



PERSONAL INFORMATION

Family name, First Name: **ZANONI, Giuseppe**
Research Author ID: **ORCID ID: 0000-0003-1530-9409 Scopus ID: 7005612414**
Nationality: **Italian**
E-mail: **gz@unipv.it**

EDUCATION & TRAINING

- 1997 Combinatorial chemistry course (Ireri technology, HTS synthesis and analysis) at SmithKline Beecham, New Frontier Science Park (Harlow – UK).
- 1996 Ph.D., with Honors; research thesis on 1) stereochemical and synthetic features of Pd (II) catalyzed reactions; 2) asymmetric allylic asymmetric alkylation mediated by chiral Pd(0) complexes with chiral space ligands. Supervisors: Prof. Giovanni Vidari (University of Pavia) and Prof. Barry M. Trost (Stanford University, USA).
- 1992 M. S. (Laurea) in Chemistry at University of Pavia, 110/110 e Lode (summa cum laude); experimental thesis centered on a new way for the synthesis of prostanoids. Supervisor: Prof. G. Vidari.

CURRENT AND PREVIOUS POSITIONS

- Since 2023 **Full Professor**, Department of Chemistry, **University of Pavia**, Italy
- 2010-2023 **Associate Professor**, Department of Chemistry, **University of Pavia**, Italy. In October 2022, Giuseppe Zanoni obtained the **National Scientific Qualification (Abilitazione Scientifica Nazionale - ASN)** as Full Professor.
- 1998-2010 **Assistant Professor**, Department of Chemistry, previously known as Department of Organic Chemistry, School of Mathematical, Physical and Natural Sciences, **University of Pavia**.
- 1998-2010 **Researcher**, Department of Organic Chemistry, School of Mathematical, Physical and Natural Sciences, **University of Pavia**.
- 1996-1998 **Researcher** in combinatorial chemistry at **SmithKline Beecham**, Baranzate di Bollate, Italy, and New Frontier Science Park, Harlow, UK.

TEACHING ACTIVITY

Prof. Zanoni has been teaching Organic Chemistry, Organic Chemistry Laboratory, and Biocatalysis at the School of Mathematical, Physical and Natural Sciences, Department of Pharmacy, and at the Interdisciplinary Department of Biotechnology, University of Pavia. The complete list of teaching assignments is provided in Annex 1 (teaching assignments listed in the "Stato Matricolare di Servizio" are highlighted in blue, the corresponding credits units (CFU) are highlighted in yellow).

The teaching activity of Prof. Zanoni started in academic year 2001/2002 with the class of **“Applied Organic Chemistry and Laboratory - II module”** (CHIM/06), a three-year study course in chemical technologies for the environment and resources offered at the University of Pavia. A representative list of classes follows:

Since 2021 **“Organic Chemistry II – with elements of Spectroscopy”** for M. S. Degree Single Cycle 5 years in “Chemistry and Pharmaceutical Science” (CHIM/06), 5 CFU

2017-2018 **“Fund Hunting”** for the “Chemical and Pharmaceutical Sciences and Industrial Innovation” PhD program

Since 2015 **“Organic Laboratory III”** course for the master's degree in "Chemistry", 9 CFU

Since 2004 **“Bioorganic Chemistry”** (CHIM/06), from 2010 **“Bioorganic Chemistry”** (CHIM/06), from 2013 **“Advanced Biocatalysis”** (CHIM/11), for the Master's degree in Chemistry, 6 CFU. During the various Academic Years, the course of **“Biorganic/Bioorganic Chemistry”** was also attended by from the students of “Industrial Biotechnology” of the Interfaculty of Biotechnology.

2003-2009 **“Bioorganic Chemistry Laboratory”**, from 2008 **“Bioorganic Chemistry Laboratory”**, course for the Interfaculty of Biotechnology at the University of Pavia, 6 CFU

2004-2015 **“Organic Chemistry for Biological Systems”**, then in 2009, **“Biorganic Chemistry/Organic Chemistry for Biological Systems”** then in 2012, **“Bioorganic and Bioanalytical Chemistry module: bioorganic chemistry”** withing the Interdisciplinary Department of Biotechnology, 3 CFU

2002-2004 Organic Chemistry trainer for the Italian Team participating at the **International Chemistry Olympiads (IChO)**

Since 2003 As a faculty member at the Department of Organic Chemistry (then renamed as Department of Chemistry) of the **University of Pavia**, Prof. Zanoni has been acting as a **supervisor** or **(co)supervisor** of **more than 100 students**, including the ongoing activities, spanning undergraduate students of “Laurea in Chimica vecchio ordinamento”, “Laurea Magistrale” and “Laurea in Biotecnologie-Biotecnologie Industriali”.

