



## Supplementary Material



# Image- and Fluorescence-based Assay to Test Red Blood Cells Sensitivity to Oxidative Stress and Screen Potential Protective Molecules

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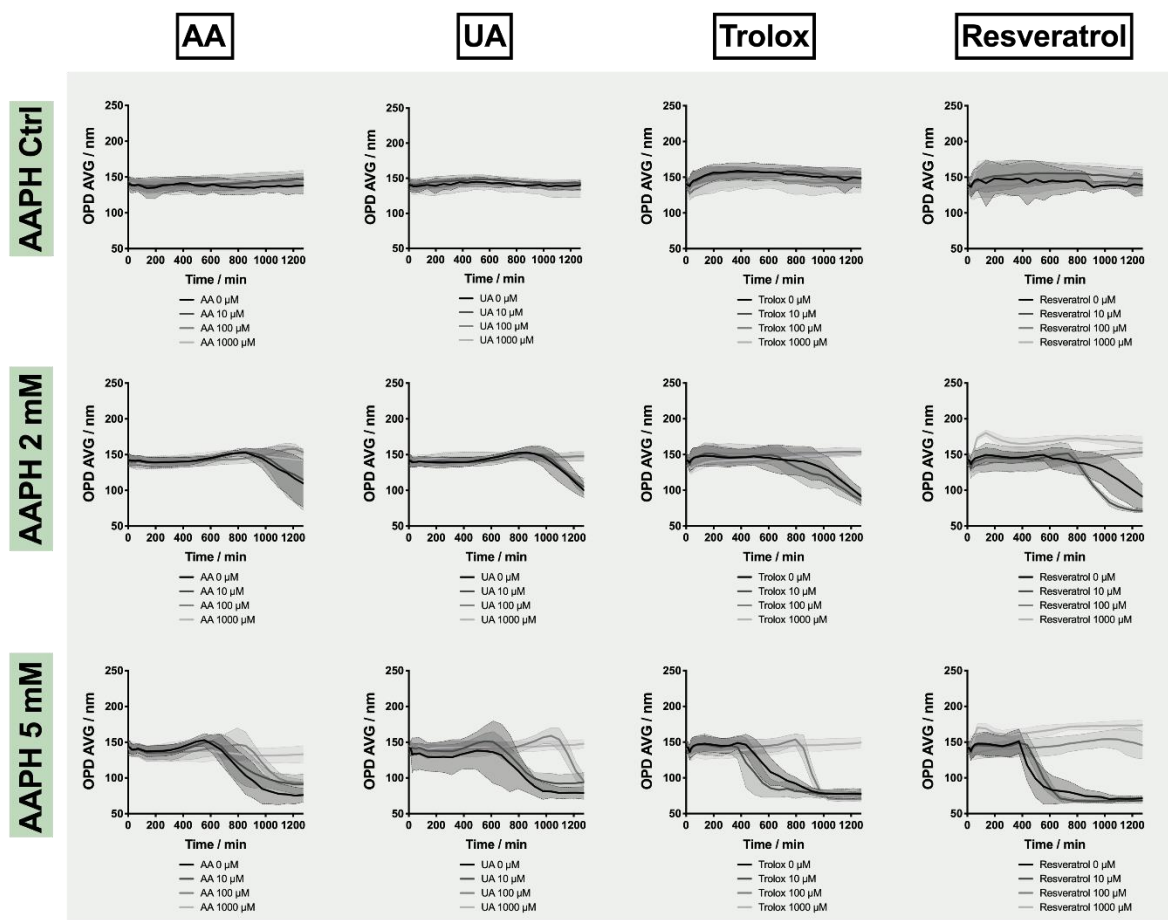
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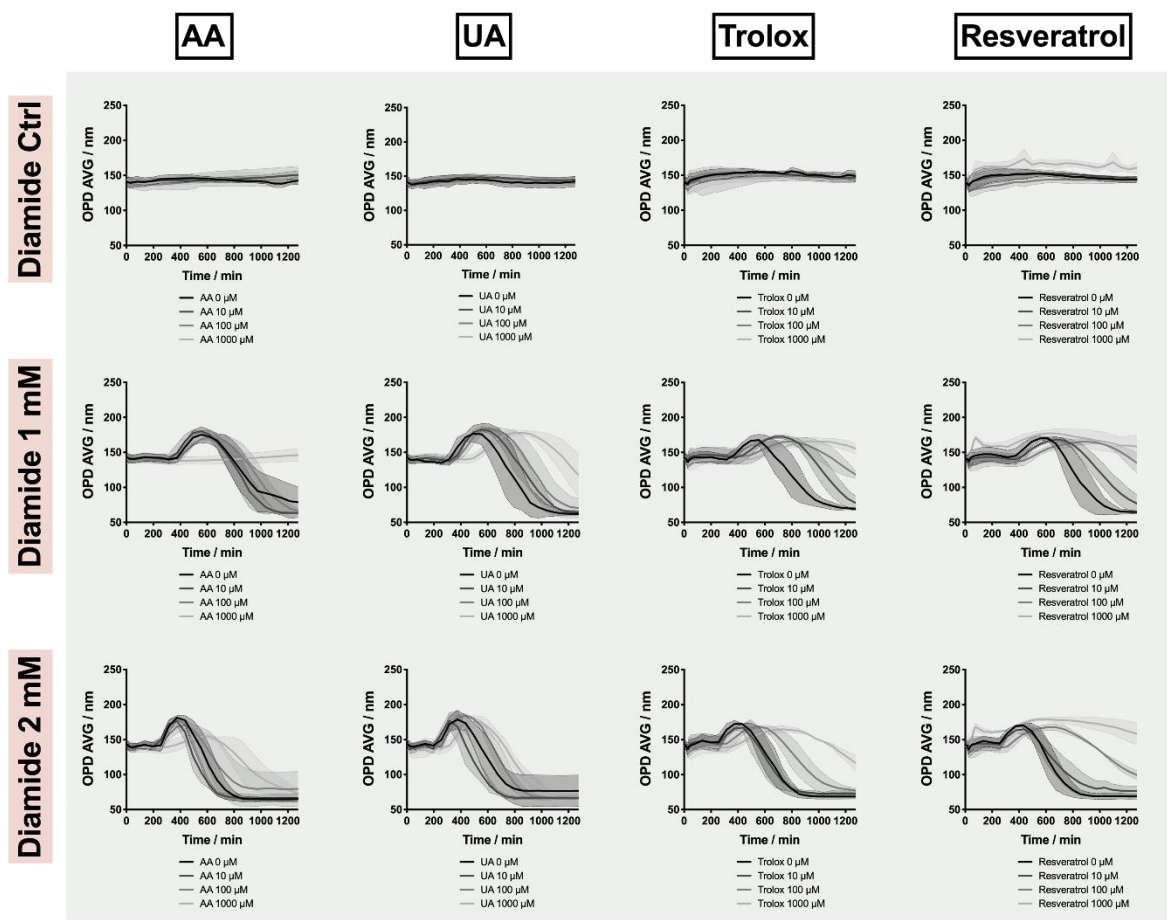
