

## Prof. Claudio Santi - (Curriculum Vitae)

### Education and research Activity

Claudio Santi was born in Fabriano (AN) in 1967. He graduated in Pharmaceutical Sciences at the University of Perugia in 1992, discussing a thesis in Organic Synthesis. He was awarded his PhD in 1996 under the supervision of Professor Marcello Tiecco, and in 1998 he spent a period as a visiting scientist in the group of Professor Thomas Wirth at the "Institute für Organische Chemie" of Basel University, supported by a fellowship from the Swiss National Foundation. In 2002, he became an assistant professor, and in 2005, he was promoted to the position of associate professor at the Faculty of Pharmacy of the University of Perugia. Since October 2013, he has been working as an Associated Professor of Organic Chemistry at the Department of Pharmaceutical Sciences of the University of Perugia. In addition, he was awarded the National Scientific Habilitation as Full Professor (ASN 2013) on 11/12/2013, a status that was subsequently confirmed on 06/09/2018 (ASN 20). He has been invited as visiting professor at Jan Dlugosz University of Czestochowa-Poland (2013 and 2021), Universidade Federal de Pelotas - Brazil (2014 and 2023), and Universidade Federal de Minas Gerais, Belo Horizonte – Brazil (2020). Furthermore, he has been awarded an Erasmus Fellowship for teaching organic chemistry at Jagiellonian University in Krakow (2007), the School of Chemistry at Cardiff University (2009), the Universidad Complutense de Madrid (2016), and Jan Dlugosz University of Czestochowa-Poland (2025).

He is a renowned expert in the field of organoselenium chemistry, having pioneered research in the utilization of optically pure diselenides in asymmetric synthesis (investigating the role of selenium heteroatom interactions as relevant conditions for the transfer of the chirality information) as well as the application of organoselenium reagents (with a particular emphasis on biomimetic catalysts) in Green Chemistry. In this latter field, he has developed new synthetic protocols using non-conventional and recyclable reaction media associated with the use of enabling technologies (e.g. ultrasounds, photo-, electro- and flow-chemistry). He discovered the first class of bench-stable zinc selenates that some authors named "Santi's Reagents", which are currently commercialized by Sigma-Aldrich.

He has recently directed part of his scientific interest towards the synthesis of biologically active organoselenium compounds, demonstrating for some of them antibacterial (antibiofilm), antiviral (HIV and SARS-CoV-2), antioxidant and hormetic properties. He is currently directing part of his scientific effort on studying the biological mechanism of interaction of organoselenium compounds with proteins, as well as in the application of catalytic oxidation to the treatment of biomasses. In 2011, he co-founded the International Research Network on Selenium Sulfur Redox and Catalysis, of which he is still the chair. Since 2013, he has led the Catalysis, Synthesis and Organic Green Chemistry group at the Department of Pharmaceutical Sciences, Perugia University.

### Scientific production

Prof. Santi has published more than 200 peer-reviewed articles (including review articles) in indexed journal, edited 4 books and 6 special issues, and he wrote several book chapters.

### Bibliometric Data

(PE macrosector – PE5\_17 Organic Chemistry)

Data source (Scopus) 02/09/25

Number of indexed publications 220

Citations 7,411

h-index 46

Data Source (WoS -Publons) 02/09/25

Number of indexed publications 221

Citations 6,772

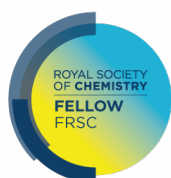
h-index 43

Data Source (Google Scholar) 02/09/25

Citations 9263

h-index 50

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- Scopus Author ID: 7004236169
- ResearcherID: B-7306-2014



