



**Supplementary Fig. S2.** Phenotypic characterization of hepatotoxicity by quantitation of the average and total stained cell areas, nuclear shape, and intensity. **(A)** Examples presented show impact of different compounds on total positive cell area and/or average positive cell area. Numeric data of cell area is shown for representative compounds. Images of iCell hepatocytes treated with 100  $\mu$ M of indicated compounds for 72 h, then stained with Calcein AM, Hoechst. Images taken using 10 $\times$  objective and cell areas stained positive for Calcein AM analyzed by MultiWavelength Cell Scoring module. **(B)** Examples of images presented showing impact of 100  $\mu$ M of indicated compounds on nuclear area and average intensity. Images were acquired with 10 $\times$  objective and analyzed by count of nuclei or customized algorithms. Numeric results are presented as a bar graph.