

Roberto Ballini received his Laurea degree in Chemistry from the University of Camerino-Italy in 1971. After experience at the ENI-ANIC (Petrolchemical Industry) in Ravenna, he began his academic career in 1975 as a Research fellow at the University of Camerino. Then he became Assistant Professor in Organic Chemistry (1978), was promoted to Associate Professor (Organic Chemistry), and then was promoted to Full Professor of Organic Chemistry in 2000.

Prof Ballini has been:

- Director of Master in Chemistry (2001-2007)
- Head of the Department of Chemical Sciences of the University of Camerino (2007)
- Dean of the Faculty of Sciences and Technology of the University of Camerino (2007-2009)
- Director of School of Science and Technology (2009-2013)

Seminars, Conferences and Schools.

Prof. Ballini has been teacher in specialistic Schools in the field of Organic Synthesis and of Green Chemistry:

- 1) Scuola di Chimica Organica A. Corbella di Gargnano (Giugno 1995);
- 2) Summer School on Green Chemistry Ninth Edition (Novembre 2002, Lecce).

Prof Ballini gave the following seminaries:

- 1) Dipartimento Farmaco-Chimico, Università di Bari (Aprile 1991);
- 2) Dipartimento di Chimica Organica "Ugo Schiff", Università di Firenze (Aprile 1991);
- 3) Istituto di Chimica Farmaceutica, Università di Urbino (Maggio 1991);
- 4) Dipartimento di Chimica, Università Cà Foscari-Venezia (Giugno 1995);
- 5) Dipartimento Farmaco-Chimico, Università di Messina (Maggio 1997);
- 6) Facoltà di Farmacia, Università di Chieti (Febbraio 1999);
- 7) Dipartimento di Chimica delle Sostanze Naturali, Università "Federico II" di Napoli (Maggio 2004);
- 8) Department of Organic Chemistry, University of Nijmegen-Olanda (July 1995);
- 9) Department of Organic Chemistry, University of Nijmegen-Olanda (August 1996);
- 10) Universidad De Extremadura-Badajoz (Spain) (June 2001);
- 11) Istituto di Chimica Farmaceutica, Università di Urbino (Maggio 2002).
- 12) Department of Chemistry, Texas Christian University (March 2004);
- 13) Department of Chemistry, University Texas Dallas (March 2004);
- 14) Department of Chemistry, Suothen Methodist University-Texas (March 2004);
- 15) University of North Texas, (March 2004).
- 16) University of Sevilla, Spain (July 2005).
- 17) University of Atene (October 2006).

Prof Ballini gave the following invited lectures:

- 1) XIX Congresso Nazionale della Ricerca e Tecnologia, Riccione (Giugno 1996);
- 2) 2nd Italian-Spanish Symposium on Organic Chemistry (ISSOC-2), Lecce (June 1998);

- 3) Henry Feuer Symposium, Purdue University-Lafayette-Indiana (November 2001);
- 4) XIX Reunion Bienal de Quimica Organica, Carmona-Spain (June 2002);
- 5) 9th International Workshop on Combustion and Propulsion: Novel Energetic Materials Application, Lerici- La Spezia (September 2003);
- 6) 9th International Symposium on Natural Product Chemistry, Karachi (January 2004);
- 7) XXIX Convegno Nazionale della Divisione della Chimica Organica, Potenza (Settembre 2004).
- 8) 15th International Symposium on Fine Chemistry and Functional Polymers (FCFP-XV), Shanghai (October 2005).
- 9) National Seminars on Green Chemistry and Natural Products, New Dehli (November 2007).
- 10) 5th Eurasian Meeting on Heterocyclic Chemistry, Kwait City (March 2008).
- 11) 1th Convegno Nazionale "Chimica Verde, Chimica Sicura", Pavia, 20-22 Ottobre 2009;
- 12) 1th Cina-Italy Bilateral Symposium on Organic Chemistry, Shangai, 26-30 April 2010.
- 13) 3rd International Conference for Asian Young Chemistry 2010, Penang-Malaysia, 23-25 June 2010;
- 14) 8th Spanish-Italian Symposium on Organic Chemistry, Padova, 3-6 July 2010.
- 15) 3rd International Conference on Heterocyclic Chemistry, Jaipur-India, 10-13 December, 2011.