### Invited (IL) Keynote (KS) and Plenary (PL) Lectures

- ICCST9 "9th International Conference on the Chemistry of Selenium and Tellurium" Bombay- India (IL-2004)
- HALCHEM V "5° International Meeting on halogen chemistry" Santa Margherita di Pula, Italy (IL-2010)
- RICMD4 "4th International Meeting on Molecular Chemistry and Development" Marrakesh Morocco (PL-2010)
- ESeTeIV "IV Encontro sobre Seleno e Telurio" Torres Brazil (PL-2012)
- ICCST12 "12th International Conference on the Chemistry of Selenium and Tellurium" Cardiff UK (PL-2013)
- RICMCA "1ere Rencontre Internationale de Chimie Moléculaire Chemiometrie & Applications" Beni Mellal Morocco (PL-2014)
- ISOCS-26 "26th International Symposium on Organic Chemistry of Sulfur" Istanbul Turkey (IL-2014)
- "CINMPIS Ventennium Conference" (1994-2014), Bari Italy (IL-2014)
- "Workshop on Selenium and Tellurium" WSeTe Santa Maria (RS) Brazil (IL-2014)
- 7th International Meeting on Halogen Chemistry (HALCHEM VII) Cestokowa, PL (IL-2015)
- WSeS-5 "5th Workshop of SeS Redox and Catalysis". Tokay University, Hiratsuaka, JP (IL-2016)
- ICCST13 "13th International Conference on the Chemistry of Selenium and Tellurium" Gifu JP (IL-2016)
- 39° Annual Meeting of the Brazilian Chemical Society, section Green Chemistry, Goiania (BS) (IL-2016)
- 39° Annual Meeting of the Brazilian Chemical Society, Italo-Brazilian Symposium on Organic Chemistry, Goianaia (BS) (IL-2016)
- Xth International Minisymposium (Current Problem in Organic Chemistry)-University of Lodz PL (IL-2017)
- 8th International Meeting on Halogen Chemistry (HALCHEM VIII), at Inuyama city, Aichi, Japan (IL-2017)
- WSeS-6 "6th Workshop of SeS Redox and Catalysis" Wroclaw, Poland (PL-2017)
- "Symposium on Selenium Chemistry and Biology" SSCB-2017, Mumbai India (IL-2017)
- ISOPS12 "12th International Symposium on Pharmaceutical Sciences" Ankara, Turkey (PL-2018)
- VII Encontro sobre Enxofre, Selênio e Telúrio & 7th Workshop of SeS Redox and Catalysis, Santa Maria, Brazil (PL-2018)
- ISOPS13 "13th International Symposium on Pharmaceutical Sciences" Ankara, Turkey (PL-2021)
- ICCBIKG 2021 "1st international Conference on Chemo and Bioinformatics" Kragujevac, Serbia (IL-2021)
- HALCHEM X "10° International Meeting on halogen chemistry" Lodz, PL(PL-2022)
- ICCST15 "15th International Conference on the Chemistry of Selenium and Tellurium" Florianopolis Brazil (IL-2022)
- 3th BIOSprint Workshop "The nex challenges of Bioraffineries" Lubjiana, Slovenia (IL 2023)
- Se2023 " 9th International selenium Conference focused on Se Chemistry, Biology and Medicine " Daejon, Korea (PL-2023)
- ICCB 2023 "the Interface of Chalcogen Chemistry and Biology" Tokay, Japan (IL 2023)
- XXIII International Symposium in "Selected Problem of chemistry of cyclic and acyclic heterorganic compounds" Jan Dlugosz University of Czestochowa-Poland IL-(2023)
- XXIV International Symposium in "Advances in the Chemistry of Heteroorganic Compounds" University of Lodz PL (PL-2023)
- CINPIS 2024 "30th Anniversary Conference" Bari – IT (KS-2024)
- 5th China-Italy Bilateral Symposium on Organic Chemistry - (V-CISOC) Zhejiang University, Hangzhou, China (IL-2024)
- Vegyészkonferencia 2024 Eger – Hungary (IL-2024)
- WSeS-11 "11th Workshop of SeS Redox and Catalysis " Torun, Poland (PL-2024)
- HALCHEM X1 "11th International Meeting on halogen chemistry" Baltimore, USA (IL-2024)
- XXV International Symposium in "Advances in the Chemistry of Heterorganic Compounds" University of Lodz PL (PL-2024)

### Honors and Awards

2015 nominated Senior Research Fellow of Mosul University-IRAQ  
 2017 Fellow of Royal Society of Chemistry -UK- (**FRSC**).  
 2018 awarded with the title of honorary professor at the Jan Dlugosz University of Czestochowa in Poland.  
 2018 included in the list "Top Italian Scientist" of the TIS (former Via-Academy)  
 2023 nominated member of the International Advisory Committee of Ankara University.  
 2025 awarded with the "Caduceo d'Oro" by Regional Board of Pharmacist Umbria.  
 2025 Recipients of the PTChem Commemorative Medal by the Polish Chemical Society