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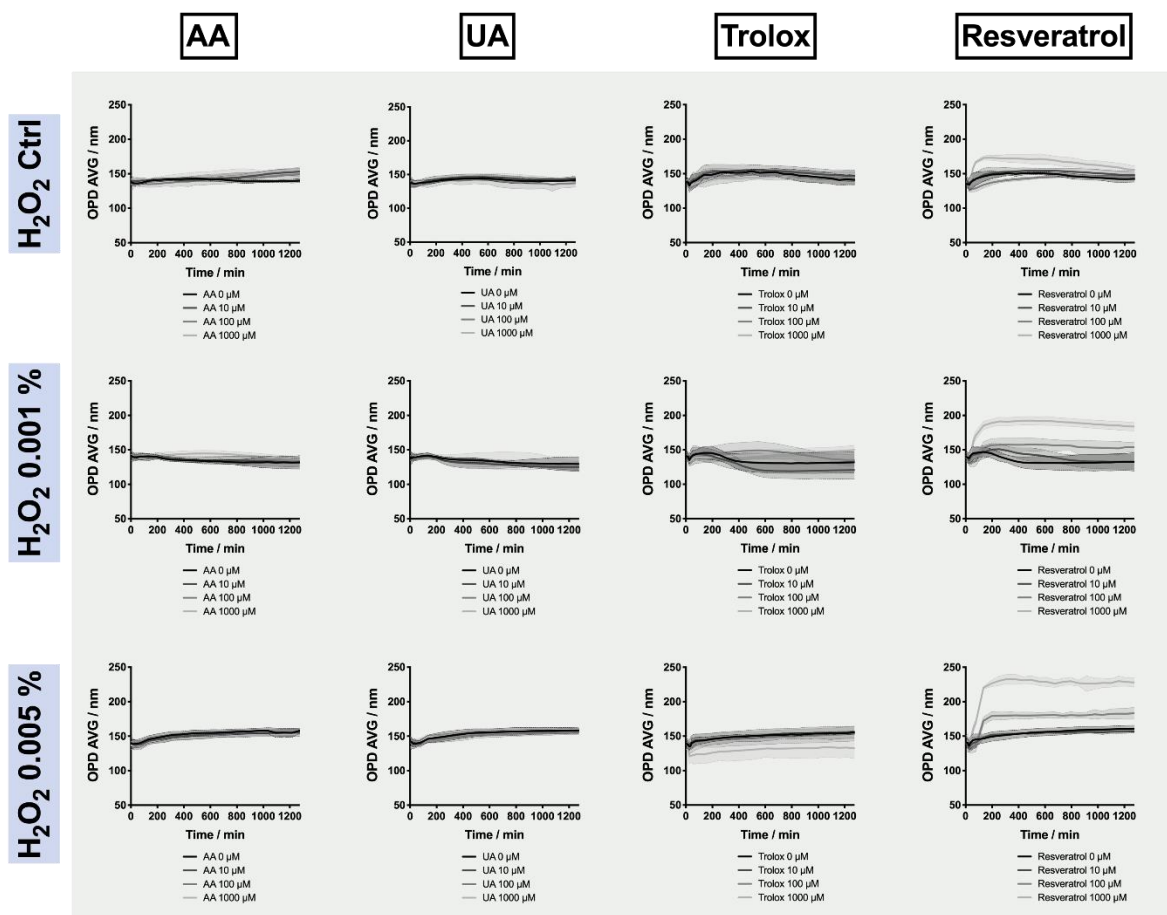
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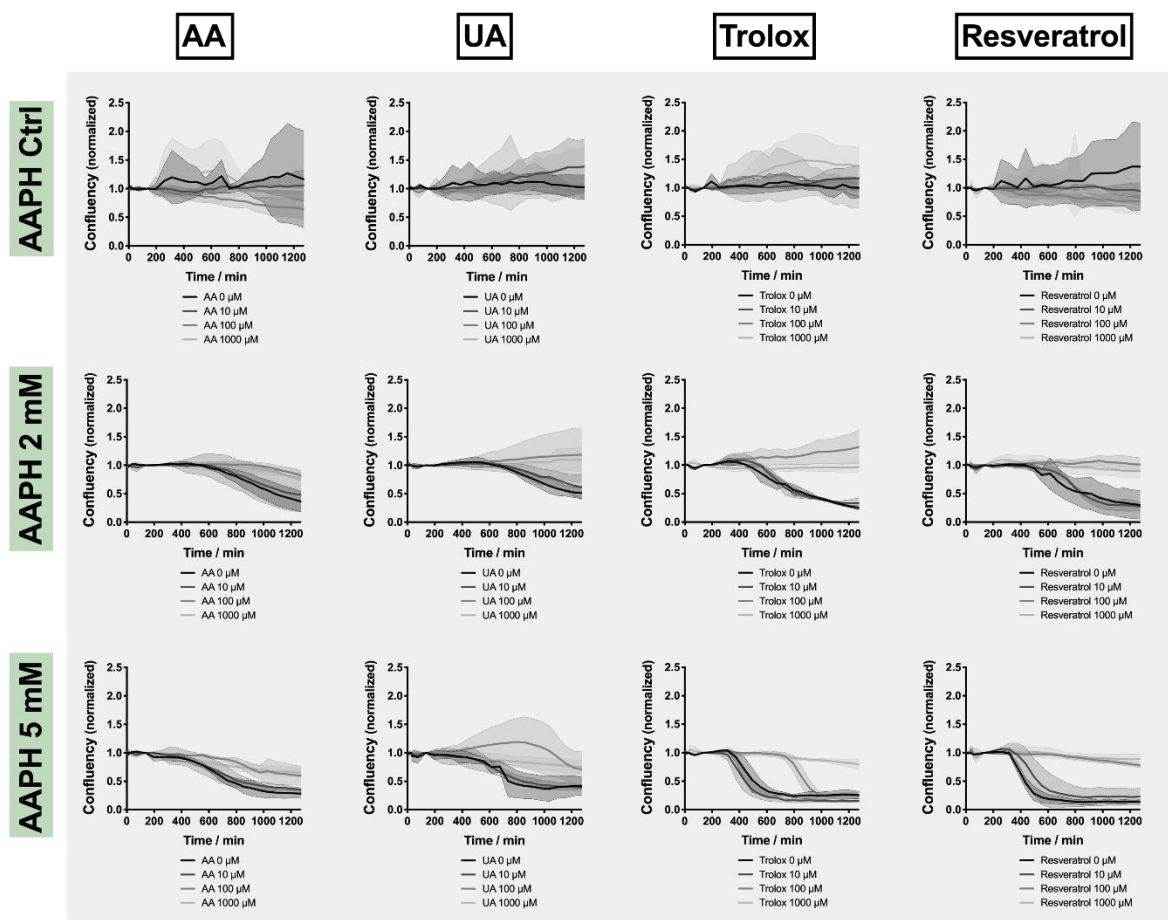
**Figure 1.** Summary Panel of the Effects on Red Blood Cells (RBCs) of 0, 10, 100 and 1000  $\mu\text{M}$  Ascorbic Acid (AA), Uric Acid (UA), Trolox and Resveratrol against AAPH at Different Concentrations. Timelapse Curves of Average of the Optical Path Difference Distribution (OPD AVG) Parameter Acquired by Digital Holographic Microscopy (DHM). Mean of 3 Red Cell Concentrates with Standard Deviation.