Prof Ballini has been member of the organizer committee of the following Congress and Symposiums:

- 1) CISC90, Convegno Nazionale della SCI, S. Benedetto del Tronto 1990;
- 2) XXV Congresso Nazionale della Divisione di Chimica Organica, Folgaria-Trento (Settembre 2002);
- 3) VII Joint Meeting on Heterocyclic Chemistry: The Millenium Meeting, Folgaria-Trento (May 2000);
- 4) 1th International School of Organometallic Chemistry, Co-Chairman, Camerino (September 1997);
- 5) 2th International School of Organometallic Chemistry, Co-Chairman, Camerino (September 1999);
- 6) 3th International School of Organometallic Chemistry, Co-Chairman, Camerino (September 2001);
- 7) 4th International School of Organometallic Chemistry, Co-Chairman, Camerino (September 2003);
- 8) 5th International School of Organometallic Chemistry, Co-Chairman, Camerino (September 2005);
- 9) 6th International School of Organometallic Chemistry, Co-Chairman, Camerino (September 2007);
- 10) Chairman del XXXIII Convegno Nazionale della Divisione di Chimica Organica (Settembre 2010);
- 11) Membro del Comitato Organizzatore della Scuola di Chimica Organica A. Corbella di Gargnano (2005-2007).
- 12)

Scientific Activity:

The research interest of Prof. Ballini is mainly dedicated to Organic Synthesis, with particular attention to the field of eco-sustainable synthetic processes (Green Chemistry). To reach the goal of environmental protection, the right approach is to focus attention on primary prevention (minimizing or avoiding waste formation) rather than on secondary remediation (mainly consisting in waste treatment).

In this context the Ballini's research group has developed a variety of collaboration with other Universities and Research centers (National: Rome, Bologna, Venezia, Urbino, Parma, Perugia, Chieti, and International: Dallas-Texas, Badajoz-Spain, Siviglia-Spain, Nijmegen-Netherland, etc.).

Of particular interest is the Chemistry of aliphatic nitrocompounds, employed for new generations of C,C single and double bond, for the cleavage of C,C bond, and for their use as key building blocks in the synthesis of important targets such as "fine chemical", natural products featuring enhanced biological activity, pharmaceuticals, high density energetic materials, etc.

Other special fields of extensive interest also concern:

- (i) Studies of new heterogeneous catalysis, and new use of solid catalysis, applied to fine chemicals and pharmaceuticals production;
- (ii) Exploitation of Solvent-free processes;
- (iii) One-pot processes for the synthesis of "fine chemical";
- (iv) Use of alternative, eco-friendly solvents, such as aqueous medium or polyethylenglicohols, in organic synthesis;
- (v) Flow processes;
- (vi) Multicomponent reactions.

The scientific activities have been evidenced by:

- 1) More than 270 Publications (**H-FACTOR = 42**) on the main scientific Journals;
- 2) 20 Reviews (several of these are on the field of the "Ecosustainable Synthetic Processes" via heterogeneous catalysis, or one-pot processes, or the use of aqueous medium;
- 3) Editor of two Books on the field of Green Chemistry:
 - (a) **Eco-Friendly Processes and Procedures for the Synthesis of Fine Chemicals**. Royal Chemical Society (RSC, 2009).
 - (b) **Green Synthetic Processes and Procedures**. Royal Chemical Society (RSC, 2019).
- 4) Author of the Book: **Nitroalkanes: Synthesis, Reactivity and Applications**. Wiley-VCH, 2021.

Memberships, Committees, Boards, Etc.

- 1) Italian representative on the IUPAC-subcommittee of the Green Chemistry;
- 2) Member of Board of the Green Chemistry Interdivisional Group of the Italian Chemical Society.
- 3) Member of Board of the Organic Chemistry Division of the Italian Chemical Society.

- 4) *Member of the Editorial Board of Letters in Organic Chemistry Journal;*
- 5) *Member of the Editorial Board of Arkivoc Journal.*
- 6) *Member of the examination board of the following International PhD:*
 - European PhD in Chemistry, University of Badajoz (Spain);*
 - European PhD in Chemistry, University of Siviglia (Spain);*
 - European PhD in Chemistry, University of Badajoz (Spain);*
 - International PhD in Chemistry, University of Karachi (Pakistan).*