

## PERSONAL INFORMATION

**Vito Capriati, FRSC**

Full Professor of Organic Chemistry  
Director of Interuniversity Consortium C.I.N.M.P.I.S.

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## EDUCATION

- 1983** *High School Scientific Diploma*, Liceo Scientifico Statale Mola di Bari (BA) (mark: 60/60)
- 1990** *M.Sc. degree (summa cum laude)*, University of Bari "Aldo Moro" (I) (Chemistry and Pharmaceutical Technology, 5-year degree course; Mentor: Prof. Leonardo Di Nunno)  
Qualified to practice as a *Pharmacist* with full marks (250/250)
- 1991** *CNR (National Research Council) fellowship* at "MISO" (Innovative Methodologies in Organic Synthesis) centre, then merged into "ICCOM" (Institute of Chemistry of Organometallic Compounds), Bari (I); Mentor: Prof. Francesco Naso
- 1992–1993** *CNR (National Research Council) fellowship* at "MISO" (Innovative Methodologies in Organic Synthesis) centre, then merged into "ICCOM" (Institute of Chemistry of Organometallic Compounds), Bari (I); Mentor: Prof. Francesco Naso

## PROFESSIONAL HISTORY AND EXPERIENCE

- 1990–1991** *Forensic chemist officer* at the Carabinieri's RIS (Scientific Investigation Department) of Rome (I)
- 1993** *Assistant Professor* of Organic Chemistry, Department of Pharmacy-Drug Sciences, University of Bari "Aldo Moro" (I); started a Scientific Collaboration with Prof. Saverio Florio's group
- 2001** *Visiting Scientist* at the Department of Chemistry (Gideon Fraenkel's group), Ohio State University (Ohio, USA)
- 2002** *Associate Professor* of Organic Chemistry, Department of Pharmacy-Drug Sciences, University of Bari "Aldo Moro" (I)
- 2003** *Visiting Professor* at the Department of Chemistry and Molecular Biology (Per Ahlberg's group), Göthenburg University (Göteborg, Sweden)
- 2014** National Habilitation for *Full Professorship* of Organic Chemistry
- 2019** *Chair* of Organic Chemistry, University of Bari

## TEACHING

- *Organic Chemistry* (Master degree course in Pharmacy (5-yr degree course)) (2003–2011)
- *Chemistry of Organic Natural Products* (Master degree courses in Pharmacy and Chemistry and Pharmaceutical Technology (5-yr degree courses) (since 1997)
- *Organic Chemistry I* (Master degree course in Chemistry and Pharmaceutical Technology (5-yr degree course)) (since 2011)
- *Organic Chemistry II* (Master degree course in Chemistry and Pharmaceutical Technology (5-yr degree course)) (since 2012)

## PRESENT INTERNATIONAL COLLABORATION

Prof. Konstantin Karaghiosoff (Ludwig-Maximilians-Universität München, Germania); Prof. Dietmar Stalke and Prof. Konrad Koszinowski (University of Göttingen, Germania); Prof. Anne Milet (Université Grenoble Alpes, Francia); Dr. Jacques Maddaluno, Prof. H. Oulyadi, Prof. Muriel Durandetti (Université de Rouen & INSA de Rouen, Francia); Prof. Mohamed Amedjkouh (Kjemisk institutt, Oslo, Norvegia); Prof. Eva Hevia (University of Bern, Svizzera); Prof. Joaquín García-Álvarez and Dr. Alejandro Presa Soto (University of Oviedo, Spain); Dr. Javier González-Sabín (EntreChem SL, Oviedo, Spain); Prof. Darren Dixon (University of Oxford, UK).