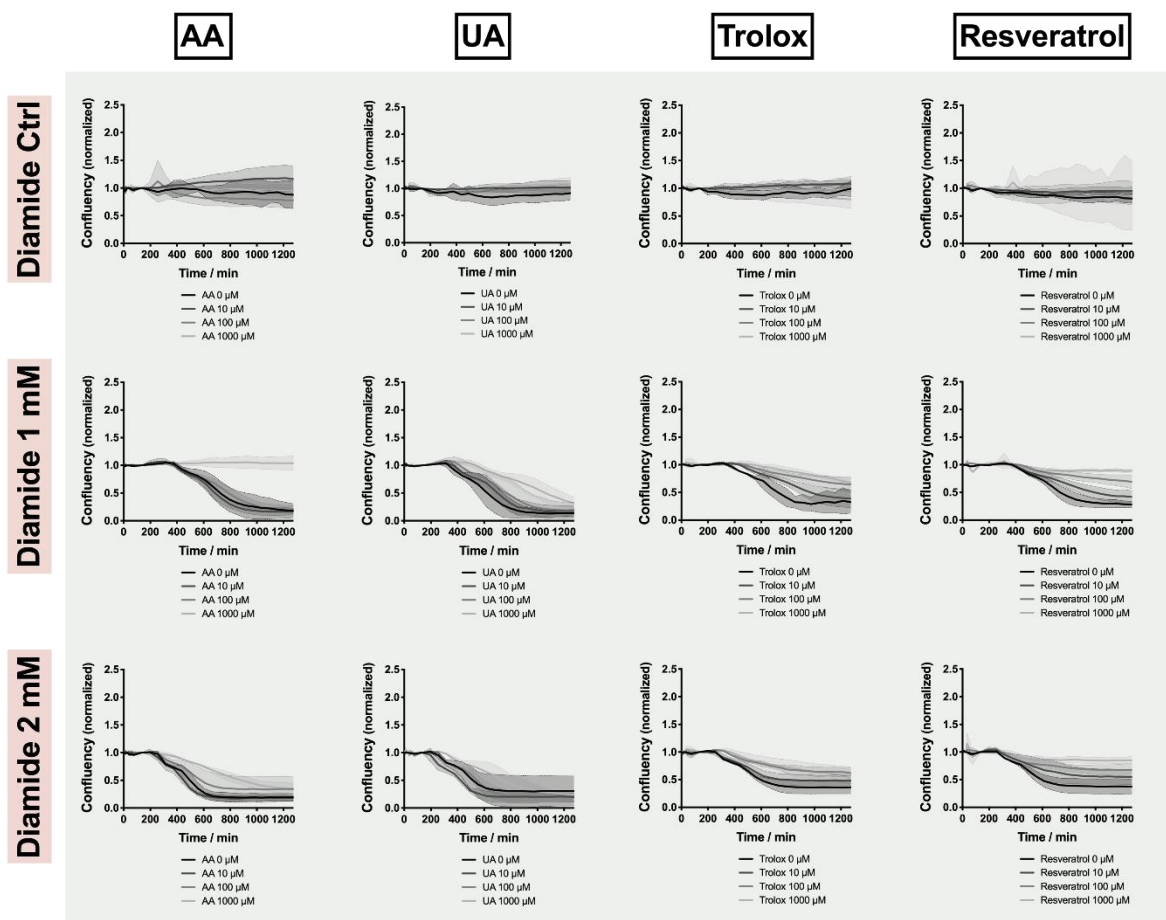
**Figure 2.** Summary Panel of the Effects on Red Blood Cells (RBCs) of 0, 10, 100 and 1000  $\mu\text{M}$  Ascorbic Acid (AA), Uric Acid (UA), Trolox and Resveratrol against Diamide at Different Concentrations. Timelapse Curves of Average of the Optical Path Difference Distribution (OPD AVG) Parameter Acquired by Digital Holographic Microscopy (DHM). Mean of 3 Red Cell Concentrates with Standard Deviation.



