

Professor Vincenzo Tortorella A Tribute



Vincenzo Tortorella was born in Montefiascone (Viterbo, Italy) on September 6, 1932. He is married to Claudia Mainardi (born in Urbino in 1940) and has two children: Carla (37 years old) and Paolo (35 years old).

In 1958 he obtained a degree in Chemistry *cum laude* from the University of Rome, where he conducted post-graduate research until 1960 at the Institute of Organic Chemistry. From 1960 to 1968 he held official teaching positions at the Universities of Genoa (Faculty of Science), Urbino (Faculty of Pharmacy) and Rome (Faculty of Pharmacy). During the 1964-65 academic year he carried out research under the guidance of Prof. D. H. R. Barton at Imperial College in the University of London, where he was awarded a diploma in Organic Chemistry (D.I.C.). He then successfully passed the qualifying examination for university teaching positions in Medicinal Chemistry (1966) and Organic Chemistry (1968). In 1968 he was awarded the university chair Organic Chemistry by public examination, and began to teach at the Faculty of Pharmacy of the University of Bari in 1969.

The various positions he has held at the University of Bari include:

- Chair in Physical Methods in Organic Chemistry from 1969 to 1973;
- Chair in Medicinal Chemistry and Toxicology from 1973 to the present;
- Director of the Institute of Medicinal Chemistry and Toxicology from 1970 to 1982;
- Director of the Medicinal Chemistry Department, 1982 to 1985;
- Dean of the Faculty of Pharmacy, 1975- present.

Professor Tortorella has received official recognition of his scientific, teaching and administrative activity at both national and international levels. Since 1983 he has served as coordinator of the program of doctoral studies in Pharmaceutical Chemistry at the University of

Bari. In the two-year period 1986-87 he served as a member of the *Italian Commission for the Verification of the technical requisites of medicinal preparations*. From 1988 until 1997 he served as national coordinator of the “40%” research project for Medicinal Chemistry financed by the Italian Ministry for University and Scientific Research (MURST). In the two-year periods 1997-99, 1999-2001 and 2001-2003 he served as coordinator of a national research project on medicinal chemistry co-financed by MURST. In the three-year period 1982-85 he was appointed President of the Division of Medicinal Chemistry of the Italian Chemical Society. In the two-year period 1988-90 he served as President of the European Federation of Medicinal Chemistry, which links the national organizations working in this field throughout Europe. From 1991 to 1996 he served as President of the Conference of Deans of Italian Faculties of Pharmacy. In 1991 he received the “Renoir” Prize for Culture awarded by the Region of Puglia and the Diploma and Gold medal of the Italian Ministry for Public Instruction. Since 1992 Professor Tortorella has served as representative of the Italian Faculties of Pharmacy in the Managing Commission of the European Association of Faculties of Pharmacy. From 1994 to 1998 he was as an active member of the Commission for the Italian Pharmacopoeia. In 2003 was awarded of the title of Honorary Professor of the Real Academia Nacional de Farmacia de Espana.

From a scientific standpoint, Professor Tortorella has conducted research involving studies of the structure of substances of interest for use as pharmaceuticals. In these studies, particular attention has been given to the influence of stereochemistry on the pharmacological action of active biological substances and to the possibility of separating their therapeutic and side effects. In particular his research has focused on cardiovascular drugs belonging to the hypolipidemic and antiarrhythmic classes and also to drugs acting at the CNS level on the dopamine and serotonin receptors.

The results of this research have been reported in over 150 scientific publications and in lectures given at numerous national and international conferences. In virtue of the expertise he has acquired in this specific sector, he is a member of the Editorial Boards of several internationally and nationally recognized journals in the field of Medicinal Chemistry.

Professor Vincenzo Tortorella has always demonstrated a high sense of duty serving the above mentioned Institutions with great perspicacity and diplomacy. In fact he has been for more than twenty years an important reference point for all the Italian Medicinal Chemists.

The present volume represents a timely acknowledgement of his long career characterized by high standards of human, didactic and scientific capabilities and I am really proud to have acted as facilitator for such an issue.