Furthermore, his editorial and dissemination activity received numerous certificates of merit as:

- the Tetrahedron: Asymmetry "Most Cited Paper 2004-2007 Award", the "RSC Advance Poster Prize" at Eurasia Conference on Chemical Sciences (2012),
- the Bentham "Certificate of appreciation" for the most cited paper in the Current Biological Chemistry journal (2016)
- in 2016 he resulted in the **top 10% of the most cited authors for RSC chemical portfolio**.
- Top 2% peer reviewers in Chemistry (2018) by Publons.



- Best Papers of 2022 from RSC's Environmental Science journals
- Best Papers 2022 – Environmental Science: Advances
- 2022/2023 and 2024 he appeared in the database of **2% top-cited scientists among all the disciplines published by Elsevier and Sandford University** based on standardized information on citations.
- In 2023/2024 he appeared in the 2nd edition of Research.com ranking of the best scholars in the field of Chemistry

### Editorial Activity

He regularly acts as reviewer for several journals belonging to ACS, Wiley, RSC, Elsevier, Thieme, Springer. MDPI, Bentam, Taylor and Francis. He was/is member of several editorial and Scientific Boards among them:

- **Editor in Chief** of *Current Chemical Biology*, Bentham (from 2020 to 2024, after 7 years as member of the EB),
- **Associated Editor** of the *International Journal of Molecular Sciences*, MDPI (Since 2023, after 5 years as member of the EB)
- **Review Editor in Chief** for *Phosphorous Sulfur Silicon & Related Elements* - T&F (Since 2024)

Selected special issues/themed collection:

2017 *Molecules* "Celebrating Two Centuries of Research in Selenium Chemistry: State of the Art and New Prospective"

2018 *Arkivoc* "Commemorative Issue in Honor of Prof. Lorenzo Testaferri on the occasion of his 75th anniversary"

2019 *New Journal of Chemistry* "Selenium & Tellurium chemistry at the beginning of the 3rd millennium: a celebration of ICCST"

2022 *International Journal of Molecular Sciences*: "Redox Modulation: Biological and Therapeutical Implication"

2023 *International Journal of Molecular Sciences*: "Redox Modulation: New Trends, Biological and Therapeutical Implication"

2023 *Molecules*: "Advances in Selenium Catalysts and Antioxidants"

### Scientific Committees

He is permanent member of the scientific advisory Board of the International Conferences on Chemistry of Selenium and Tellurium (ICCST) and that of the "International Meeting of Halogen Chemistry" (HALCHEM)

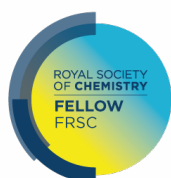
In the last years, he has served on the following International Scientific Program Committees: He chaired the Workshops of the International network "SeRedCat" WSeS-2 (2013), WSeS-3(2014), WSeS-8 (2019), participated at the scientific boards for ten consecutive Electronic conferences on Synthetic Organic Chemistry from (ECSOC-15) to (ECSOC-25) edited by MDPI (*Molecules*); was member of the scientific committee for the 1st International Meeting of Molecular Chemistry, Chemometrics and applications (RICMCA-2014) 29-30 May 2014 Bèni Mellal Maroc, In 2019 he acted as chairman of the 9<sup>th</sup> International Meeting on Halogen Chemistry (HALCHEM IX) – Perugia, co-chaired the 14<sup>th</sup> International Conference on the Chemistry of Selenium and Tellurium (ICCST-14) in Cagliari, in 2020 he acted as section editor of the 1st International Electronic Conference on Catalysis Sciences edited by Catalysis (MDPI) and in 2024 he chaired the 1<sup>st</sup> AngloItalian Chemical Biology Bilateral Meeting (AICBBM-1) in Perugia. Since 2020 he is member in the committee of the "Chemical Biology and Bio-Organic Group" of the Royal Society of chemistry

