Supplemental Material

$SiON_x$ Coating Regulates Mesenchymal Stem Cell Antioxidant Capacity via NRF2 Activity Under Toxic Oxidative Stress Condition

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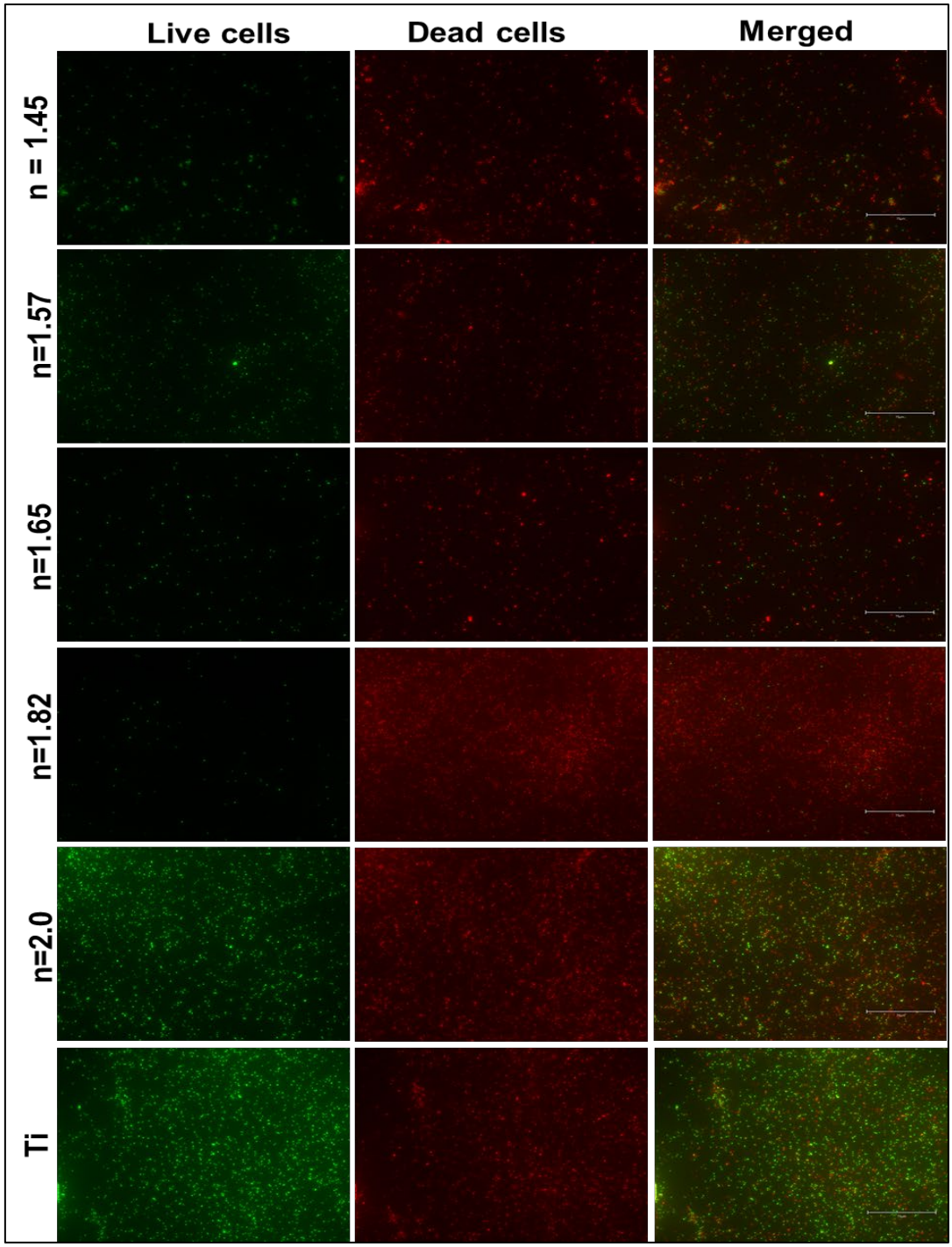
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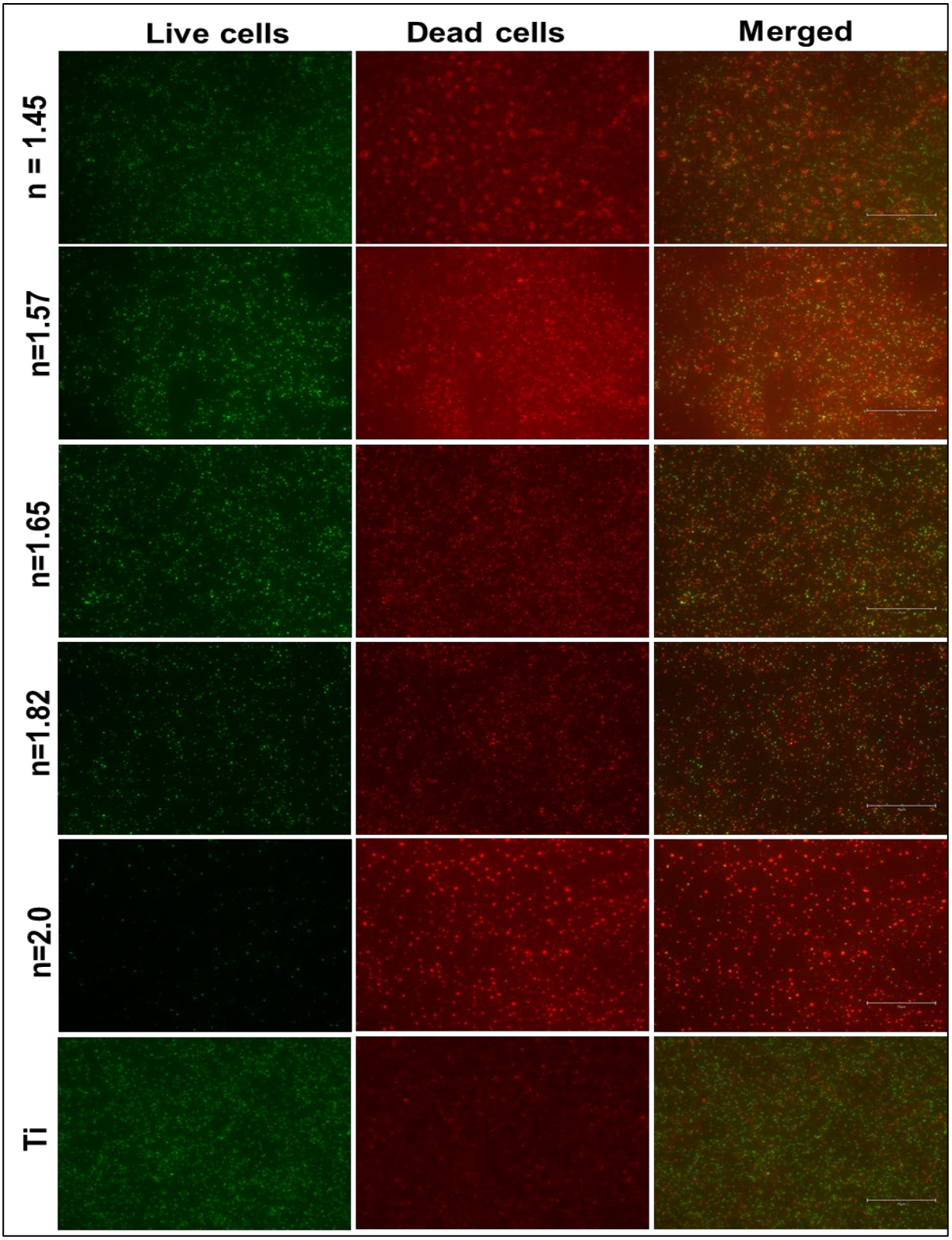
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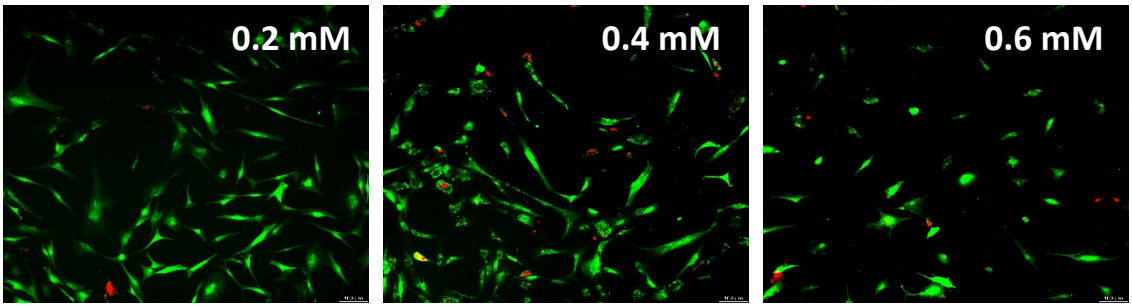
