by CD86 expression. n=3 independent experiments. Values are mean± SEM; *, P <0.05.
Supplemental Figure 4: Comparative gene expression analysis of macrophages treated or not with soluble iron (Fe-NTA, 60µM) and subjected or not to LPS treatment.

(A) Venn diagram showing global differences between LPS-treated macrophages (and their control without LPS treatment) previously differentiated in the presence (Fe-BMM) or absence of iron (BMM).
(B) Dot plot comparing gene expression in LPS-treated macrophages differentiated in the presence or absence of iron. The 20 genes most strongly downregulated in iron-treated macrophages are indicated.
(C) Hierarchical clustering of genes involved in inflammation comparing gene expression arrays of macrophages differentiated in the presence or absence of 60 µM iron and treated or not with LPS.
(D) Production of TNF-α, MCP-1 and IL-6 measured in the culture supernatant of macrophages differentiated in the presence or absence of 60 µM iron stimulated or not with LPS. n= 4 experiments. Values are mean± SEM; **, P < 0.01; *** , P < 0.001.
Supplemental Figure 5: Antioxidant responses of macrophages differentiated in the presence of iron. (A) Reactive oxygen species (ROS) production by macrophages (BMM) cultured in the presence of 20 μM iron and stimulated with LPS. Representative flow cytometry data presented as a histogram of ROS measurement by DCFH fluorescence. (B) and (C) Involvement of NRF2 in iron-induced inhibition of macrophage activation. BMM from WT or NRF2−/− mice were differentiated in the absence or presence of iron. At day 7 of culture cells were stimulated with LPS and expression of CD86 by macrophages was measured. (B) Quantification. (C) One representative experiment out of 3. Values are mean± SEM; **, P < 0.01; ***, P < 0.001.