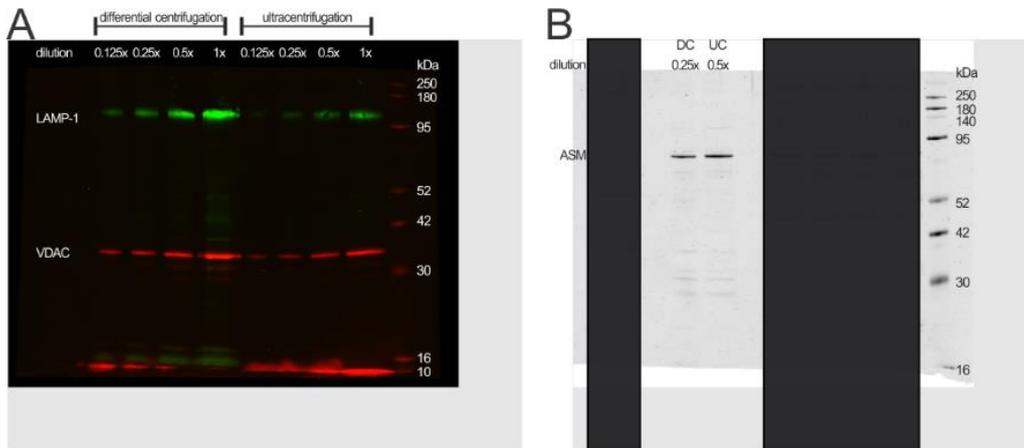
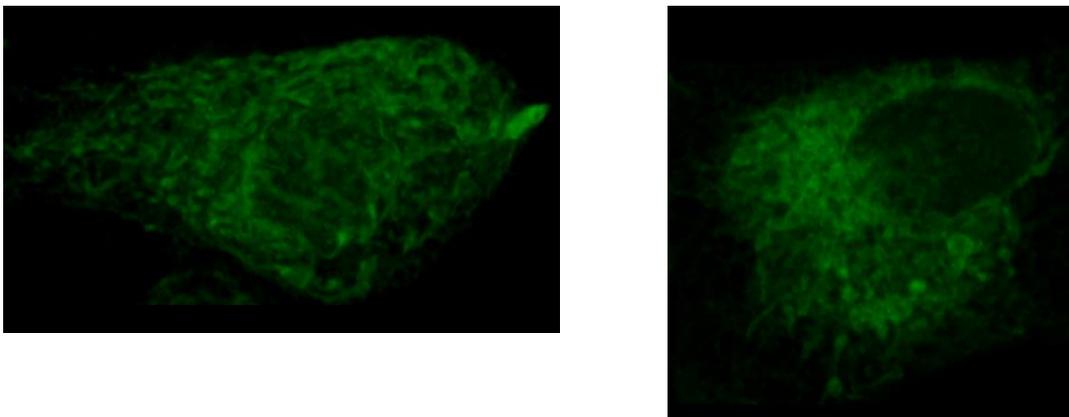


**Figure 1.** Microrespirometry of bovine retinal endothelial cells (BREC). (A) Oxygen concentration trace of BREC substrate-supported respiration (basal) and substrates + 15 μM desipramine delivered on-chip (desipramine). (B) Substrate-supported oxygen consumption rates of BREC with or without 15 μM desipramine.



**Figure 2.** Immunoblots of lysosomal and mitochondrial markers (A) and ASM (B) at varying levels of mitochondrial purity. LAMP-1 = lysosome associated membrane protein 1, VDAC = voltage dependent cation channel, ASM = acid sphingomyelinase, black boxes = unrelated experiment.



**Figure 3.** 3D reconstructed animation of control-derived (left) and diabetic-derived (right) RPE cells. Cells were stained with MitoTracker Green, imaged with confocal microscopy and reconstructed using ImageJ. See main text for details.