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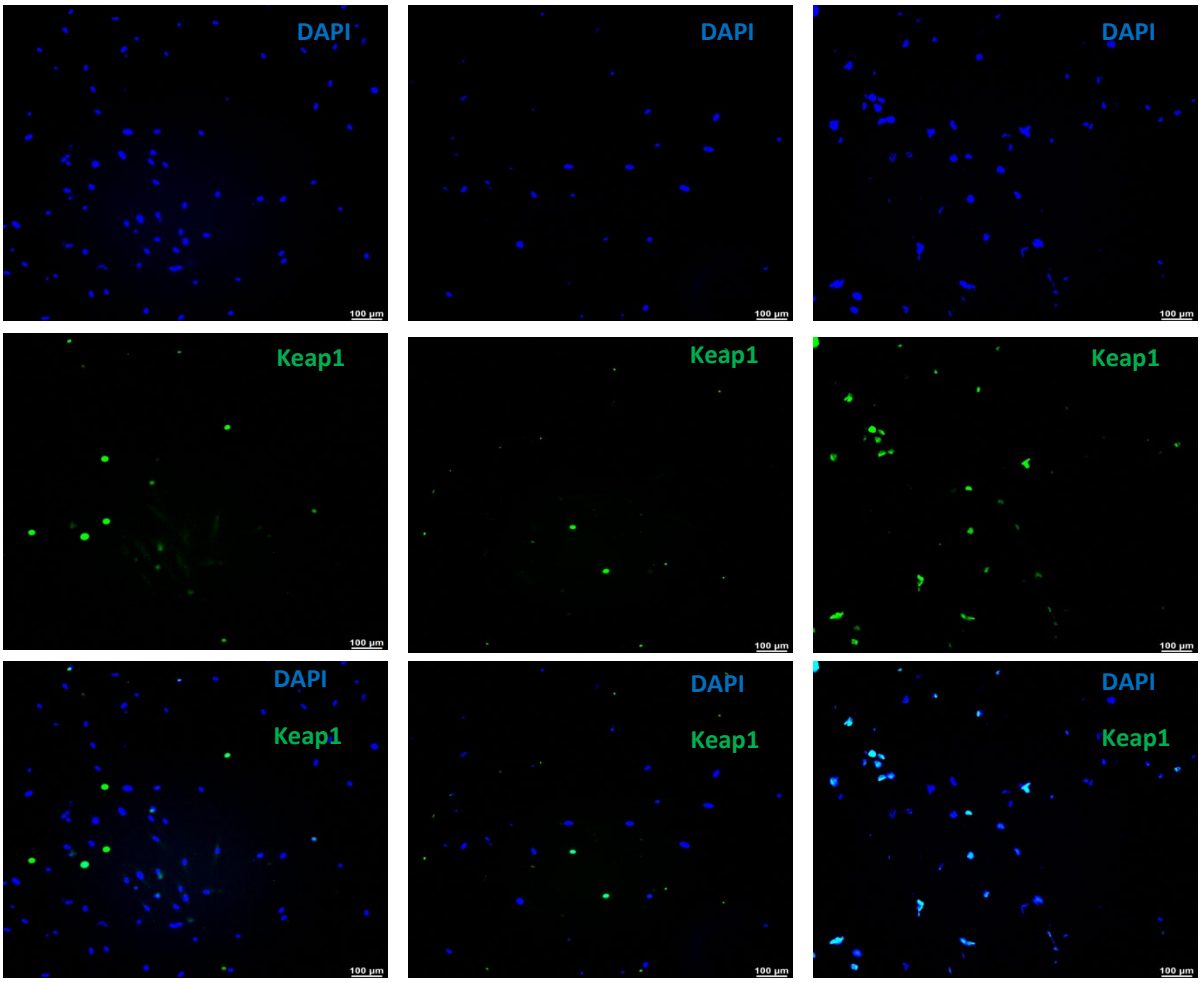
Supplemental Figure 1.1: Bacteriostatic effect of SiONx coatings verse Ti implants. Fluorescence images show the live (green) and dead bacteria (red) on the different SiONx surfaces compared to Ti implant after 12 hours.



Supplemental Figure 1.2: Bacteriostatic effect of SiONx coatings verse Ti implants. Fluorescence images show the live (green) and dead bacteria (red) on the different SiONx surfaces compared to Ti implant after 24 hours.



Supplemental Figure 2. Live/Dead assay performed after 4 days of an initial 24-hour insult using various concentrations of Hydrogen peroxide to study the sustained toxic effects of H_2O_2 on MSCs.



Supplemental Figure 3. IHC staining representing DAPI and Keap1 on MSCs after 7 days of osteogenic differentiation. There is no significant difference in the Keap1 activity on the SiONx surface when compared to the control.