Girolamo Cirrincione
Dipartimento Farmacochimico
Tossicologico e Biologico
Università di Palermo
Via Archirafi 32, 90123 Palermo
Italy
gcirrin@unipa.it

Selected Publications of Vincenzo Tortorella

1. Romeo, A.; Tortorella, V.; Di Maio, G. Sulla configurazione dell'atomo in 24 dei 24-etil steroidi *Ric. Sci.* **1959**, *29*, 2253.
2. Tortorella, V.; Lucente, G.; Romeo, A. Andamento della reazione di Wagner-Meerwein nel caso di alcuni 17-idrossi steroidi *Annali Chimica* **1960**, *50*, 1198.
3. Tortorella, V. 2-Halogenopyridine *N*-oxides in peptide chemistry: reactions of 2-chloro-3- and -5-nitropyridine *N*-oxides with benzoic acid *Chem. Comm.* **1966**, 308.
4. Tortorella, V.; Bettoni, G. Optical rotatory dispersion of *N*-(2-pyridyl *N*-oxide)amino acids: empirical correlation of Cotton effect with chromophoric substituent *Chem. Comm.* **1967**, 321.
5. Tortorella, V.; Tarzia, G. Impiego delle 2-alogenopiridina-*N*-Ossido nella chimica dei peptidi. Uso della 2-fluoro-piridina-*N*-Ossido per la demolizione graduale (I) *Gazz. Chim. Ital.* **1967**, *97*, 1479.
6. Sarantakis, D.; Sutherland, J.; Tortorella, C.; Tortorella, V. 2-Fluoropyridine *N*-oxide and its reaction with amino-acid derivatives *J. Chem. Soc. (C)* **1968**, 72.
7. Tortorella, V.; Bettoni, G.; Halpern, B.; Crabbè, P. Optical properties of dimedonyl derivatives of aromatic amines and aminoacids *Tetrahedron* **1972**, *28*, 2991.
8. Tortorella, V.; Bettoni, G.; Sciacovelli, O. NMR investigation on the conformational properties of *N*-(2-pyridyl-*N*-oxide) amino derivatives *Tetrahedron* **1973**, *28*, 1345.
9. Tangari, N.; Tortorella, V. Regiospecific oxidation of cyclic amino compounds with ruthenium tetroxide *Chem. Comm.* **1975**, 71.
10. Bettoni, G.; Franchini, C.; Morlacchi, F.; Tangari, N.; Tortorella, V. Reactions of nitrogen compounds with ruthenium tetroxide. II: Oxidation of tertiary amines as convenient alternative to the Von Braun reaction *J. Org. Chem.* **1976**, *41*, 2780.
11. Perrone, R.; Tortorella, V. A convenient method for the assignment of the absolute configuration to cyclic amines *Tetrahedron* **1978**, *34*, 2533.
12. Bettoni, G.; Carbonara, G.; Franchini, C.; Tortorella, V. Oxidation of tertiary polycyclic amines by RuO₄ *Tetrahedron* **1981**, *37*, 4159.
13. Tortorella, V.; Tangari, N.; Vetuschì, C. Sistema catalitico costituito da un derivato del rutenio supportato su resine sintetiche, utile per l'ossidazione selettiva di composti organici e relativo procedimento di produzione, Italian Patent, 1984.
14. Perrone, R.; Carbonara, G.; Tortorella, V. Chemical studies on drug metabolism II : *N*-demethylation and *N*-oxidation of some alicyclic amines by ruthenium tetroxide *Arch. Pharm.* **1984**, *317*, 635.
15. Bettoni, G.; Loiodice, F.; Tortorella, V.; Conte, D.; Mambrini, M.; Ferrannini, E.; Bryant, S. H. Stereospecificity of the chloride ion channel the action of chiral clofibric acid analogues *J. Med. Chem.* **1987**, *30*, 1267.
16. Feller, D. L.; Kamanna, V. S.; Newman H. A.; Romstedt, K. J.; Witiak, D. T.; Bettoni, G.; Loiodice, F.; Conte, D.; Bryant, S. H.; Tortorella, V. Dissociation of hypolipidemic and antiplatelet actions from adverse myotonic effects of clofibric acid related enantiomers *J. Med. Chem.* **1987**, *30*, 1265.
17. Conte, D.; Bryant, S. H.; De Luca, A.; Mambrini, M.; Tricarico, D.; Ricchetti, R.; Tortorella, V.; Bettoni, G. Enantiomeric pairs of clofibric acid analogs produce opposite effects on chloride channel conductance in rat skeletal muscle *Pharmacol. Research Comm.* **1988**, *20*, 110.