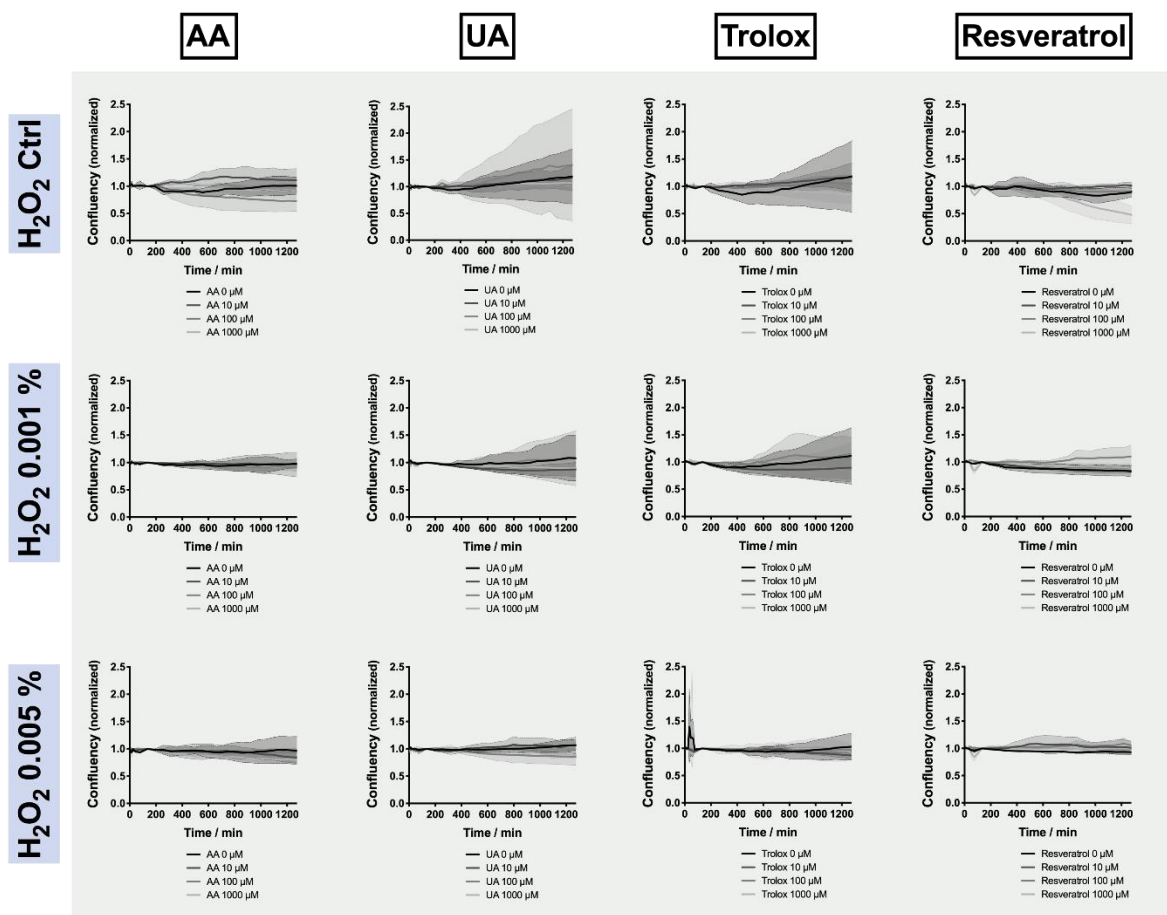
**Figure S3.** Summary Panel of the Effects on Red Blood Cells (RBCs) of 0, 10, 100 and 1000  $\mu$ M Ascorbic Acid (AA), Uric Acid (UA), Trolox and Resveratrol against  $H_2O_2$  at Different Concentrations. Timelapse Curves of Average of the Optical Path Difference Distribution (OPD AVG) Parameter Acquired by Digital Holographic Microscopy (DHM). Mean of 3 Red Cell Concentrates with Standard Deviation.



