Electronic Supplementary Material (ESI) for Metallomics.
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Electronic supplementary information (ESI)

Zinc intoxication induces ferroptosis in A549 human lung cells

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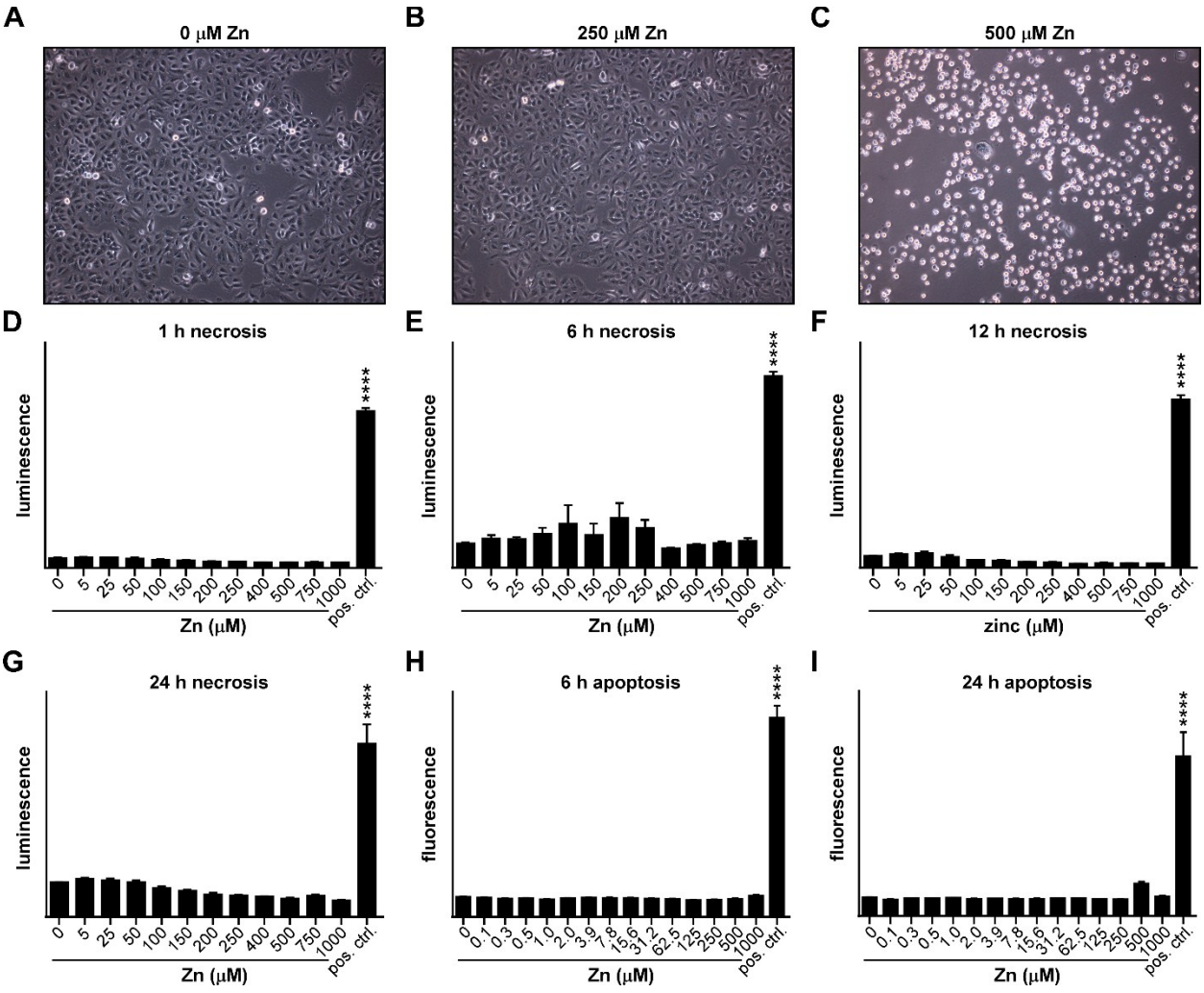

Figure S1: Zinc does not induce apoptosis or necrosis. (A-C) Representative images of A549 cells 24 h after treatment with 0, 250, or 500 μM zinc. (D-G) Necrosis at 1, 6, 12 and 24 h by measurement of lactate dehydrogenase release by CytoTox-Glo. (H-I) Apoptosis at 6 h and 24 h by measurement of caspase-3/7 cleavage by ApoOne. Statistics are by ANOVA with Sidak's multiple comparisons to test significant increase in signal compared to 0 μM zinc.

