

Accepted Manuscript

Serendipitous discovery of potent human head and neck squamous cell carcinoma anti-cancer molecules: A fortunate failure of a rational molecular design

Chiara Zagni, Venerando Pistrà, Luciana A. Oliveira, Rogerio M. Castilho, Giovanni Romeo, Ugo Chiacchio, Antonio Rescifina



PII: S0223-5234(17)30790-0

DOI: [10.1016/j.ejmech.2017.09.075](https://doi.org/10.1016/j.ejmech.2017.09.075)

Reference: EJMECH 9790

To appear in: *European Journal of Medicinal Chemistry*

Received Date: 21 July 2017

Revised Date: 1 August 2017

Accepted Date: 29 September 2017

Please cite this article as: C. Zagni, V. Pistrà, L.A. Oliveira, R.M. Castilho, G. Romeo, U. Chiacchio, A. Rescifina, Serendipitous discovery of potent human head and neck squamous cell carcinoma anti-cancer molecules: A fortunate failure of a rational molecular design, *European Journal of Medicinal Chemistry* (2017), doi: 10.1016/j.ejmech.2017.09.075.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Serendipitous discovery of potent human head and neck squamous cell carcinoma anti-cancer molecules: A fortunate failure of a rational molecular design

Chiara Zagni ^{a, *}, Venerando Pistarà ^a, Luciana A. Oliveira ^b, Rogerio M. Castillo ^b, Giovanni Romeo ^c, Ugo Chiacchio ^a, Antonio Rescifina ^{a, *}

^a Dipartimento di Scienze del Farmaco, Università degli Studi di Catania, V.le A. Doria, 95125 Catania, Italy.

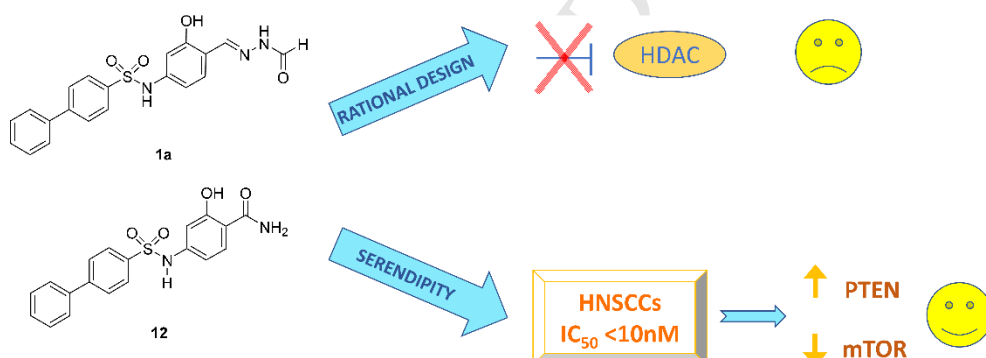
^b Laboratory of Epithelial Biology, Department of Periodontics and Oral Medicine, University of Michigan School of Dentistry, Ann Arbor, MI 48109-1078, USA.

^c Dipartimento Farmaco-Chimico, Università di Messina, Viale SS. Annunziata, Messina 98168, Italy.

Corresponding authors:

Chiara Zagni chiarazagni@gmail.com; Antonio Rescifina arescifina@unict.it

Graphical Abstract



Highlights

- Novel anticancer molecules were designed and synthesized as HDAC inhibitors
- Compounds **1a** and **12** showed very low inhibitory activity over HDAC
- Compounds **1a** and **12** exhibited excellent anti-proliferative activity against HNSCCs
- Compounds **1a** and **12** enhanced PTEN expression
- Compounds **1a** and **12** were shown to block mTOR signaling

Keywords

HDAC; PTEN; HNSCC; PI3K/Akt/mTOR; Drug design; anti-cancer

Download English Version:

<https://daneshyari.com/en/article/5158191>

Download Persian Version:

<https://daneshyari.com/article/5158191>

[Daneshyari.com](https://daneshyari.com)