Giovanni Sorba

Curriculum vitae

PERSONAL DATA

Born in Turin, 28/08/1954, living in San Giusto Canavese vicolo Castelletto, 6. Married, two daugters.

Phone: 0321375850

BIO AND EDUCATION

Degree in Medicinal and Pharmaceutical Chemistry (with honour "summa cum laude") Faculty of Pharmacy, University of Torino.

Assistant Researcher on Medicinal Chemistry (Faculty of Pharmacy, University of Torino).

Visiting doctor (six months) at University College London (Professor C.R. Ganellin group); CNR grant.

Adjunct Professor on Medicinal Chemistry (Faculty of Pharmacy, University of Piemonte Orientale "Amedeo Avogadro").

Full Professsor on Medicinal Chemistry (Pharmaceutical Sciences Department).

UNIVERSITY CAREER

2001-	Full Professor, Università del Piemonte Orientale
1998-2001	Adjunct Professor, Università del Piemonte Orientale
1983-1998	Assistant Researcher, Università di Torino

UNIVERSITY POSITIONS

2011-	Vice-dean del Dipartimento di Scienze del Farmaco
2013-	Chairman del Corso di Studio in CTF
2008-2011	Dean del Dipartimento del DiSCAFF
2005-2011	Member del Senato Accademico
2000-2008	Vice-dean della Facoltà di Farmacia
2000-2008	Supervisor for the *curricula* of the PhD school in Science of Bioactive Substances

SCIENTIFIC POSITIONS

2005-	Member of the American Chemical Society
1998-	Member of the Italian Chemical Society

MAIN FIELDS OF INTEREST

1. Design, synthesis, structure and biological evaluation of NCE
2. Structure Activity Relationship (SAR) studies

CURRENT ISSUES OF RESEARCH

1. **PI3K Inhibitors**
   Phosphoinositide 3-kinase inhibitors (PI3K inhibitors) are a class drugs that inhibiting one or more of the phosphoinositide 3-kinase enzymes, which are part of the PI3K/AKT/mTOR pathway, an important signalling pathway for many cellular functions such as growth control, metabolism and translation initiation. Within this pathway there are many components, inhibition of which may result in tumor suppression (targeted therapy). There are a number of different classes and isoforms of PI3Ks. Class 1 PI3Ks have a catalytic subunit known as p110, with four isoforms: p110 alpha, p110 beta, p110 gamma and p110 delta. The inhibitors being studied inhibit one or more isoforms of the class I PI3Ks. They are being actively investigated for treatment of various cancers.
2. **Anti-tubulinic Agents**
   Tubulin inhibitors are drugs that interfere directly with the tubulin system, usefull for cancer chemotherapy. Microtubules play an important role in eukaryotic cells. Alpha- and beta-tubulin, the main components of microtubules, have gained considerable interest because of their properties and function and has become the subject of intense study. The addition of tubulin ligands can affect microtubule stability and function, including mitosis. cell motion and intracellularorganelle transport. Tubulin binding molecules have generated significant interest after the introduction of the taxanes into clinical oncology and the general use of the vinca alkaloids. These compounds inhibit cell mitosis by binding to the protein tubulin and preventing polymerization or depolymerization into the microtubules.
3. **Sirtuine 3 Inhibitors**
   Sirtuin-3 (SIRT3), a major mitochondria NAD+-dependent deacetylase, and also regulate cellular functions. SIRT3 is an emerging regulator of the mitochondrial response to stress, such as: metabolic reprogramming and antioxidant mechanisms. Recently evidences demonstrated that SIRT3 may function as either oncogene or tumor suppressor on influencing cell death. Thus the role of SIRT3 with oncogenic or tumor-suppressive function in cancer, can provide more new clues for exploring SIRT3 as a therapeutic target for drug discovery.

4. **Nicotinamide Phosphoribosyltransferasa Inhibitors**

Nicotinamide phosphoribosyltransferase (NAMPT) plays a key role in the replenishment of the NAD pool in cells. This enzyme has a key role in bioenergetics and in the regulation of NAD-using enzymes, such as PARPs and sirtuins. There are also evidences that NAMPT is secreted and has a role as a cytokine. An important role of either the intracellular or extracellular form of NAMPT has been shown in cancer, inflammation, and metabolic diseases. Two NAMPT inhibitors (FK866 and CHS828) have already entered clinical trials, and a surge in interest in the synthesis of novel molecules has occurred.

5. **Disostituited Triazoles Derivatives**
   The triazole nucleus is one of the most important heterocycles which is a feature of natural products and medicinal agents. Triazole nucleus is enjoying their importance as being the center of activity. The nitrogen containing heterocyclics are found in abundance in most of the medicinal compounds. Triazole and its derivatives have a wide range of application in the design of compounds used such as antimicrobial, anti-inflammatory, analgesic, antiepileptic, antiviral, antihypertensive, antimalarial, antianxiety, antidepressant, and antihistaminic, antitubercular agents The use of disubtituted triazole ring in dug design is based on the phenomenon of isosterism

TOP FIVE PAPERS

1. **Design, Synthesis, and Biological Evaluation of Combretabenzodiazepines: A Novel Class of Anti-Tubulin Agents**
   Galli Ubaldina; Travelli Cristina; Aprile Silvio; Arrigoni Elena; Torretta Simone; Grosa Giorgio; Massarotti Alberto; Sorba Giovanni; Canonico Pier Luigi; Genazzani Armando A.; et al.
   Journal of Medicinal Chemistry (2015), 58(3), 1345-1357.

2. **A Novel Potent Nicotinamide Phosphoribosyltransferase Inhibitor Synthesized via Click Chemistry**
   Colombano Giampiero; Travelli Cristina; Galli Ubaldina; Caldarelli Antonio; Chini Maria Giovanna; Canonico Pier Luigi; Sorba Giovanni; Bifulco Giuseppe; Tron Gian Cesare; Genazzani Armando A.
   Journal of Medicinal Chemistry (2010), 53(2), 616-623.

3. **Synthesis, biological evaluation, and molecular docking of Ugi products containing a zinc-chelating moiety as novel inhibitors of histone deacetylases**
   Grolla Ambra A.; Podesta Valeria; Chini Maria Giovanna; Di Micco Simone; Vallario Antonella; Genazzani Armando A.; Canonico Pier Luigi; Bifulco Giuseppe; Tron Gian Cesare; Sorba Giovanni; et al
   Journal of Medicinal Chemistry (2009), 52(9), 2776-2785.

4. **Synthesis and Cytotoxic Evaluation of Combretafurazans**

Tron Gian Cesare; Pagliai Francesca; Del Grosso Erika; Genazzani Armando A.; Sorba Giovanni
Journal of Medicinal Chemistry (2005), 48(9), 3260-3268.

5. **Water Soluble Furoxan Derivatives as NO Prodrugs**
   Sorba Giovanni; Medana Claudio; Fruttero Roberta; Cena, Clara; Di Stilo Antonella; Galli Ubaldina; Gasco Alberto
   Journal of Medicinal Chemistry (1997), 40(4), 463-469.

AWARDS

1. Winner (1998) of a CNR grant