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**Membrane damage by Betulinic Acid provides insights into cellular aging**

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**Abbreviations**

AAU, Autophagy Arbitrary Units; BA, Betulinic acid; Cathepsin B; CTSB; CQ, Chloroquine; COXIV, Cytochrome c Oxidase Subunit IV; CVS, Crystal violet staining; DMEM, Dulbecco's modified Eagle's medium; DDR, DNA damage response; FBS, fetal bovine serum; GAPDH, Glyceraldehyde-3-Phosphate Dehydrogenase; LMP, Lysosomal membrane permeabilization; MTT, 3-(4,5-Dimethylthiazol-2-yl)-2,5-Diphenyltetrazolium Bromide; NR, Neutral Red; OIS, oncogene-induced senescence; POPC, 1-palmitoyl,2-oleoyl-sn-glycero-3-phosphocholine; DPPE, 1,2-Dipalmitoyl-sn-glycero-3-phosphoethanolamine; SIPS, stress-induced premature senescence; mitochondrial membrane potential,  $\Delta\Psi_m$ .

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