Since 2013 **Supervision of PhD students of 18 PhD students**, 5 of which (highlighted in blue) have received **PhD scholarships** funded by private companies or research institutions

Gandini (2013); Chiesa (2013); Nicolini (2014); Virelli (2014); Brochetta (2016); **Risi (2016)**; Andreoli (2017); Baccalini (2017); Casali (2018); **Lunghi (2020)**; Ostrek (2020); Besio (2021); Barbieri (2021) Minervini (2021); Tufano (2022); **Ronco (2022)**; **Barilli (2023)**; **Plavi (2023)**.

Since 2007 **Supervision of 14 Post-docs & Senior scientists**

Marchetti (2007/9); Porta (2010/2011); Valli (2012/14); Legnani (2012); Merlini (2012/13); Hayotsyan (2012/13); Pesciaioli (2014/15); Bugoni (2015/16); Gandini (2017/2018); Virelli (2018/19); Brochetta (2020/21); Galer (2020/21); Franco (2022/23); Casali (2023-)

Total CFU for lectures: 176 (1408 hours)

Total CFU for laboratory classes: 58 (696 hours)

SCIENTIFIC ACTIVITY

BIBLIOMETRICS

The main scientific activities the main scientific activities of Prof. Zanoni are in the field relating to the development of innovative synthetic methodologies, aimed at the synthesis of natural and non-natural, biologically and pharmacologically active products. To date, Prof. Zanoni has authored/co-authored **141 publications** in international peer-reviewed journals and was indicated as co-inventor in **12 patents**.

H-index	35
citations	4805 times[≡]
First author:	11
Corresponding:	34
Total IF:	1,084.932
Mean IF:	7.750

Prof. Zanoni has also been **invited to write chapters** for the books: *Unity is Strength The Case of Cascade Reactions Combined with C- H Activation* in *More Synthetic Approaches to Nonaromatic Nitrogen Heterocycles, Volume I* (Ana Maria M.M. and Faisca Phillips; Ed. 2022); *La Chimica Organica in Laboratorio – Tomo 1 – Chapter 6.3*

RESEARCH INTERESTS

Scientific interests of Giuseppe Zanoni span from the total synthesis of natural, biologically active and/or pharmacologically active molecules to the development of new synthetic methods. Among these, the use of organometallic chemistry through catalysis mediated by Pd, Ir, Au, Re and Ni complexes, asymmetric catalysis, organocatalysis, and photocatalysis are noteworthy. Scientific interests of Giuseppe Zanoni have subsequently expanded to phosphorous, gold, and silver chemistry, NHC-mediated asymmetric reaction and C-H activation processes, as well as to precision medicine (BNCT) and novel PET probes. The common thread that connects Prof. Zanoni's research in the field of the development of new synthetic methods is the Atom Economy concept.

Based on critical analysis of the chemical literature, Giuseppe Zanoni and collaborators published a review paper discussing the possibility of accessing both enantiomers of a product, through the sole variation of an achiral parameter of the catalytic cycle or of the reaction process, thus introducing the new concept of “**Chiral Atom Economy**”. Accordingly, changes in the type of metals, temperature, pressure, or additives can induce an enantiodivergence in the products. This publication (*Chem. Soc. Rev.* (2003), 115-129) has been cited 144 times, 87th percentile.

Selected Scientific Achievements

In the field of catalysis, under the guidance of Prof. Barry M. Trost, Prof. Zanoni contributed to the discovery of the enantioface chiral recognition as a new mechanism for Pd(0) mediated asymmetric allylic alkylation (AAA, *J. Am. Chem. Soc.*, **1996**, 6297). These studies represent part of the PhD thesis of Giuseppe Zanoni. Thanks to the experience gained in the group of Prof. Barry Trost on the chemistry of Pd(0) and chiral complexes with chiral space ligands, Prof. Zanoni developed

[≡] Scopus database

the first known example of catalytic asymmetric addition to aldehydes of π -allylpalladium complexes via Umpolung (*Angew. Chem. Int. Ed. Engl.*, **2004**, 846).