## SCIENTIFIC MERITS

Capriati's main research revolves around:

- the design and application in stereoselective organic synthesis of novel polar organometallic reagents** with special emphasis on functionalised organolithium species, and the elucidation of the structure-reactivity relationship of reactive lithiated intermediates by combining multinuclear magnetic resonance investigations with X-ray data and *ab initio* calculations (*J. Org. Chem.* **2008**, *73*, 9552; *Chem. Eur. J.* **2009**, *15*, 7958; *Chem. Eur. J.* **2010**, *16*, 9778; *Chem. Eur. J.* **2011**, *17*, 8216; *Chem. Sci.* **2014**, *5*, 528; *Eur. J. Org. Chem.* **2019**, 5549). His work has contributed to paving the way towards key challenges in the area of organometallic and lithium carbenoid chemistry (both synthetic and mechanistic aspects) (for reviews: *Chem. Eur. J.* **2010**, *16*, 4152; *Dalton Trans.* **2014**, *43*, 14204). Recent breakthroughs include (a) the employment of organometallics with applications in the direct functionalisation of aryl-substituted oxygen-containing heterocycles (e.g., oxetanes, tetrahydrofurans and tetrahydropyrans) (*Chem. Commun.* **2011**, *47*, 9918; *Chem. Commun.* **2013**, *49*, 10160; *Eur. J. Org. Chem.* **2016**, 3157) and the *ortho*-functionalisation of aryloxetanes (*Angew. Chem. Int. Ed.* **2012**, *51*, 7532; *Eur. J. Org. Chem.* **2019**, 5549);
- informative mechanistic studies** codifying how deprotonative metallation can be successfully exploited in the asymmetric synthesis of key building blocks *en route* to natural and bioactive compounds (*Chem. Eur. J.* **2009**, *15*, 7958; *Chem. Commun.* **2013**, *49*, 4911; *Chem. Sci.* **2014**, *5*, 528; *Eur. J. Org. Chem.* **2019**, 5549);
- novel developments in boron and fluorine chemistry** with a particular focus on the role played by weak, non-covalent inter- and intramolecular interactions in promoting the formation of supramolecular motifs through spontaneous self-assembly processes (*Chem. Eur. J.* **2010**, *16*, 9778; *Dalton Trans.* **2015**, *44*, 19447);
- the investigation of Deep Eutectic Solvents (DESS) as a new generation of promising green and unconventional reaction media**, in replacing traditional and toxic VOCs, for the development of a sustainable chemistry in organocatalysis (*Green Chem.* **2016**, *18*, 792; *Beilstein J. Org. Chem.* **2016**, *12*, 2620), in whole cells biocatalysis (*Adv. Synth. Cat.* **2017**, *359*, 1049; *Catalysts* **2018**, *8*, 55; *React. Chem. Eng.* **2020**, *5*, 859), in metal-catalysis also interfaced with biocatalysis (*Green Chem.* **2017**, *19*, 69; *Green Chem.* **2018**, *20*, 3468; *ChemSusChem* **2018**, *11*, 3495; *Front. Chem.* **2019**, *7*, 723; *ChemCatChem* **2020**, *12*, 1979; *Org. Biom. Chem.* **2021**, *19*, 1773; *ChemSusChem* **2022**, *15*, e202102211), in aminocarbonylation reactions (*Chem. Commun.* **2018**, *54*, 8100), as electrolyte components in a new generation of dye-sensitized solar cells (*Energy Tech.* **2017**, *5*, 345; *Chem. Eur. J.* **2018**, *24*, 17656; *ChemElectroChem* **2020**, *7*, 1707), in the preparation of (chiral) amines and heterocycles of pharmaceutical interests (*ChemSusChem* **2020**, *13*, 358; *Molecules* **2022**, *27*, 7594; *ACS Sustainable Chem. Eng.* **2022**, *10*, 4065), in electrochemistry (*Solid State Ionics* **2018**, *323*, 48), in biotechnological applications with photosynthetic bacteria (*ACS Sust. Chem. Eng.* **2017**, *5*, 7768), in the chemistry of graphene (*Sci. Rep.* **2019**, *9*, 5463), in the synthesis of heterocycles (*Tetrahedron* **2016**, *72*, 4239; *Molecules* **2016**, *21*, 924; *Eur. J. Org. Chem.* **2019**, 5549; *Eur. J. Org. Chem.* **2022**, e202200843; *Molecules* **2020**, *25*, 574; *Beilstein J. Org. Chem.* **2020**, *16*, 1915; *Eur. J. Org. Chem.* **2023**, *26*, e202200814), in extractive processes of mycotoxins (*Molecules* **2017**, *22*, 121), and in protein crystallization (*ACS Sustainable Chem. Eng.* **2021**, *9*, 8435).