**Figure S4.** Summary Panel of the Effects on Red Blood Cells (RBCs) of 0, 10, 100 and 1000  $\mu\text{M}$  Ascorbic Acid (AA), Uric Acid (UA), Trolox and Resveratrol against AAPH at Different Concentrations. Timelapse Curves of Normalized Confluency Parameter Acquired by Digital Holographic Microscopy (DHM). Mean of 3 Red Cell Concentrates with Standard Deviation.

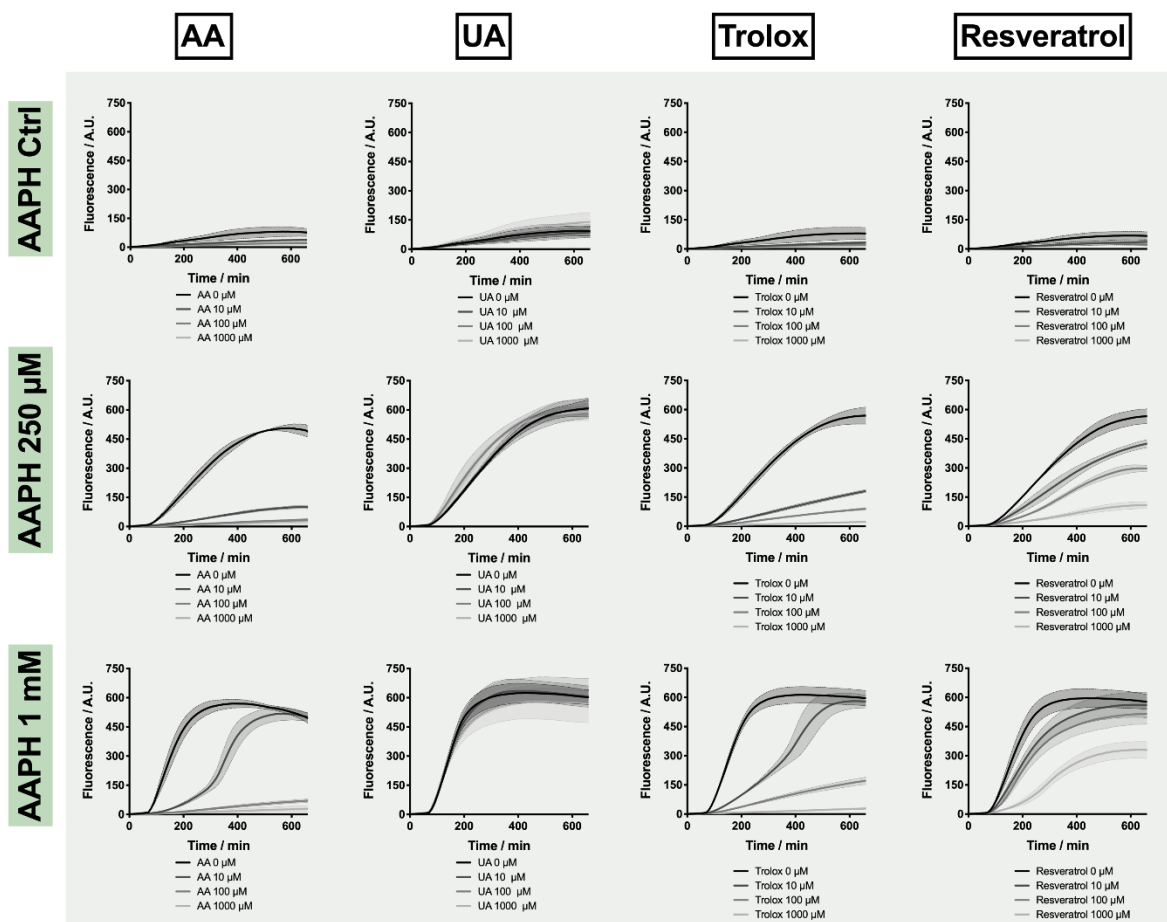


**Figure S5.** Summary Panel of the Effects on Red Blood Cells (RBCs) of 0, 10, 100 and 1000  $\mu\text{M}$  Ascorbic Acid (AA), Uric Acid (UA), Trolox and Resveratrol against Diamide at Different Concentrations. Timelapse Curves of Normalized Confluency Parameter Acquired by Digital Holographic Microscopy (DHM). Mean of 3 Red Cell Concentrates with Standard Deviation.