### Teaching Experiences

Since 2001 he is professor of "Physical Methods for Organic Chemistry" 72hr/year (9CFU), from 2024 Professor of "Synthetic aspects in the preparation of macro and biomolecules" 32 hr/year (4 CFU). Previously he taught "Organic Chemistry" 84 hr/year (12 CFU), "Organic Chemistry of Natural Compounds" 42 hr/year (6 CFU) at the Department of Pharmaceutical Sciences of Perugia University, "Spectroscopic Methods for Biomolecules" 32hr/year (4CFU) at the school of Biotechnology University of Perugia. Furthermore he regularly teach a short course of "Structure Elucidation of Organic Molecules by NMR" at school of Doctorate in Pharmaceutical Sciences and "Catalysis" and the second level master on "Process development and production of active pharmaceutical ingredients" (PRO - API). Since 2006 he supervised (or co-advised) several experimental diploma work theses including incoming several Erasmus students, 8 PhD students 3 PhD Sandwich from Brazil and 1 PhD Sandwich from Morocco and 6 post docs.

### Institutional Appointments

From 2012 to 2014 he was Member of Bioethics Committee, University of Perugia: from 2013 – from 2013-2016 deputy of "Quality Assurance" for the Department of Pharmaceutical Sciences and From 2017 to 2022 he was deputy of "Research" for the Department of Pharmaceutical Sciences. In 2015 he was elected in the scientific committee of the University of Perugia involved in the self-evaluation processes for chemical sciences. From 2018 to 2022 he was a member of the executive-board of the DELPHI STAR LABS in the frame of the project "Dipartimenti di Eccellenza 2018-2022". In 2023 he was elected as Degree Program Coordinator in



Pharmaceutical Chemistry and Technology. In 2023 he was nominated in the Steering Committee of the European Project VITALITY. In 2025 he was nominated by the "Giunta Regionale Umbria" as a member of the A.D.I.S.U Steering Committee.

### National and international Grants

2003-2005: participant at PRIN 2003, title of the project "Asymmetric synthesis of optically pure biologically relevant compounds mediated by organoselenium reagents. Addition and cyclization reactions"  
2006-2008: participant at PRIN 2005, title of the project "Novel methods for the enantioselective synthesis of heterocyclic and polyfunctionalized compounds"  
2008-2019: participant at PRIN 2007, title of the project "Development of novel methods for the enantioselective synthesis of heterocyclic and polyfunctionalized compounds"  
2009-2010: Italian PI of an international project in the frame of BRITISH-ITALIAN PARTNERSHIP PROGRAMME FOR EARLY CAREER RESEARCHERS British Council and CRUI. Project title: Green Catalyst for Novel Chemistry.  
2013-2014 Foreigner Researcher at the program FAPERG/CAPES-12/2013 - Internacionalização da PPG/RS- Project INTERNACIONALIZAÇÃO DA PÓS-GRADUAÇÃO EM QUÍMICA DA UFPEL.  
2015-2018: Local PI of IRRTF project "Selenium (Redox) Therapeutics" in the frame of "International Research and Research Training Fund (IRRTF) of the University of Melbourne"  
2017 FFABR 2017 "Fondo per il finanziamento delle attività base di ricerca" (individual grant supported by MIUR)  
2019 Italian PI at CAPES-Print/UFPEL project "Moléculas bioativas contendo selênio – Síntese, caracterização e aplicações",  
2020-2023 COSY Thinking Project (2020-1-SE01-KA203-077872) co-funded by the European Commission.  
2023: " National Innovation Ecosystem grant ECS00000041 - VITALITY - CUP J97G22000170005, funded by the European Union – NextGenerationEU under the Italian Ministry of University and Research (MUR)" (Participant, member of the Stirring Committee and PI of the local project "Lignin-originated biomaterial for cosmetic applications").  
2024: ""SUSTAINABLE DURABLE WATER REPELLENT CASHMERE" POR FESR 2021-2027

### Other funding sources

Prof Santi coordinated several research programs commissioned by local, national and multinational companies and supervised research grants for young researcher and post doc assigned by UE, Regione Umbria, local foundations and the interuniversity consortium CINPIS.

"In compliance with the Italian legislative Decree no. 196 dated 30/06/2003, I hereby authorize you to use and process my personal details contained in this document."

1<sup>th</sup> September 2025

Prof Claudio Santi