It has always been a firm conviction of the scientific community that the employment of both anhydrous conditions and water-free reaction media is required for the successful handling of highly polarized organometallic compounds of s-block elements because of their high reactivity. Capriati's research team has reported the breakthrough discoveries that **organolithium reagents can be successfully used, employing either protic eutectic mixtures or water as reaction medium**, under batch conditions, at room temperature and under air (a) in nucleophilic additions to carbonyl derivatives, imines, nitriles, Weinreb amides, and nucleophilic substitutions (*Chem. Sci.* **2016**, *7*, 1992; *Green Chem.* **2017**, *19*, 3069; *Angew. Chem. Int. Ed.* **2017**, *56*, 1020; *Angew. Chem. Int. Ed.* **2023**, e202304720), (b) in *ortho*- and lateral-lithiation reactions and in nucleophilic acyl substitution reactions in benzamide derivatives (*Chem. Commun.* **2014**, *50*, 8655; *Chem. Commun.* **2015**, *51*, 9459; *Chem. Commun.* **2019**, *55*, 7741) and (c) in direct Pd-catalysed cross-coupling reactions with aryl halides (*Angew. Chem. Int. Ed.* **2019**, *58*, 1799). Pd-catalysed Negishi couplings between (functionalised) organozinc halides and (hetero)aryl bromides have also been successfully performed both in DESSs and in water, under mild and aerobic conditions, and in short reaction times (20 s) (*Angew. Chem. Int. Ed.* **2021**, *60*, 10632 (for recent reviews, see: *Eur. J. Org. Chem.* **2015**, *31*, 6778; *Chem. Eur. J.* **2018**, *24*, 14854; *Curr. Opin. Green Sust. Chem.* **2021**, *30*, 100487).

## SELECTED PUBLICATIONS

- G. Dilauro, C. Luccarelli, A. F. Quivelli, A. Vitale, F. M. Perna, **V. Capriati**  
"Introducing Water and Deep Eutectic Solvents in Organosodium Chemistry: Chemoselective Nucleophilic Functionalizations in Air"  
*Angewandte Chemie International Edition* **2023**, e202304720
- G. Dilauro, L. Cicco, P. Vitale, F. M. Perna, **V. Capriati**  
"Ligand-Free Pd-Catalyzed Reductive Mizoroki-Heck Reaction Strategy for the One-Pot Synthesis of Functionalized Oxygen Heterocycles in Deep Eutectic Solvents"  
*European Journal of Organic Chemistry* **2023**, e202200814  
(selected by the Editorial Office as **Very Important Paper** and for the **Front Cover** of the corresponding issue)
- A. F. Quivelli, F. V. Rossi, P. Vitale, J. García-Álvarez, F. M. Perna, **V. Capriati**  
"Sustainable and Scalable Two-Step Synthesis of Thenfadil and Some Analogs in Deep Eutectic Solvents: From Laboratory to Industry"  
*ACS Sustainable Chemistry & Engineering* **2022**, *10*, 4065–4072  
(selected by the Editorial Office for the **Front Cover** of the corresponding issue)

