Supporting Information

Proliferation assay image analysis The semi-quantitative analysis used to analyze the EdU and DAPI stained nuclei from the proliferation assay is depicted in Figure S1. The 8-bit grayscale confocal image stacks (stacks of images from the same plate with the same stain) were imported into ImageJ. With the first 0 µM OdDHL image (control) selected, the images were first subjected to the integrated 'Subtract Background' algorithm in ImageJ. Next, the integrated 'Threshold' algorithm was then applied to the images and adjusted in order to fully show all nuclei without introducing noise into the image (threshold set just before noise appeared in image). Lastly, the integrated 'Analyze Particles' algorithm was applied to the image and the area covered by stained nuclei was calculated (denoted as "%Area"). After all areas were found using this method, the percent area of the EdU-tagged nuclei was divided by the percent area of the DAPI-tagged (all) nuclei. The fraction calculated from the ratio of the percent areas was converted to a percentage and considered the percent proliferation for the two hour incubation period at each condition.

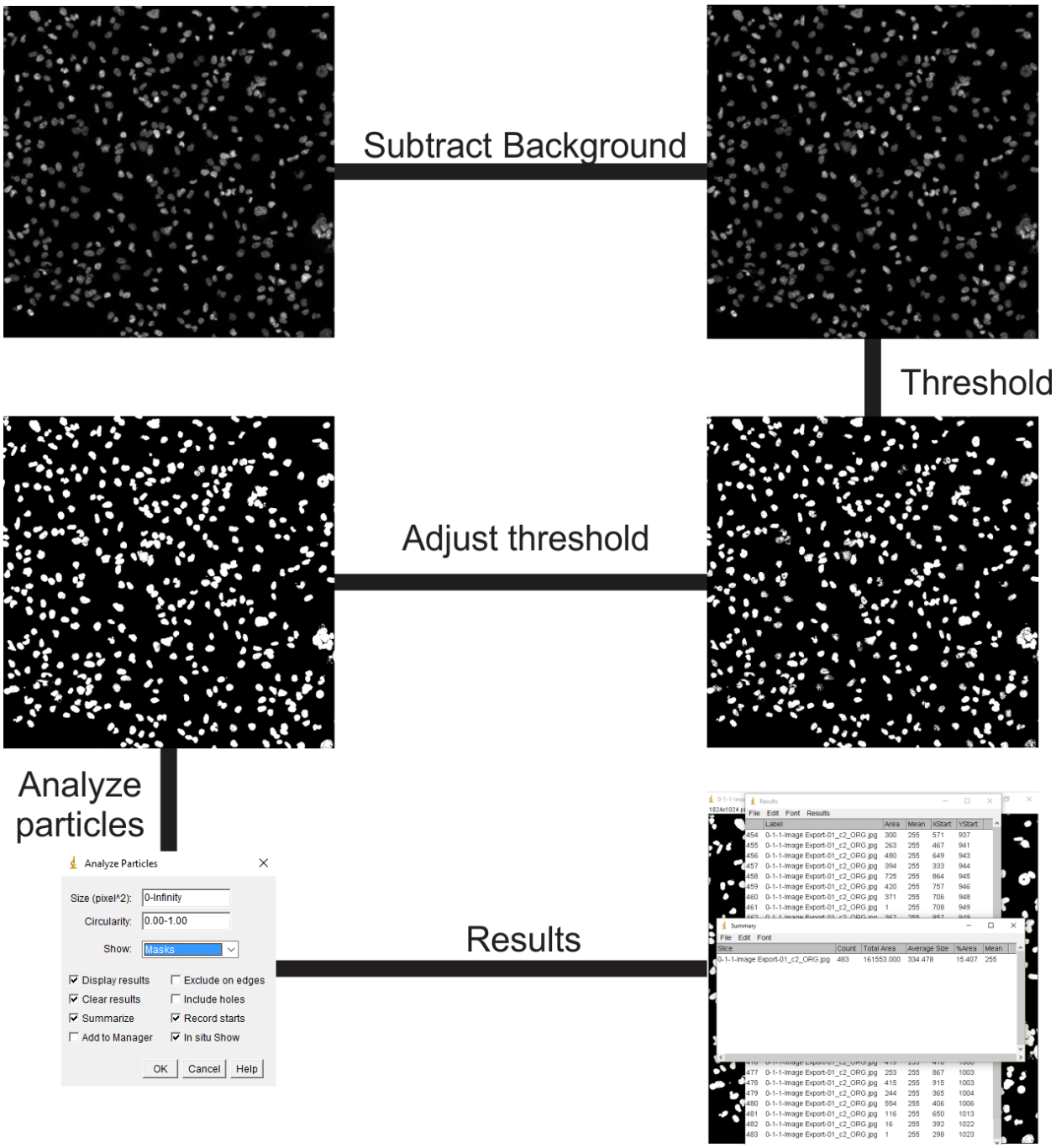

Figure S1. Diagram of the image analysis method in ImageJ.

