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In copertina presentiamo una nuvola di tag (tag cloud in Inglese), rappresentazione visiva delle etichette (tag) o parole chiave usate negli abstract dei lavori del Congresso.
Generalmente questa lista è presentata in ordine alfabetico, con la peculiare caratteristica di attribuire un font più grande alle parole più importanti. Si tratta quindi di una lista pesata.
Le nuvole di tag costituiscono un elemento di interfaccia per gli architetti dell'informazione, che le possono utilizzare per progettare navigazioni alternative all'interno di un sito web.
(testo tratto da Wikipedia)

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in the apoptotic and glycolytic pathways were well represented in all patients, strongly suggesting that their expression is essential for the primary tumor growth. Conversely the cluster of cell motility proteins was irregularly expressed among patients, indicating this cluster as a possible marker for tumor metastasis, and suggests the possibility of using it as prognostic factors for breast cancer progression. Hierarchical clustering strengthen this hypothesis and showed the possibility to segregate patients in different class according to the probability of disease progression.

Pucci-Minafra I et al. (2007) Proteomics Clin Appl 1:118-29.
Pucci-Minafra I et al. (2008) J Proteome Res. 7:1412-8.

The synergistic effect exerted by the HDAC inhibitor SAHA and the sesquiterpene lactone parthenolide on triple negative breast cancer cells.

Daniela Carlisi[1], Antonella D'Anneo[2], Marianna Lauricella[1], Giuseppina Buttitta[2], Sonia Emanuele[1], Roberta Martinez[1], Giovanni Tesoriere[2*]

[1]*Department of Experimental Biomedicine and Clinical Neurosciences, Laboratory of Biochemistry, Polyclinic, University of Palermo, Via del Vespro 129, 90127 Palermo, Italy.*

[2]*Department of Biological, Chemical and Pharmaceutical Sciences and Technologies, Laboratory of Biochemistry, Polyclinic, University of Palermo, Via del Vespro 129, 90127 Palermo, Italy.*

e-mail address of presenting author: daniela.carlisi@unipa.it

*e-mail address of corresponding author: giovanni.tesoriere@unipa.it

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Triple-negative breast cancer (TNBC) is a subtype of breast cancer, insensitive to endocrine therapy. Chemotherapy is the main form of treatment, but is accompanied by a high rate of recidivism. The sesquiterpene lactone Parthenolide (PN) exerts a cytotoxic effect on MDA-MB231 cells, a TNBC cell line (1), but was ineffective at low doses (2-5µM). This represents an obstacle for a therapeutic utilization of PN. We supposed, in line with other authors (2), that PN causes a protective response, which at low doses prevails on the cytotoxic effect. With the aim of inhibiting this protective effect we have shown that pre-treatment of MDA-MB231 cells with SAHA (2-5µM), an histone deacetylates inhibitor, synergistically sensitizes the cells to the cytotoxic effect of PN, also at low doses of this compound.

SAHA/PN combination induced hyperacetylation of histones H3 and H4 and hypomethylation of DNA. These changes cause epigenetic effects, which can be responsible for the increased expression of tumour suppressors p21 and p27 and decreased levels of Bcl2 and p65, a component of NFkB.

Moreover SAHA alone induced ROS generation as well as autophagy, which favours cell survival, and apoptosis. The addition of PN (8µM) to SAHA reduced production of ROS and autophagy, while increased the apoptotic process.

Interestingly PN activates Akt, mTOR, phospho-p70S6kinase and ULK1/2, a factor that inhibits autophagy. In addition PN caused nuclear accumulation of Nrf2 with stimulates antioxidant genes. SAHA prevented these effects.

In conclusion SAHA/PN stimulated cytotoxicity through many mechanisms: (i) induces epigenetic events with changes in gene expression, (ii) PN prevents SAHA effect on autophagy and (iii) SAHA suppresses the protective response exerted by PN through inactivation of m-TOR. Taken together our results suggest that combination SAHA/PN can be a candidate for TNBC therapy.

1 D'Anneo, A et al. (2013) *Cell Death Dis*, **4**, e891
2 Hassane, DC et al (2010) *Blood*, **116**, 5983-90