- A. F. Quivelli, M. Marinò, P. Vitale, J. García-Álvarez, F. M. Perna, **Vito Capriati** "Ligand-free Copper-Catalyzed Ullmann-type C–O Bond Formation in Non-innocent Deep Eutectic Solvents under Aerobic Conditions" *ChemSusChem* **2022**, *15*, e202102211
- G. Dilauro, C. S. Azzolini, P. Vitale, A. Salomone, F. M. Perna, **V. Capriati** "Scalable Negishi Coupling between Organozinc Compounds and (Hetero)Aryl Bromides under Aerobic Conditions when using Bulk Water or Deep Eutectic Solvents with no Additional Ligands" *Angewandte Chemie International Edition* **2021**, *60*, 10632; *Angewandte Chemie* **2021**, *133*, 10726 (this article also appears in: **Hot Topic: C-C Coupling**, *ChemCatChem*)
- L. Cicco, A. Fomona-Pascual, A. Sánchez-Condado, G. A. Carriedo, F. M. Perna, **V. Capriati**, A. Presa Soto, J. García-Álvarez, "Fast and Chemoselective Addition of Highly Polarized Lithium Phosphides Generated in Deep Eutectic Solvents to Aldehydes and Epoxides" *ChemSusChem* **2020**, *13*, 4967 (selected by the Editorial Office as **Very Important Paper** and for the **Cover Feature** of the corresponding issue; **Highlighted** in: [https://www.chemistryviews.org/details/ezone/11264622/Highly\\_Reactive\\_Lithium\\_Phosphides\\_Tamed\\_in\\_Deep\\_Eutectic\\_Solvents.html](https://www.chemistryviews.org/details/ezone/11264622/Highly_Reactive_Lithium_Phosphides_Tamed_in_Deep_Eutectic_Solvents.html)).
- L. Cicco, A. Salomone, P. Vitale, N. Ríos-Lombardía, J. González-Sabín, J. García-Álvarez, F. M. Perna, **V. Capriati** "Addition of Highly Polarized Organometallic Compounds to *N-tert*-Butanesulfinyl Imines in Deep Eutectic Solvents under Air: Preparation of Chiral Amines of Pharmaceutical Interest" *ChemSusChem* **2020**, *13*, 3583 (selected by the Editorial Office for the **Cover Feature** of the corresponding issue).
- G. Dilauro, A. F. Quivelli, P. Vitale, **V. Capriati**, F. M. Perna "Water and Sodium Chloride: Essential Ingredients for Robust and Fast Pd-Catalysed Cross-Coupling Reactions between Organolithium Reagents and (Hetero)aryl Halides" *Angewandte Chemie International Edition* **2019**, *58*, 1799; *Angewandte Chemie* **2019**, *131*, 1813 (selected by the Editorial Office as **Hot Paper; Top Downloaded Paper 2018–2019**)
- G. Dilauro, S. M. García, D. Tagarelli, P. Vitale, F. M. Perna, **V. Capriati** "Ligand-Free Bioinspired Suzuki–Miyaura Coupling Reactions using Aryltrifluoroborates as Effective Partners in Deep Eutectic Solvents" *ChemSusChem* **2018**, *11*, 3495.
- J. García-Álvarez, E. Hevia, V. Capriati "The Future of Polar Organometallic Chemistry Written in Bio-based Solvents and Water" *Chemistry – A European Journal* **2018**, *24*, 14854 (selected by the Editorial Office for the section "**Hot Topic: Sustainable Chemistry**" and for their Showcase of outstanding Review-type articles).
- L. Cicco, N. Ríos-Lombardía, M. J. Rodríguez-Álvarez, F. Moris, F. M. Perna, **V. Capriati**, J. García-Álvarez, J. González-Sabín "Programming Cascade Reactions Interfacing Biocatalysis with Transition-metal Catalysis in Deep Eutectic Solvents as Biorenewable Reaction Media" *Green Chemistry* **2018**, *20*, 3468 (selected by the Editorial Office for the **Inside Front Cover** of the corresponding issue and as **HOT Paper**).
- G. Dilauro, M. Dell'Aera, P. Vitale, **V. Capriati**, F. M. Perna "Unprecedented Nucleophilic Additions of Highly Polar Organometallic Compounds to Imines and Nitriles Using Water as a Noninnocent Reaction Medium", *Angewandte Chemie International Edition* **2017**, *56*, 10200; *Angewandte Chemie* **2017**, *129*, 10334 (**HIGHLIGHTED** in *Synfacts* **2017**, *13* (10), 1074 and in *ChemistryViews*: [https://www.chemistryviews.org/details/ezone/10603789/Water\\_Tames\\_Grignard\\_and\\_Organolithium\\_Reagents.html](https://www.chemistryviews.org/details/ezone/10603789/Water_Tames_Grignard_and_Organolithium_Reagents.html)).
- L. Cicco, S. Sblendorio, R. Mansueto, F. M. Perna, A. Salomone, S. Florio, **V. Capriati** "Water opens the door to organolithiums and Grignard reagents: exploring and comparing the reactivity of highly polar organometallic compounds in unconventional reaction media towards the synthesis of tetrahydrofurans", *Chemical Science* **2016**, *7*, 1192 (**HIGHLIGHTED** in *Synfacts* **2016**, *12* (1), 0081).
- A. Salomone, F. M. Perna, A. Falcicchio, S. O. Nilsson Lill, A. Moliterni, R. Michel, S. Florio, D. Stalke, **V. Capriati** "Direct Observation of a Lithiated Oxirane: A Synergistic Study Using Spectroscopic, Crystallographic, and Theoretical Methods on the Structure and Stereodynamics of Lithiated *ortho*-Trifluoromethyl Styrene Oxide", *Chemical Science* **2014**, *5*, 528 (selected by the **Chemical Science Editorial Office** as **HOT Paper**).

