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Article – Supplementary Materials

Treatment of Cells and Tissues with Chromate Maximizes Mitochondrial 2Fe2S EPR Signals

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Supplementary Figures

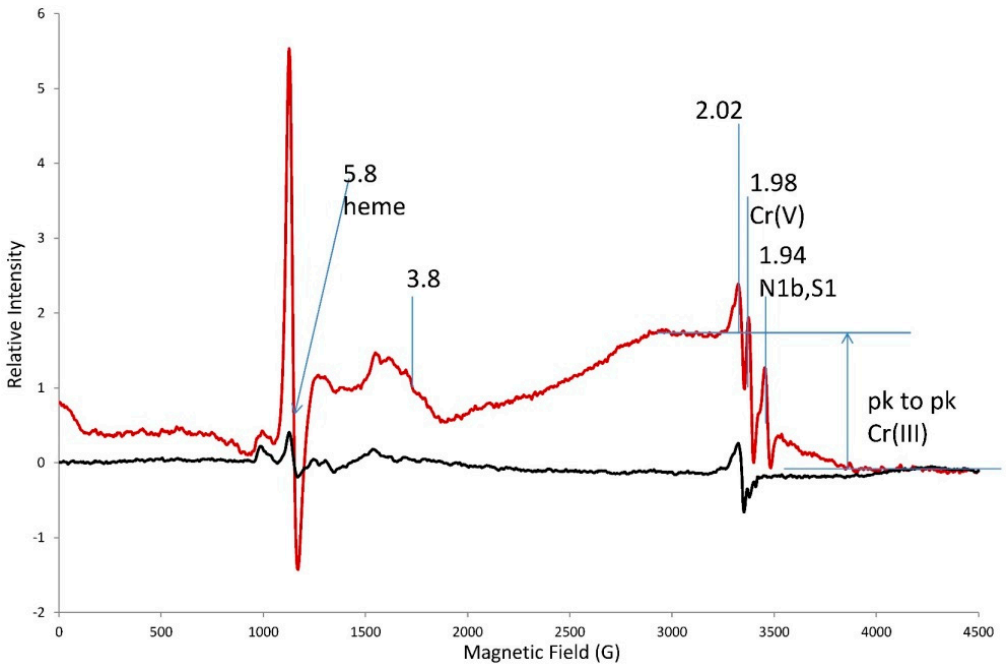

Figure S1. EPR spectra for white cells (black) plus 400 μM chromate (red). Cells incubated at 37 °C for 3 h. Vertical lines indicate g-values for heme (5.8), a line not assigned (3.8), lines from a superposition of several sites (2.02), Cr(V) (1.98), and N1b and S1 (1.94–1.93). The arrow indicates the peak-to-peak height. This signal is tentatively assigned to superposition of Cr(III) complexes. (Note: The line shape suggests absorption or passage conditions.) Spectrometer conditions: microwave freq., 9.387 GHz; temp., 10 K, mod. amp., 5 G; microwave power, 5 mW; sweep time, 83.89 s; time constant, 81.82 ms; nine scans.