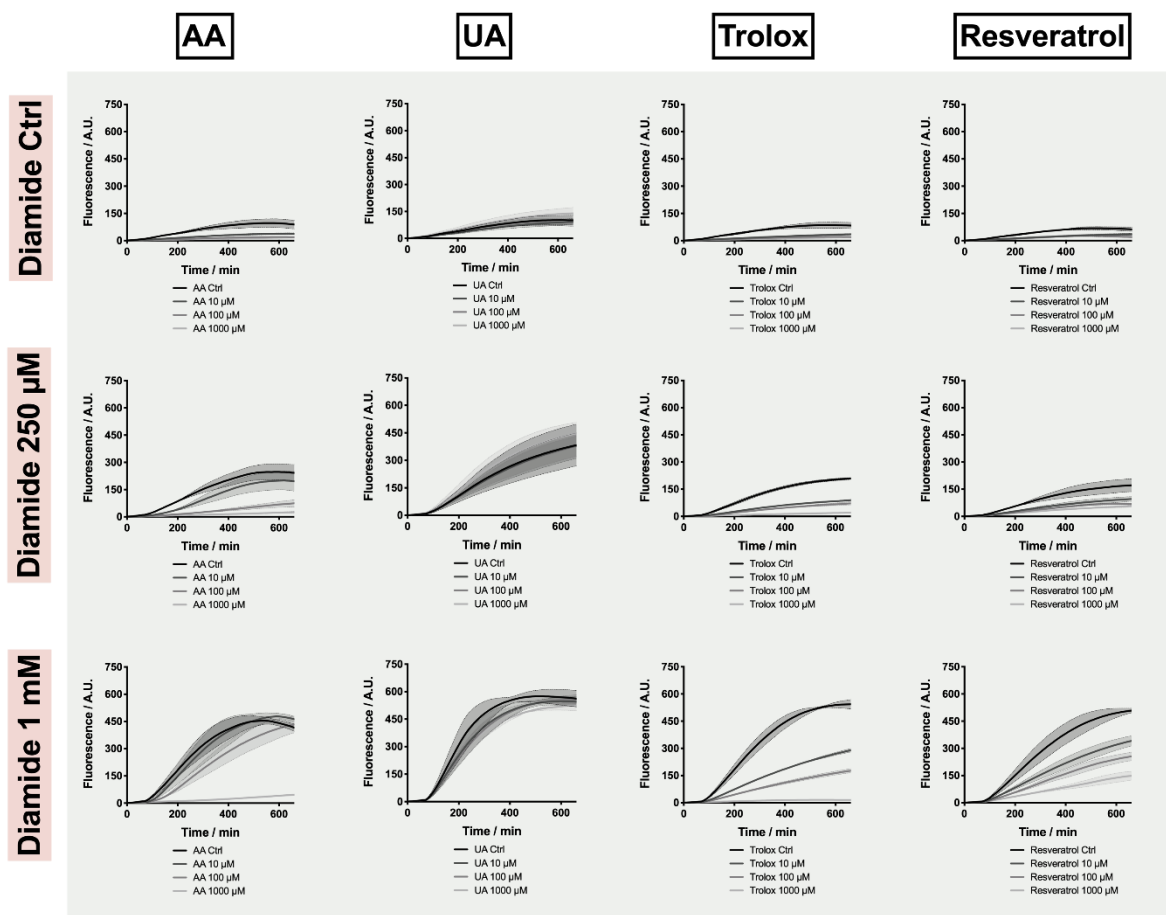
**Figure S6.** Summary Panel of the Effects on Red Blood Cells (RBCs) of 0, 10, 100 and 1000  $\mu\text{M}$  Ascorbic Acid (AA), Uric Acid (UA), Trolox and Resveratrol against  $\text{H}_2\text{O}_2$  at Different Concentrations. Timelapse Curves of Normalized Confluency Parameter Acquired by Digital Holographic Microscopy (DHM). Mean of 3 Red Cell Concentrates with Standard Deviation.