## ORGANIZING & SCIENTIFIC COMMITTEES

- 1996** "XXIII National Meeting of the Organic Division of the Italian Chemical Society", Monopoli (BA, Italy) (Organizing Committee)
- 2002** "2nd Trans-Mediterranean Colloquium on Heterocyclic Chemistry" (TRAMEC), Bari, Italy (Organizing Committee)
- 2002** Scientific meeting organized by the "Puglia Section" of the Italian Chemical Society: "I Giovani e la Ricerca Chimica in Puglia", Bari, Italy (Organizing Committee)
- 2004** Scientific meeting organized by the "Puglia Section" of the Italian Chemical Society: "La Chimica per la Qualità della Vita", Bari, Italy (Organizing Committee)
- 2006** 22nd European Colloquium on Heterocyclic Chemistry (EHC), Bari, Italy (Organizing Committee)
- 2010** One-Day Symposium on "Advances in Organolithium Chemistry" on the occasion of the 70th birthday of Prof. Saverio Florio, Dipartimento di Farmacia – Scienze del Farmaco, University of Bari (10 international speakers invited) (Organizing Committee and Co-Chair)

- 2016** “Scientific Seminars of C.I.N.M.P.I.S Fellows (XVI Edition)”, University of Calabria, Rende (CS, Italy) (Scientific Committee)
- 2017** Scientific Seminars of C.I.N.M.P.I.S Fellows (XVII Edition)”, University of Cagliari, Cagliari, Italy (Scientific Committee)
- 2018** “28th European Colloquium on Heterocyclic Chemistry (EHC)” University of Lecce, Lecce, Italy (Organizing Committee)
- 2019** “C.I.N.M.P.I.S. DAYS” (Scientific Seminars) (XVIII Edition)”, University of Bologna, Bologna, Italy (Scientific Committee)
- 2019** The Fourth China-Italy Bilateral Symposium on Organic Chemistry (CISOC-IV)” (Scientific Board)
- 2020** “C.I.N.M.P.I.S. DAYS” (Scientific Seminars) (XIX Edition)”, University of Pavia, Pavia, Italy (Scientific Committee)
- 2021** “Scientific Days of the Consortium C.I.N.M.P.I.S. ” (XX Edition), University of Messina, Messina, Italy (Scientific Committee)
- 2022** “International Conference on Coordination Chemistry – ICC (44° Edition)”, “Session Chair” within the Topic “T05 – Main Group Coordination Chemistry” (Rimini, Italy) (Organizing Committee)
- 2023** “Scientific Days of the Consortium C.I.N.M.P.I.S. ” (XXI Edition), University of Pisa, Pisa, Italy (Scientific Committee)