In the field of asymmetric catalysis, in collaboration with Prof. Liming Zhang an accelerative asymmetric gold catalysis via chiral ligand metal cooperation was achieved for the first time. An asymmetrically positioned remote amide group in the designed chiral binaphthyl-based ligand plays the essential role of a general base catalyst and selectively accelerates the cyclizations of 4-allen-1-ols into one prochiral allene face.

Because of the accelerative nature of the catalysis, highly enantioselectivity can be achieved with catalyst loadings as low as 100 ppm (*J. Am. Chem. Soc.*, **2017**, 16064).

Regarding Pd(II) chemistry, a regio-convergent Pd-mediated lactonization was developed using the Hosokawa's heterobimetallic Pd-Cu couple (*J. Org. Chem.*, **2002**), 6064). From these studies, new insights into the Pd(II)-mediated lactonization transformation were obtained.

Another field which deserved interesting findings, was the C-H activation chemistry using Pd(II) catalysis. In collaboration with Prof. Lutz Ackermann, Giuseppe Zanoni developed an intramolecular C-H activation strategy to access 2-benzazepines in an atom- and step-economical manner. The C-H arylation featured low catalyst loading and a mild base, thus enabling a broad reaction scope with high functional-group tolerance.

One of the isolated benzotriazolodiazepinones was identified as a new Hsp90 nanomolar inhibitor, with potential for anticancer applications (*Chem. - Eu. J.*, **2018**, 16516). Moreover, thanks to collaboration with the group of Prof. Maiti, Giuseppe Zanoni participated in the development of a Pd(II)-catalyzed chelating-group-assisted *ortho* C-H olefination of benzyl phosphoramidate with unactivated aliphatic alkenes.

The total synthesis of natural, biologically and/or pharmacologically active molecules are at the center of the scientific endeavors of Giuseppe Zanoni.

Among others, Giuseppe Zanoni accomplished the first asymmetric total synthesis of biologically-active lipid peroxidation products (*J. Neurochem.*, **2006**, 1301; G. Zanoni, *J. Biol. Chem.*, **2005**, 35562; *Free Radic. Biol. Med.* **2007**, 1791) that could also be used as biomarkers of oxidative stress at peripheric and neuronal level, due to few evidence that suggested the role of neuronal oxidative stress in the neurodegeneration events.

Isoprostanes are a family of eicosanoids formed in vivo from the free radical-initiated peroxidation of membrane-bound arachidonic acid independent of the cyclooxygenase enzyme. An asymmetric syntheses of Isoprostanes A₂ (*J. Org. Chem.*, **2002**, 4346), Isoprostanes J₂ (*J. Org. Chem.*, **2003**, 6005) via a A-J prostaglandin swap (*J. Org. Chem.*, **2003**, 6803) using the Umpolung approach for the installation of the lower side chain of the prostane framework were therefore explored.

Giuseppe Zanoni applied the strategy developed for the isoprostane synthesis to the preparation of clavulones, Preclavulone A (*J. Org. Chem.*, **2006**, 8459), and jasmonates, and patented the synthesis of (+)-(1*R*,2*S*)-methyl dihydrojasmonate and (+)-(1*R*,2*S*)-magnolione (*J. Org. Chem.*, **2005**, 4876). Because these compounds are largely used in the perfume industry owing to their pleasant olfactory properties, Giuseppe Zanoni protected the IP, filing a patent (patent No. 1).

Giuseppe Zanoni and OLON (former Sifavor) protected the IP, filing a patent describing the total asymmetric synthesis of prostaglandins like anti-glaucoma drugs (patent No. 6).

