NMMC Salerno 2015

NPCF 9

9° Meeting

Nuove Prospettive in Chimica Farmaceutica

XXIII National Meeting on Medicinal Chemistry

9th Young Medicinal Chemists Symposium

September 6-9, Salerno - Italy

Campus di Fisciano - Università degli Studi di Salerno

Abstract eBook

9° Meeting

Nuove Prospettive in Chimica Farmaceutica

***XXIII National Meeting on Medicinal Chemistry* and**
9th Young Medicinal Chemists Symposium
(XXIII NMMC – 9th NPCF)
September 6-9, 2015
Fisciano, Salerno, Italy
Congress venue: Università degli Studi di Salerno (Fisciano)

TOPICS

- Anti-infective Agents
- Biophysics and Analytics in Drug Discovery
- Cancer
- Cardiovascular Diseases
- Central Nervous System
- Computer Aided Methods in Medicinal Chemistry
- Drug Delivery
- Drug Design
- Epigenetics
- Inflammation
- Metabolic Diseases
- Nutraceuticals and Nutragenomics
- Pharmaceutical Analysis
- Pharmaceutical Biotechnologies
- Synthetic Methods and Strategies in Medicinal Chemistry

Società Chimica Italiana
Divisione di Chimica Farmaceutica

EFMC
European Federation for Medicinal Chemistry

XXIII National Meeting on Medicinal Chemistry and 9th Young Medicinal Chemists Symposium
(XXIII NMMC – 9th NPCF)

Organizing Institution

Medicinal Chemistry Division (*Divisione di Chimica Farmaceutica*) of the Italian Chemical Society

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Welcome address

Dear Friends and Colleagues,

On behalf of the Organizing Committee, I am glad to welcome you all to the ***XXIII National Meeting on Medicinal Chemistry and 9th Young Medicinal Chemists Symposium.***

The meeting, organized by the Medicinal Chemistry Division (*Divisione di Chimica Farmaceutica*) of the Italian Chemical Society, will be held in the Campus of the University of Salerno (located in Fisciano - Salerno, Italy) - from September 6th to 9th, 2015.

The **XXIII NMMC** aims to provide a panel of scientists to interact and discuss the latest ideas, scientific breakthroughs and techniques. The meeting offers an exciting chance to debate future changes and to provide topical coverage of key disciplines, and to explore for cooperation and collaborations. Moreover, this edition of the meeting will be joint with the **9th Young Medicinal Chemists Symposium** "*Nuove Prospettive in Chimica Farmaceutica*" (**NPCF9**), directed to graduate, post-graduate, PhD students and young researchers operating in University or Industry.

The scientific programme includes

- three days of scientific presentations
- plenary lectures of eminent international scientists
- twemty parallel oral sessions with keynotes and short communications of distinguished scientists from Italy and abroad, poster sessions and an exhibition by companies working in the field
- attendance of over 300 delegates from Italy and other countries
  (from Europe, America, Asia, both University and Industry).

I would like to thank all the speakers and participants for their contributions.

The Chairman

Ettore Novellino

SPONSORS

We acknowledge the support of the **XXIII NMMC and 9th NPCF** by the following institutions, companies and journals:

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ABSTRACT

synthesis and sirt1 modulation studies of amides and hydrazides of benzoic acid incorporating a (2-trifluoromethylpyridin-4-yl)amino moiety

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Sirtuins are a class of enzymes that catalyze the NAD^+-dependent deacetylation of e-acetyl-Lys residues of proteins.[1] Among them, SIRT1 regulates key metabolic and inflammatory pathways through deacetylation of several protein substrates, including PGC-1α, NFκb, and FOXO. Overexpression of SIRT1 or its chemical activation has shown protective effect against various age-related diseases including diet-induced insulin resistance, metabolic syndrome, inflammation, and cardiovascular disease.[2] Therefore, development of SIRT1 activators as potential therapeutic agents in the treatment of the age-related diseases has been subject of increasing interest. Conversely, recent findings have also shown SIRT1 overexpression to enhance tumor growth and promote cell survival in response to stress and drug resistance. It has been also reported SIRT1 to be upregulated in a spectrum of cancers, including lymphomas, leukemia and soft tissue sarcomas, prostate cancer, and lung and colon carcinomas.[3] Thus, the dual role of SIRT1 in modulating the acetylation of tumor suppressor proteins and chromatin renders them attractive therapeutic target for anticancer drug development. In view of these findings, we are interested in the design of new compounds to evaluate their ability in modulating of the SIRT1 deacetylase activity. In the present study, we report synthesis of a series of amides and hydrazides of benzoic acid incorporating a (2-trifluoromethylpyridin-4-yl)amino moiety (Figure 1); results of their in vitro evaluation and initial SAR study will be discussed.

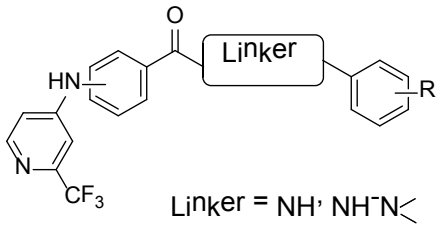

Figure 1

References

1. Landry, J., et al., The silencing protein SIR2 and its homologs are NAD-dependent protein deacetylases. *PNAS* **2000**, *97*, 5807-5811.
2. Longo, V. D.; et al., Sirtuins in aging and age-related disease. *Cell* **2006**, *126*, 257-268.
3. Lim C. S. Human SIRT1: a potential biomarker for tumorigenesis? *Cell Biol Int* **2007**, *31*, 636-637.