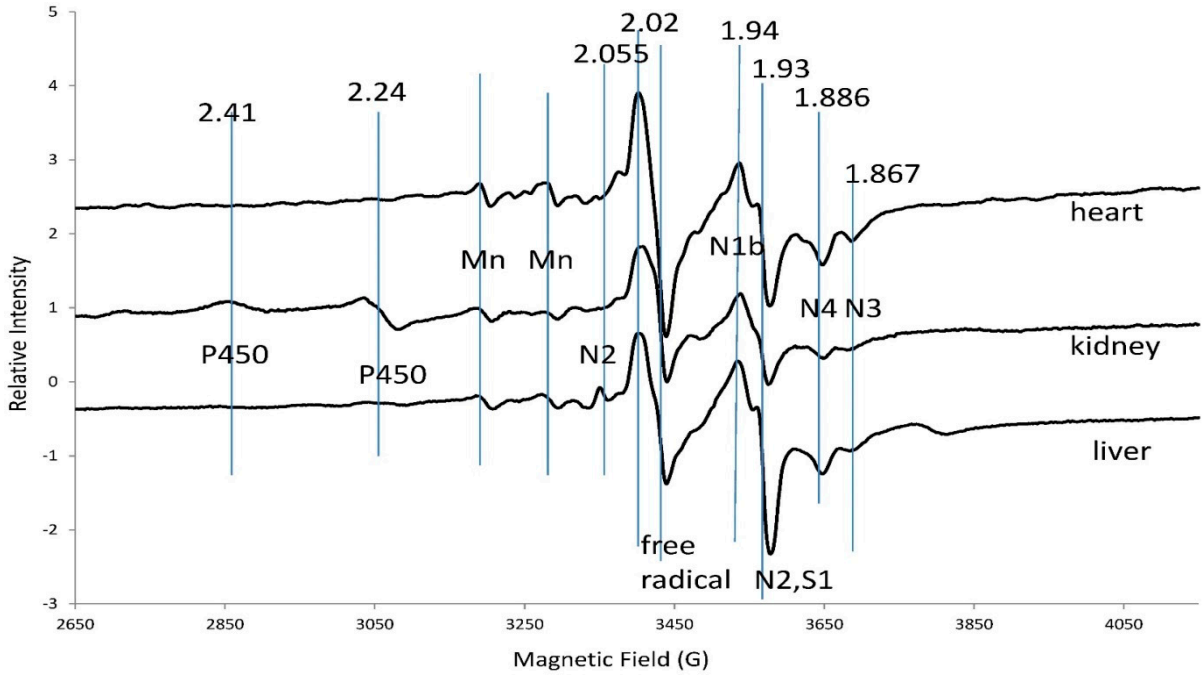

Figure S2. EPR spectra for liver tissue (bottom), kidney tissue (middle), and heart tissue (top). The vertical lines indicate the g-values for EPR lines from Complex I (N2, N1b, N3, N4) and Complex II (S1).

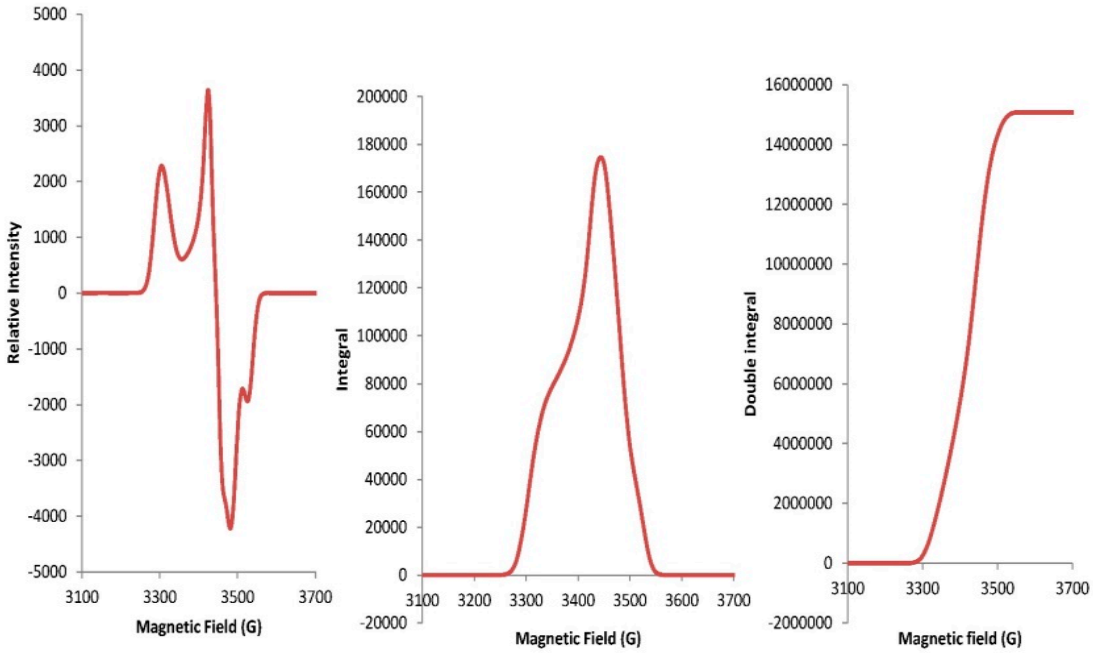

Figure S3. Left: Simulation (EasySpin) for the sum of signals for N1b, S1, and 2Fe2S from xanthine oxidoreductase. Middle: Integral using Sumspc. Right: Double integral using Sumspc. Comparison with a signal from CuEDTA gives a concentration of 3 μM each for N1b, S1, and the 2Fe2S signal for xanthine oxidoreductase.