After importing the 8-bit grayscale images into ImageJ, the background was subtracted, a threshold was applied and adjusted, and the percent areas of nuclei coverage was calculated using the integrated 'Analyze Particles' algorithm.

Apoptosis/necrosis assay image analysis The semi-quantitative analysis used to analyze the annexin V-FITC and propidium iodide stained cells from the apoptosis/necrosis assay is depicted below in Figure S2. The original 8-bit grayscale confocal image stacks (from the same plate with the same stain) were imported into ImageJ. The integrated 'Measure' algorithm was applied to each image in order to find the "Mean Gray Value" or MGV (preselected with "Set Measurements" under "Analyze"). After all MGVs were found using this method, the average MGV for each condition was calculated and all MGVs were normalized to the MGV for appropriate 0.6% DMSO control. The fraction calculated from the ratio of the MGVs was converted into a percentage to conduct a statistical analysis of percent increase of apoptosis and necrosis associated with 400 µM OdDHL compared to the 0.6% DMSO control.

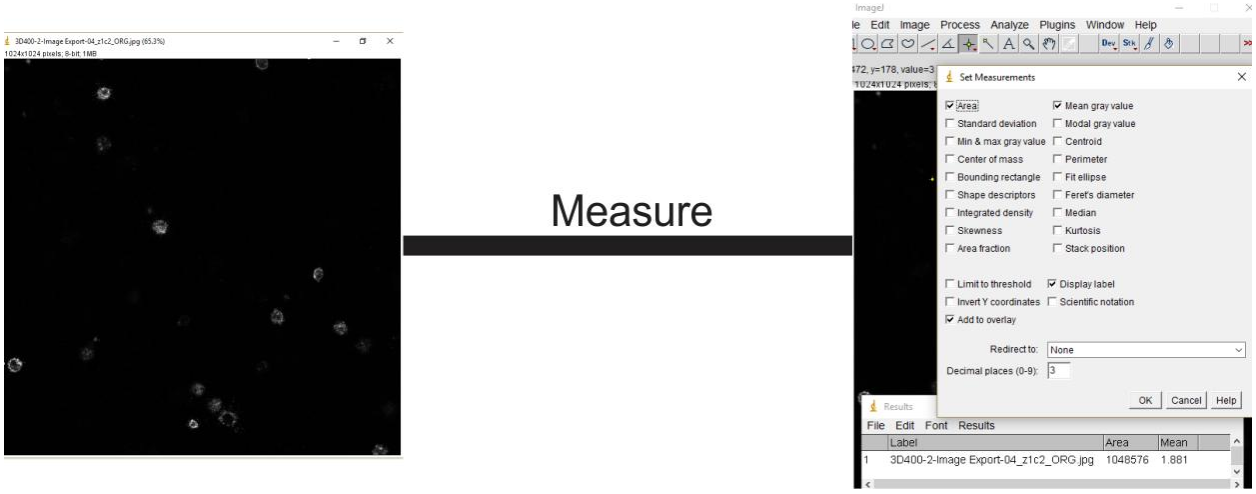

Figure S2. Diagram of the image analysis method in ImageJ.

After importing the 8-bit grayscale images into ImageJ, the MGV was measured and used as a relative metric of annexin V-FITC and propidium iodide expression.