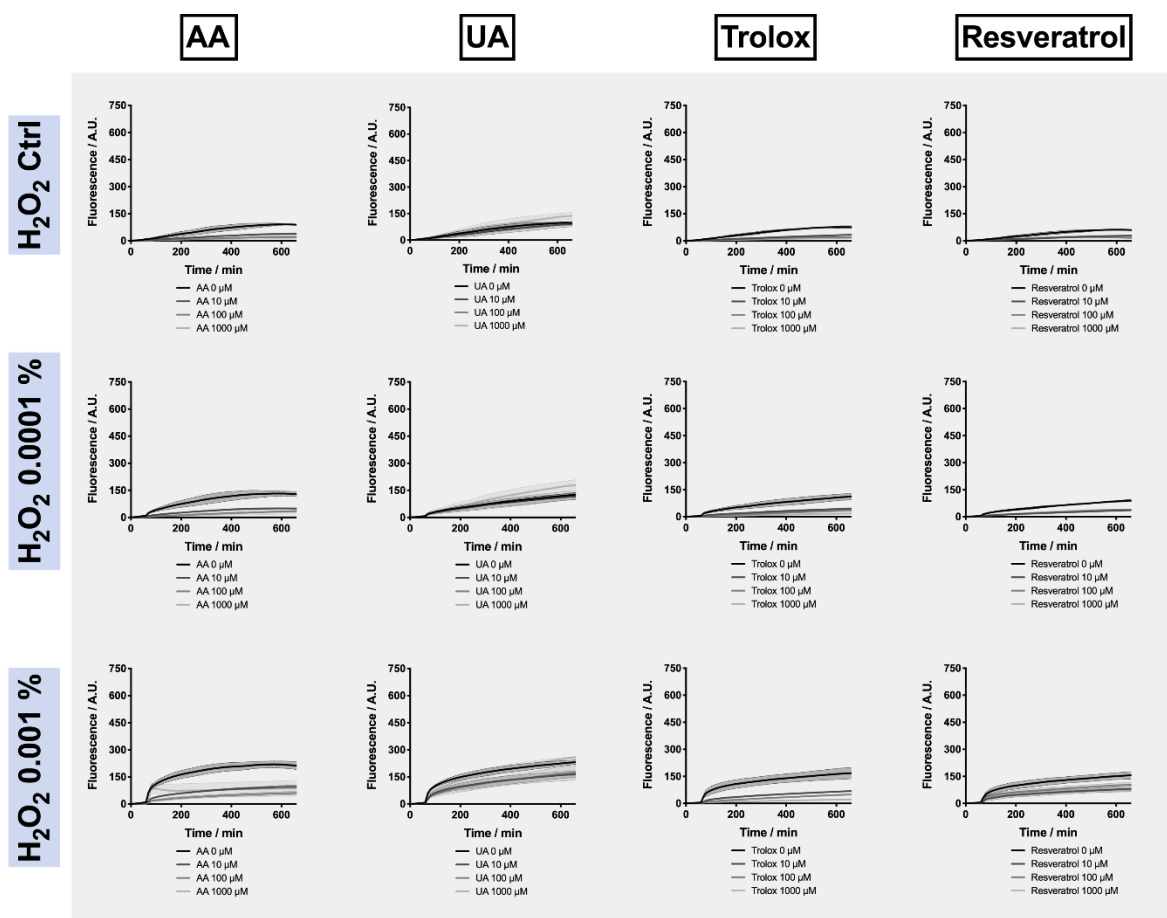


**Figure S7.** Summary Panel of the Effects on Red Blood Cells (RBCs) of 0, 10, 100 and 1000  $\mu\text{M}$  Ascorbic Acid (AA), Uric Acid (UA), Trolox and Resveratrol against AAPH at Different Concentrations. Timelapse Curves of Fluorescence emission. Mean of 3 Red Cell Concentrates with Standard Deviation.





**Figure S8.** Summary Panel of the Effects on Red Blood Cells (RBCs) of 0, 10, 100 and 1000  $\mu$ M Ascorbic Acid (AA), Uric Acid (UA), Trolox and Resveratrol against Diamide at Different Concentrations. Timelapse Curves of Fluorescence emission. Mean of 3 Red Cell Concentrates with Standard Deviation.



**Figure S9.** Summary Panel of the Effects on Red Blood Cells (RBCs) of 0, 10, 100 and 1000  $\mu\text{M}$  Ascorbic Acid (AA), Uric Acid (UA), Trolox and Resveratrol against  $\text{H}_2\text{O}_2$  at Different Concentrations. Timelapse Curves of Fluorescence emission. Mean of 3 Red Cell Concentrates with Standard Deviation.