For a complete list of publication, see Annex 3

FUNDING[#]

1. Project coordinator PNRR: Missione 4, "Istruzione e Ricerca" - Componente 2, "Dalla ricerca all'impresa" - Linea di investimento 3.1, "Fondo per la realizzazione di un sistema integrato di infrastrutture di ricerca e innovazione", finanziato dall'Unione europea - NextGenerationEU: Project Title: "*National Consortium for Innovation and development of Radiopharmaceuticals*" (NCIR) , code ITEC0000003 - **2022-2025 - budget € 15.985.105,00; € 5.2000.000 for the University of Pavia**, approximately € 600.000 (VAT included) for new instrumentation for the Organic Chemistry Section. **PI**
2. Grant by MITE - Ministry of the Ecological Transition - Call "Bando RAEE 2021" - **2022-2024 - budget € 300.000; € 145.000 for University Team**. Note the turned out first in ranking. **Local PI**
3. Project financed by Cariplo Foundation - Call "Economia Circolare" 2021 Edition - **2022-2024 - budget € 299.750; € 91.775 for University Team**. **Local PI**
4. Grant by Regione Lombardia - Call Fashiontech-Progetti di Ricerca & Sviluppo per la moda sostenibile" Project: Scent of Lombardy - **2020-2022 - budget € 570.209; € 270.000 for Chemistry Group University of Pavia**. **PI**
5. Grant by Regione Lombardia - HUB Economia Circolare - 2021-2023 - **budget € 820.000; € 430.000 for Chemistry Department** for acquiring a new 400MHz NMR and electrosynthesis equipment. **Local co-PI**
6. Grant by Regione Lombardia – project Lombardia Eccellente: "Cluster di eccellenza per le sinergie tra produzione agroalimentare e ricerca medico-scientifica" - **2011-2013 – budget: € 1.400.000**. **PI**
7. Project financed by Regione Lombardia – Cariplo Foundation "Sottomisura A - attrattività eccellenze" – **2015-2018 – budget € 302.000**. **PI**
8. Project financed by Regione Lombardia – Cariplo Foundation "Sottomisura B - rafforzamento giovani ricercatori" – 2016-2017 – **budget € 98.000**. **PI**
9. Grant by Regione Lombardia, project VIPCAT: Value Added Innovative Protocols for Catalytic Transformations (Accordo per la ricerca e l'innovazione) - **2016-2019 – budget: € 3.072.638; € 484.930,87 for University team**. **Local PI**
10. Grant by Regione Lombardia – DG Sanità "Progetto ricerca indipendente Neuromarks" – **2012-2013 – budget € 240.000; € 200.000 for University team**. **PI**
11. Grant by Regione Lombardia – DG Ricerca e Innovazione Tecnologica "Dispositivo azioni di sistema per il miglioramento delle risorse umane nel settore della ricerca e sviluppo tecnologico Misura D4". Project title: I neuroprostani come possibili marker molecolari di gravi patologie neurodegenerative - **2005-2007 - budget € 499.995; € 220.000 for University team**. **PI**
12. Grant by Fondazione Piacenza e Vigevano – Project title "Sviluppo di nuovi biomarkers per gravi patologie neurodegenerative: il morbo di Parkinson" – **2008 – 2011 – budget € 380.000**. **PI**
13. Grant by Regione Lombardia, "Astil" (international cooperation project Lombardia – Kurdistan Iracheno), **2010 – 2012, budget € 500.000**. **Co-PI**
14. PRIN 2008 Unit coordinator (Scientific Coordinator Prof. Ballini - 200895XNPL_005), **budget € 19.000**. **Local PI**

Total Funding for the University team € 9.740.705

Total Grant € 24.486.697

[#] **Competitive Grants Only**

THIRD MISSION - PATENTS

Third Mission refers to the set of scientific, technological and cultural transfer and productive transformation of knowledge, through processes of direct interaction of the University with civil society and the entrepreneurial fabric, with the aim of promoting economic growth and social aspects of the territory, so that knowledge becomes instrumental in obtaining benefits of a social, cultural and economic nature. Third Mission, as defined by ANVUR, complements the traditional teaching and research missions of the participating university institutions, as recognized and established in the Legislative Decree 19/2012, which defines the principles of the "Self-Assessment, Periodic Evaluation and Accreditation" (AVA) system, and the subsequent Ministerial Decree 47/2013, which identifies the indicators and parameters for periodic evaluation.

Under the **Mission**, Giuseppe Zanoni holds patents as inventor the intellectual property resulting from academic and industrial research—the latter for work conducted as a researcher at SmithKline Beecham.

Other patents stem from consulting for private companies through contracts stipulated by the Department of Chemistry, University of Pavia.