#### ADMINISTRATIVE ROLE & POSITION RESPONSABILITY

- 1999–2004** Member of the Steering Committee of “Puglia Section” of the Italian Chemical Society
- 1999–2004** Member and secretary of the Technical-Scientific Committee of the “Interdepartmental Centre for Services in the Spectroscopy Sector”
- 2007–2009** Member of the Area Committee 03 – Chemistry– of the University of Bari for the allocation of resources for research grants and post-doctoral fellowships
- 2008–2022** Co-founder of the academic spin-off “SYNCHIMIA Materials & Nanomaterials” at the University of Bari for the preparation of (a) innovative material and nanomaterial useful for photonics and electronics, and (b) chiral nonracemic products of pharmaceutical, biological, and agrochemical interest, heterocyclic compounds, and pheromones traps also making use of environmentally sustainable technologies based on DES systems.
- 2012–onward** Legally authorized representative on behalf of the University of Bari Aldo Moro within the Interuniversity Consortium C.I.N.M.P.I.S.
- 2012–2015** Member of the Class Board (Class LM-13, Pharmacy and Industrial Pharmacy), Degree Courses in Pharmacy and Chemistry and Pharmaceutical Technology
- 2016–onward** *Director* of Interuniversity Consortium C.I.N.M.P.I.S.
- 1997–2004, 2004–2006, 2022–onward** Member of the Board of the Department of Pharmacy-Drug Sciences of the University of Bari

#### ACHIEVEMENTS AND HONOURS

- 1993–1995 and 1995–1997** “*Nato Research Grant* for the development of bilateral scientific collaborations between Italy and USA in collaboration with Prof. Saverio Florio (University of Bari, Italy) and Prof. Theodore Cohen (University of Pittsburgh, USA)
- 1999** *JSP Fellowship*, 34th EuChem Conference on Stereochemistry – Bürgenstock Conference (Bürgenstock, Lucerna, Switzerland)
- 2009** *Recipient of the C.I.N.M.P.I.S. Prize* “Innovation in Organic synthesis” awarded by the Interuniversity Consortium C.I.N.M.P.I.S.
- 2014** *Recipient of the Award of the Italian Chemical Society (Organic Division)* for “Mechanistic and Theoretical Aspects of Organic Chemistry”
- 2019** *Fellow* of the Royal Society of Chemistry
- 2021** Elected in the board of the *Interdivisional Group of Organometallic Chemistry* of the Italian Chemical Society (SCI)
- 2021** Recognized as ranking among the top 1% of reviewers for *Angewandte Chemie*
- 2022** Paola Mariani Award (Forum on Industrial Biotechnology and Bioeconomy, Bari, best poster presentation)
- 2023** *EurJOC Lecture*, XLI National Congress of the Division of Organic Chemistry of the Italian Chemical Society (SCI), Rome, September 10-14, 2023 (CDCO 2023)