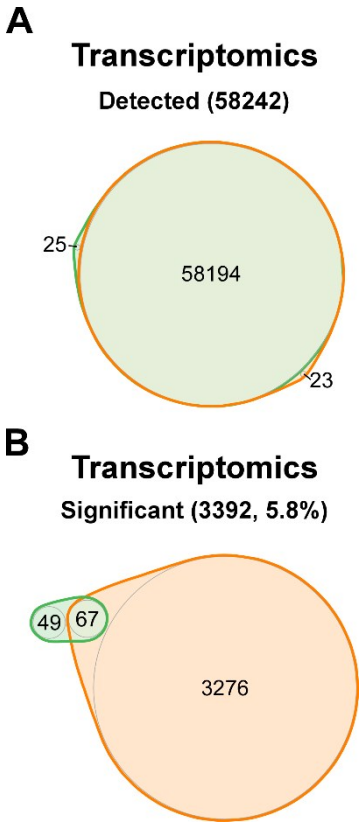

Figure S2: Transcriptomics data over time. (A) Detected transcripts are displayed across time. (B) Significantly changed transcripts are displayed across time.

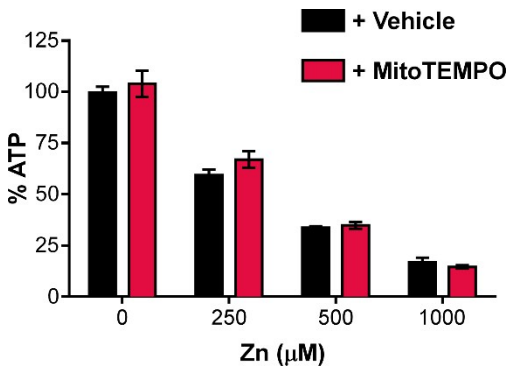

Figure S3: Addition of MitoTEMPO does not rescue viability of A549 cells intoxicated with zinc. A549 cells were treated with Zn (0-1000 μM) and MitoTEMPO (100 μM) overnight and viability was assessed. No significant difference between vehicle and MitoTEMPO treated conditions by two-way ANOVA with Sidak's multiple comparisons.

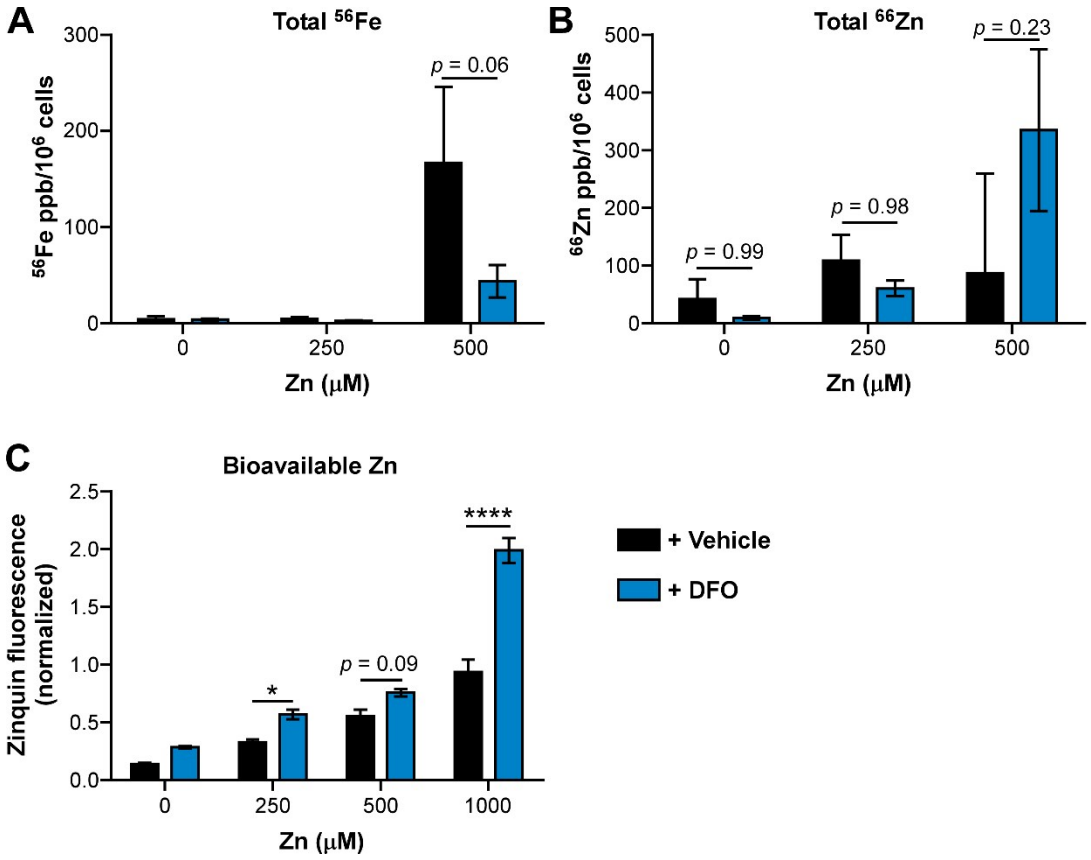

Figure S4: Desferoxamine treatment does not decrease total or bioavailable zinc. A549 cells were pre-treated with ddH2O (vehicle) or desferoxamine (DFO; 100 μM) 30 min prior to Zn intoxication. (A-B) ^{56}Fe and ^{66}Zn were measured by inductively coupled mass spectrometry. (C) Bioavailable Zn was measured by Zinquin fluorescence normalized to SytoOrange 82 fluorescence. Statistics indicated are two-way ANOVA with Sidak's multiple comparisons.