➤ **Patents application of Academic/Industrial research activity performed as a Professor at the University of Pavia and as a Researcher at SmithKline Beecham (now GlaxoSmithKline)**

- 1) University of Pavia **"Enantioselective process for the preparation of methyl dihydroepijasmonate"** (WO 2004/108652)
- 2) SmithKline Beecham **"Derivatization with phenylisocyanate for HPLC monitoring of chemical reactions"** (WO 2000/005578).

➤ **Patent Applications deriving from the consulting**

- 3) VZ Brevetti **"Method and apparatus for treating waste materials to recover fuel oil"** (WO 2009/066251);
- 4) VZ Brevetti **"Apparatus for producing synthetic fuel"** (WO 2008/102307);
- 5) VZ Brevetti **"Apparatus for treatment of municipal solid waste materials comprising catalyst and mixing with fluid under inert atmosphere, heating to evaporate, separation of solids and liquids and heat exchanger"** (IT 2008/BO0072);
- 6) Sfiavitor S.r.l. **"Process for the preparation of prostaglandin derivatives"** (WO 2010/097672);
- 7) Sunflower S.r.l. **"Method for reducing the concentration of isocyanates in streams"** (WO 2007/015276);
- 8) Flamma S.p.A **"Process for the preparation of Panobinostat"** WO 2021/170719;
- 9) Aptenia **"Metallocene compounds and labeled molecules comprising the same for in vivo imaging"** (WO 2014/13559).
- 10) Aptenia **"Metallocene compounds and labeled molecules comprising the same for in vivo imaging"** (EP2774930)
- 11) Sifavitor **"Process for the preparation of prostaglandin derivatives"** (IT1393112)
- 12) Sifavitor **"Process for the preparation of prostaglandin derivatives"** (US20120016136 A1)

INSTITUTIONAL ACTIVITIES

- Since 2010 Co-founder and member of Steering Committee of **Istituto Tecnico Superiore per le Nuove Tecnologie della Vita** (Bergamo)
- Since 2022 Steering Committee **Eliomed Tech S.r.l.** (Enna).
- Since 2022 Steering Committee **Laboratorio Energia Nucleare Applicata**. University of Pavia
- Since 2022 Member of the “**Giunta**” of the **Department of Chemistry** - University of Pavia
- Since 2022 Representative of the Chemistry Department for “**Gruppo OSA@UNIPV**” University of Pavia
- Since 2022 Member of **Centro Nazionale di Adroterapia Oncologica** Scientific Committee for developing of new B-Entities for BNCT application
- 2019-2022 Member of the Board of Directors of **Fondazione Regionale Ricerca Biomedica**. Regione Lombardia
- 2007-2012 Member of the “**Collegio Dottorato**” in Chemical Science [DOT0322401]. University of Pavia
- 2013-2016 Member of the “**Collegio Dottorato**” in Ecology and Sustainable Management of Environmental Resources [DOT1335703]- Tuscia University
- 2010-2011 Scientific and Technical Committee – **Istituto Regionale per la Ricerca** – Regione Lombardia
- 2011-2015 Member of the Board of Directors of **IRCCS San Matteo General Hospital**

TRUST-BASED ASSIGNMENT

- 2002 **Referee** for the Swiss National Science Foundation: SNSF Advanced Grants
- Since 2022 Associate Editor with **Natural Product Synthesis** (specialty section of Frontiers in Natural Products).
- Since 2020 **External reviewer** for the attribution of the PhD degree in Chemistry, as at the University of Perugia, University of Milan, University of Bologna, Indian Institute of Technology Bombay (India), and Nanyang Technological University (Singapore).
- Since 1998 **Thesis examiner** for the degree in Chemistry, University of Pavia.
- Since 2000 **Referee** for several international peer-reviewed journals, including J. Am. Chem. Soc., Angew. Chem. Int. Ed. Engl., ACS Omega, Org. Lett., Chemistry a European Journal, Eu. J. Org. Chem., Org. Biol. Chem., Chem. Rev., Chem. Soc. Rev., Chirality, J. Org. Chem.
- 2006-2007 **Scientific tutor** in Regione Lombardia Ingenio (“Sovvenzione globale INGENIO. Programma Operativo Regione Lombardia Ob. 3. Fondo Sociale Europeo 2000-2006”).