#### RECENT FUNDED PROJECTS: ROLES AND RESPONSABILITIES

- 2011–2015** *Collaboration with the pharmaceutical industry Dompè (L'Aquila, Italy) within the framework of the National Operative Programme for Research and Competitiveness (PON) 2007–2013 (PON01\_00862), co-funded by MIUR, on “An Integrated Technological Platform for the Development of New Drugs for Rare Diseases” (overall funding: 18.500 k€; assigned to the C.I.N.M.P.I.S.’s Unit of Bari: 831 k€)*
- 2012–2013** *PI for the italian part of the international bilateral Vigoni Project: “Functional Organoboron and Organolithium Intermediates: Structural Characterization and Applications in Stereoselective Synthesis and Material Sciences” in collaboration with Prof. Dietmar Stalke (University of Göttingen, Germany)*
- 2016** *Responsible for a triennial fellowship from Regione Puglia, within the call “Future in Research”; funded an Adjunct Temporary Assistant Professor (RTDa) position on the topic “Synthesis of Novel Chelating Agents for Copper and Zinc with Potential Application in Neurodegenerative Diseases” (ID: I2PTCF6). This position was renewed for additional two years.*
- 2017** *Responsible for a PhD Fellowship for 2017/2018 Academic Year (course XXXIII) within the framework of the “Programma Operativo Nazionale Ricerca e Innovazione (PON RI 2014/2020), Axis I “Investments in Human Capital”, Action I.1. – “Innovative PhDs with industrial characterization”. Funding: FSE-FESR (D.D. n. 1377 on 5/6/2017)*
- 2017** *Responsible for the management of the C.I.N.M.P.I.S. project “Synthesis of New Molecules as Drugs for Rare Diseases” co-funded by MIUR (code: COCM8470P0) (overall funding: € 82.452)*
- 2019** *Responsible for a one-year foreign fellowship for post-doc funded by Fondazione Puglia within the framework “Scientific and Technological Research” on the topic “Development of Sustainable Synthetic Processes in Unconventional Solvents for the Preparation of Molecules of Pharmaceutical Interest”*
- 2019** *Local PI of the National PRIN Project 2017 “Unlocking Sustainable Technologies Through Nature-Inspired Solvents (NATUREChem)” funded by the Italian Ministry of University and Research (MUR) (code: 2017A5HXFC) (total funding: € 607.700; University of Bari: € 114.306)*
- 2020** *Responsible for a triennial fellowship from Regione Puglia, within the call “Research for Innovation – REFIN”; funded an Adjunct Temporary Assistant Professor (RTDa) position on the topic “Eco-sustainable and Innovative Synthetic Methodologies of New Compounds with Potential Application in Neurodegenerative Diseases Treatment in Environmentally Friendly Solvents (Deep Eutectic Solvents, DESs)” (POR Puglia FESR-FSE 2014/2020; public notice n. 2/FSE/2019)*
- 2021** *PI of the National Project FISR 2020 “On the Sustainable Repurposing of Existing Drugs: Combining Batch and Continuous Flow Processes using Deep Eutectic Solvents for the preparation of Ruxolitinib (SusDesFlow) (codice: FISR2020IP\_01721) (sector PE) co-funded by MUR (DD n. 1049, 30 aprile 2021)*
- 2021** *PI of the Project PON “Green Chemistry and Biocatalysis for Innovative and Eco-sustainable Synthetic procedures for the Preparation of APIs (Active Pharmaceutical Ingredients) and Food Supplements” – Action IV.4 – “PhD programmes and research contracts on innovation” and Action IV.5 – “PhD programmes on green related topics” of the new Axis IV of the PON Research and Innovation 2014–2020 “Education and research for recovery – REACT-EU”, granted by the new review of the Program with the thematic objective of cohesion policies “Promote overcoming the effects of the crisis in the context of the COVID-19 pandemic and its social consequences and prepare a recovery green, digital and resilient economy” (Regulation (EU) 2020/2021 of the European Parliament and of the Council of December 23<sup>rd</sup> 2020). DM 1061/2021.*
- 2022** *Responsible for a biennial “Margarita Salas” post-doctoral internship granted to post-doctoral Spanish candidates to allow them to spend a research period outside Spain (host institution: Dipartimento di Farmacia-Scienze del Farmaco, University of Bari, Bari, Italy). Project: “Reshaping metal-catalyzed C-C coupling process under greener conditions: Sustainable Deep Eutectic Solvents (DESs) are the answer”*
- 2023** *PI of the National PRIN Project 2022 “green revolution by Merging mEtal-orgaNic frameworks with Deep Eutectic solVents for the dEvelopment of sustainable technologies and artificial nitrogen fixation (MENDELEEV)” funded by the Italian Ministry of University and Research (MUR) (code: 2022KMS84P) (total funding: € 284.529; University of Bari: € 103.849)*

## PROFESSIONAL AFFILIATIONS

- Italian Chemical Society [Division of Organic Chemistry (since 1992); Division of Chemical Education (since 1992); Interdivisional Group of Organometallic Chemistry (since 1992); Interdivisional Group of Green Chemistry–Sustainable Chemistry (since 2014); Interdivisional Group of Catalysis (2014–2019); Interdivisional Group of Chemistry for Renewable Energies (EnerCHEM) (since 2014)]
- The American Chemical Society (Division of Organic Chemistry; Division of Chemical Education) (1998-)
- International Society of Heterocyclic Chemistry (2003-2008; 2016-)

## MENTORING

**More than 100 undergraduates** in “Pharmacy” and “Chemistry and Pharmaceutical Technology” (University of Bari, Italy) (1998–Present); **1 Adjunct Temporary Assistant Professor (RTDa)** (2016–2019; 2019–2020); **1 Adjunct Temporary Assistant Professor (RTDa)** (2020–2023); **13 PhDs** (2 under supervision in the Doctorate School of “Drug Sciences”) (2003–Present); **7 Postdocs/Fellows** (2012–Present); **32 Erasmus/“Global thesis” students** (2012–Present); **4 Visiting undergraduate students** (2015–2020); **2 Visiting PhD students** (2017–2018).