18. Morea, G.; Sabbatini, L.; Zambonin, P.; Tangari, N.; Tortorella, V. Surface Characterization of the active RuO₂ xH₂O catalyst supported on Teflon *J. Chem. Soc., Faraday Trans* **1989**, 85.
19. Ebenshade, T. A.; Kamanna, V. S.; Newman, H. A.; Tortorella, V.; Witiak, D. T.; Feller, D. L. In vivo and in vitro peroxysome proliferation properties of selected clofibrate analogues in the rat: structure-activity relationships *Biochem. Pharmac.* **1990**, 40, 1263.
20. Perrone, R.; Berardi, F.; Leopoldo, M.; Tortorella, V.; Lograno, M. D.; Daniele, E.; Govoni, S. Oxygen isosteric derivatives of 3-(3-hydroxyphenyl)-*N-n*-propylpiperidine *J. Med. Chem.* **1992**, 35, 3045.
21. Perrone, R.; Berardi, F.; Colabufo, N.; Tortorella, V.; Fiorentini, F.; Olgiati, V.; Vanotti, E.; Govoni, S. Mixed 5-HT_{1A}/D-2 activity of a new model of arylpiperazines: 1-aryl-4-[3-(1,2-dihydronaphthalen-4-yl)-*n*-propyl] piperazines. 1. Synthesis and structure-activity relationships *J. Med. Chem.* **1994**, 37, 99.
22. Perrone, R.; Berardi, F.; Colabufo, N.; Leopoldo, M.; Tortorella, V.; Fiorentini, F.; Olgiati, V.; Ghiglieri, A.; Govoni, S. High affinity and selectivity on 5-HT_{1A} receptor of 1-aryl-4-[(1-tetralin) alkyl] piperazines. 2. *J. Med. Chem.* **1995**, 38, 942.
23. Berardi, F.; Giudice, G.; Perrone, R.; Tortorella, V.; Govoni, S.; Lucchi, L. Novel potent σ 1 ligands: *N*-(ω -(Tetralin-1-yl)alkyl)piperidine derivatives *J. Med. Chem.* **1996**, 39, 4255.
24. Rangwala, S. M.; O'Brien, M. L.; Tortorella, V.; Longo, A.; Loiodice, F.; Noonan, D.J.; Feller, D.L. Stereoselective effects of chiral clofibric acid analogs on rat peroxisome proliferator-activated receptor (rPPAR) activation and peroxisomal fatty acid β -oxidation, *Chirality*, **9**, 43, 1997.
25. Berardi, F.; Santoro, F.; Perrone, R.; Tortorella, V.; Govoni, S.; Lucchi, L., *N*-[ω -(Tetralin-1-yl)alkyl]-derivatives of 3,3-dimethylpiperidine are highly potent and selective σ 1 or σ 2 ligands *J. Med. Chem.* **1998**, 41, 3940.
26. Perrone, R.; Berardi, F.; Colabufo, N.; Leopoldo, M.; Tortorella, V. 1-Aryl-4-[(5-methoxy-1,2,3,4-tetrahydronaphthalen-1-yl)alkyl]piperazines and their analogues: Influence of the stereochemistry of the tetrahydronaphthalen-1-yl nucleus on 5HT_{1A} receptor affinity and selectivity versus α 1 and D2 Receptors. *J. Med. Chem.* **1999**, 42, 490.
27. Perrone, R.; Berardi, F.; Colabufo, N.; Leopoldo, M.; Tortorella, V. A structure-affinity relationship study on derivatives of *N*-[2-[4-(4-chlorophenyl)piperazin-1-yl]ethyl]-3-methoxybenzamide, a high-affinity and selective D4 receptor ligand *J. Med. Chem.* **2000**, 43, 270.
28. Perrone, R.; Berardi, F.; Colabufo, N.; Leopoldo, M.; Lacivita, E.; Tortorella, V.; Leonardi, A.; Poggesi, E.; Testa, R. *trans*-4-(Methoxyphenyl)cyclohexyl)-1-arylpiperazines: a new class of potent and selective 5-HT_{1A} receptors ligands as conformationally constrained analogues of 4-(3-(5-methoxy-1,2,3,4-tetrahydronaphtalen-1-yl)propyl)-1-arylpiperazines *J. Med. Chem.* **2001**, 44, 4431.
29. Leopoldo, M.; Berardi, F.; Colabufo, N.; De Giorgio, P.; Lacivita, E.; Perrone, R.; Tortorella, V. Structure-affinity relationship study on *N*-(4-(4-arylpiperazin-1-yl)butyl)arylcarboxamides as potent and selective dopamine D3 receptor ligands *J. Med. Chem.* **2002**, 45, 5727.
30. Perrone, R.; Berardi, F.; Colabufo, N.; Lacivita, E.; Leopoldo, M.; Tortorella, V. Synthesis and structure-affinity relationship of 1-(*o*-(4-aryl-1-piperazinyl)alkyl)-1-arylketones as 5-HT₇ receptor ligands *J. Med. Chem.* **2003**, 46, 5727.