Supplemental Figure Legends

Figure S1. Intracellular metal content in response to manganese depletion. Cells subject to serial transfer to Mn-deficient TAP medium were collected and total Mn (A) and Fe (B) content was measured by ICP-MS (See Methods).

Figure S2. Selective sensitivity of Mn-deficient cells to peroxides. Cells were grown in 0.1 μM supplemental Mn^{2+} or 25 μM Mn^{2+} conditions for 2 d. Cultures were diluted to 1 x 10^6 cells / mL before the addition of the indicated concentrations of hydrogen peroxide (H_2O_2), cumene hydroperoxide, methyl viologen, *tert*-butyl hydroperoxide, Rose Bengal or metronidazole. Growth was monitored by counting cells in a hemocytometer.

Figure S3. MnSOD is up-regulated by Fe-deficiency. A, RNA were isolated from cells (strain CC1021) grown in 0.2 μM or 20 μM iron. Gene expression was assessed by real-time PCR as described in the legend to Fig. 5, except that the error bars represent the variation in technical triplicates of the PCR reactions.

Figure S4. Time course of changes in gene expression in response to Mn-deficiency and re-supply. RNA from cells subject to serial transfer to Mn-deficient TAP medium was analyzed (left column). The expression is presented relative to Mn-replete conditions. $MnCl_2$ (25 μM) was added to Mn-deficient cultures and RNA was extracted from the cells at the indicated times and assayed for accumulation of specific mRNAs by real-time PCR (right column) as described in the legend to Fig. 5.