

Pores formation on cell membranes by hederacolchiside A1 leads to a rapid release of proteins for cytosolic sub-proteome analysis

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Hederacolchiside A1 was used to progressively permeabilize the membrane of human melanoma MEL-5 cells. Holes formation was followed by Scanning Electron Microscopy and interaction of the saponin with cholesterol and phospholipids by TOF-SIMS. 2D-LC-MS/MS and 2D-SDS-PAGE show that the release of soluble proteins into serum-free culture media increases with time. This can lead to a new rapid and efficient strategy to analyze the cytosolic subproteome and it opens the door to get information from the cytosolic compartment for clinical proteomic studies.

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