



**SUPPLEMENTARY FIG. S2.** Pixel histograms for (A) representative images of cells containing LDs, shown in *blue*, and (B) overlaid with a histogram for a representative image of cells with no LDs, shown in *yellow*. It can be seen in the overlaid image that the *blue* histogram includes a shoulder to the *right* of the average, indicating that images with differentiated cells contain a larger fraction of bright pixels (due to the interior of LDs). The *red* line indicates the automatically determined threshold, and the *green* line indicates the high threshold set at a 15% higher value.