COLLABORATIONS

- Prof. **Lutz Ackermann** (Göttingen University, Germany), C-H activation field.
- Prof. **Liming Zhang** (California University – Santa Barbara Campus – USA), gold catalysis.
- Prof. **Robin Chi** (Nanyang Technological University – Singapore), organocatalysis.
- Prof. **Debabrata Maiti** (Indian Institute of Technology Bombay – India), C-H activation chemistry.
- Prof. **Jan Weigand** (Technische Universität Dresden, Germany), phosphorous chemistry for BNCT application to osteosarcoma.
- Prof. **Ginger L. Milne** (Vanderbilt University – USA), oxidative stress field.
- Prof. **James Gleason** (McGill University – Montreal, Canada), organocatalytic biomimetic cyclization.
- Prof. **Giovanna Riccardi** (Department of Biology and Biotechnology - University of Pavia), mechanism and development of novel anti-tuberculosis drugs.
- Prof. **Faiq Hussain** and Prof. **Ahmed A. Amin** (Salahaddin University - Erbil, Kurdistan Region, Iraq), international PhD cooperation aimed to forge the new ruling class in the chemical field of Kurdistan.
- Proff. **Marco Bonora** and **Maurizio Corti** (Department of Nuclear Physics - University of Pavia), BNCT applications.
- Prof. **Zibo Li** (Department of Radiology - University of North Carolina at Chapel Hill, North Carolina, USA), ¹⁸F-labelling chemistry.
- Prof. **Yueh Z. Lee** (School of Medicine Radiology - University of North Carolina at Chapel Hill, North Carolina, USA), ¹⁹F MRI experiments.
- Prof. **Lorenzo Malavasi** (Department of Chemistry – University of Pavia), synthesis of novel chiral perovskites.
- Prof. **Giulia Stella** (Department of Internal Medicine and Medical Therapy, University of Pavia and IRCCS San Matteo, pneumology, Pavia), development of new drug and imaging agents for pleural malignant mesothelioma.
- Prof. **Liming Zhang** (Department of Chemistry & Biochemistry, University of California Santa Barbara, USA), development of new Au asymmetric catalysis.
- Prof. **Aiichiro Nagaki** (Faculty of Science, Mechanistic Organic Chemistry Lab - Hokkaido University, Japan), cation-pool as a promoter of polyene biomimetic cyclization.
- Prof. **Sukbok Chang** (Department of Chemistry at Korea Advanced Institute of Science and Technology – South Korea), development of novel biomimetic cyclization promoted by electrophilic nitrenium species.
- Prof. **Bi Xihe** (Northeast Normal University – China). Collaboration in the field of azide chemistry, resulting in several publications, among which: *Nature Comm*, **2019**, 1; **2021**, 5244; **2022**, 4280; and **2022**, 7469; *Angew. Chem. Int. Ed. Engl.*, **2022**, e202116190; **2018**, 8927; and **2020**, 647; *J. Am. Chem. Soc.*, **2019**, 1593.

CONSULTING

Giuseppe Zanoni has consulted for companies operating in the field of organic chemistry:

SOGIN (Roma), PA Aromatics (Pavia), Flamma (Chignolo di'Isola), Nerviano Medical Science (Nerviano), Aptenia S.r.l (Milano), VZ Technology (Brescia), Sifavitor (Casaletto Lodigiano-now OLON), Cornelli Consulting (Milano), Recipharm (Masate), Intertrading (Pianoro), Saclà (Asti), Geochem – ENI (Milano), OilService (Cava Manara), Fiocchi (Lecco), Virostatics (Tramariglio), Dompé (Aquila), Farmabios (Gropello Cairoli), PER S.p.A (Peschiera Borromeo), Ecocircular (Castel San Giovanni), Prima America Co. (New Hampshire, USA).

- consulting engagements have resulted not only in the filing of **patents**, but also in the enhancement of **human capital**.
 - a) **Fondazione Amodeo**: the collaboration made it possible to activate a framework agreement between the Amodeo Foundation and the University of Pavia aimed at the competition for a five-year post as a university researcher (prior to Law 240/2010) with a value of € 200.000;
 - b) **Cornelli Consulting**, PhD Fellowship;
 - c) **Sifavitor** (OLON), PhD Fellowship;
 - d) **PER S.p.A.**, PhD Fellowship fully financed
 - e) **Flamma Innovation**, one PhD Fellowship fully financed and one PhD Fellowship on Decree 352
 - f) **De Nora**, PhD Fellowship on Decree 117
 - g) **Centro Nazionale Adroterapia Oncologica**, PhD Fellowship on Decree 117
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- consulting for PER led to the application to an SME grant under Horizon 2020. The first phase ended with the financing, while the second phase ended with the Seal of Excellence (Annex 4). This led to the signing of a research contract with the Department of Chemistry for € 100,000
 - consulting for Ecocircular led to the application to a PNRR grant: "Missione 2 *Rivoluzione verde e transizione ecologica*", Componente 1 "*Economia circolare e agricoltura sostenibile Investimento 1.2 del PNRR che prevede la realizzazione di "progetti "faro" di economia circolare*". Project "*Total Plastic Recovery*" [MTE12C_00000073], granted: € 2.890.530,01. Decree 182 (30/09/2022).

ORGANISATION OF SCIENTIFIC MEETINGS

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|------|---|
| 2017 | " ERC Chemistry Day " - Pavia, 22 May 2017. This international event, entirely organized by Giuseppe Zanoni, was attended by Nobel Prize laureate Prof. B. Feringa, and by other scientists previously awarded with ERC grants: Prof. J. Weigand, L. Ackermann, N. Maulide, A. Credi, C. Di Valentin, J. Waser and S. Nolan. |
| 2012 | " XXXIV Convegno Nazionale della Divisione di Chimica Organica " - Pavia, 10-14 September 2012. |
| 2006 | " Neuromarks - markers for neuronal oxidative stress " – Busto Arsizio, Italy, 13 October 2006. |
| 2001 | " Le Giornate di Chimica Organica a Pavia: La chimica dei prodotti naturali nel III millennio " - Pavia, 09 May 2001. |

AWARDS

In 2010 Giuseppe Zanoni received “**Bracco Prize**” for young researcher: Italian Chemical Society.

INVITED SEMINARS & LECTURES

- 1995 **Stanford Chemistry Department Seminars**, Stanford University (California, USA), “First Evidence for a Novel Mechanism in the Enantioselective Palladium-mediated Heteroatoms Intorduction”; 05 October 1995: (Speaker).
- 2000 **V Convegno Nazionale Giornate di Chimica delle Sostanze Naturali**: “Addizione-ciclizzazione di 1,5-dienil allilsilani con aldeidi promossa da TiF_4 : una nuova reazione biomimetica”; Napoli, 21-23 June 2000; (presenter).
- 2002 **XXVIII Convegno Nazionale della Divisione di Chimica Organica**: “Primo esempio di umpolung enantioselettivo dei complessi π -allilpalladio”; Roma, 16-20 September 2002; (presenter).
- 2003 **VI Convegno Nazionale Giornate di Chimica delle Sostanze Naturali**: “ $A_2 \rightarrow J_2$ swap: un nuovo approccio alla sintesi di prostanoidi ciclopentenonici. Sintesi totale dell’isoprostano J_2 ”; Salerno, 29 September - 1 October 2003; (presenter).
- 2004 **1st European Workshop on Isoprostane Research: Chemistry, Biochemistry, Physiology and Pharmacology**; “First asymmetric synthesis of iso-PG J_2 ”; Montpellier (Francia), 28-30 June 2004; (invited speaker)
- 2007 **Le Giornate di Chimica Organica a Pavia**: Attualità delle ricerche sui metaboliti secondari: domande dalla biologia, risposte dalla chimica: “Lo Stress Ossidativo: Aspetti Chimici e Biologici”; Pavia, 18 May 2007; (invited speaker)

Il sottoscritto Giuseppe Zanoni è consapevole delle conseguenze previste all’art. 75 nonché delle sanzioni penali richiamate dagli artt. 46 e 76 del DPR n. 445 del 28 dicembre 2000 in caso di dichiarazioni mendaci, di formazione uso di atti falsi. Inoltre, il sottoscritto autorizza al trattamento dei dati personali, ai sensi del D.lgs n. 196/03 successive modifiche, integrazioni e regolamenti di attuazione.

Pavia 19 Gennaio 2024