## BRIEF TRACK RECORD AND EDITORIAL ACTIVITY

- Author of **167 papers** in high-profile peer-reviewed international scientific journals: **1 Proceeding; 5 editor-reviewed specialized monographies; 7 editor-reviewed book chapters; 1 National Patent; 1 International Patent**; delivered **more than 180 Communications** (oral and poster) and **32 plenary and invited talks and seminars** at national and international meetings; **h-index: 39** (source: Scopus; more than 4690 citations, June 2023) (for details, see: <https://ricerca.uniba.it>)
- **Co-author** in the english-to-italian translation of three university textbooks of Organic Chemistry: “Essential of Organic Chemistry” (1<sup>st</sup> ed., Bruice), “Organic Chemistry” (9<sup>th</sup> ed., Solomons & Fryhle), “Organic Chemistry” (2<sup>nd</sup> ed., Clayden, Greeves, Warren and Wothers)
- **Co-editor** of “Lithium Compounds in Organic Synthesis From Fundamentals to Applications”; Publisher: Wiley-VCH (2014)
- **Guest Editor** with Prof. Paola Vitale of the **Special Issue** in *Catalysts* “Chiral Building Blocks via Asymmetric Catalysis” (2018)
- **Topic Editor** with Prof. Joaquin García-Álvarez of the **Special Issue** in *Frontiers in Chemistry* “Metal-Mediated and Metal-Catalyzed Reactions in Nonconventional Solvents” (2018–2019)
- **Guest Editor** with Dr. Daniele Castagnolo of the **Special Issue** in *Molecules* “Green Methodologies for the Synthesis of Active Pharmaceutical Ingredients and Drug-Like Compounds (2020-)
- **Section Editor** of the Section Board “Green Chemistry” of *Molecules* (2018-)
- **Guest Associate Editor** of the Section “Green and Sustainable Chemistry” of *Frontiers in Chemistry* (2018-)

## PLENARY AND INVITED TALKS AND SEMINARS

**2023 September** – XLI National Congress of the Italian Chemical Society, Roma, Italy (invited speaker; *EurJOC Lecture*); **2023 June** – XXXIX Reunión Bional de Química – Zaragoza, Spain (invited speaker); **2022 June** – XLVI International Summer School on Organic Chemistry – ISOS 2022, Gargnano (BS), Italy (invited speaker); **2022 May** – International School of Process Chemistry (ISPROCHEM 2022), Gargnano, (BS) Italy (invited speaker); **2019 October** – Departmental Colloquium at the University of Oviedo (Spain) (host: Prof. Joaquín García-Álvarez) (invited speaker); **2019 March** Departmental Colloquium at the University Bari, Italy, within the framework “I Mercoledì del Farmaco” (host: Prof. Francesco Leonetti) (invited speaker); **2018 November** – Green Extraction of Natural Products (GENP2018), Bari, Italy (invited speaker); **2018 July** – 28th International Conference on Organometallic Chemistry (ICOMC 2018), Florence, Italy (invited speaker); **2018 February** – Departmental Colloquium at the University of Napoli Federico II, Italy (host: Prof. Daniela Montesarchio) (invited speaker); **2017 December** – II International Caparica Congress on Translational Chemistry (IIC3TC 2017), Caparica, Lisbon, Portugal (invited speaker); **2017 November** – New Directions in Organic Synthesis, Milano, Italy (invited speaker); **2017 September** Departmental Colloquium at the University of Alicante (Spain) (host: Prof. Rafael Chinchilla) (invited speaker); **2017 April** – Third China-Italy Bilateral Symposium on Organic Chemistry, Wuhan, China (invited speaker); **2017 January** – Organic Chemistry Winter Meeting organized by the Norwegian Chemical Society (Division of Organic Chemistry), Gausdal (Oslo), Norway (plenary speaker); **2016 July** – 11<sup>th</sup> International Symposium on Carbanion Chemistry (ISCC11), Rouen, Normandy, France (plenary speaker); **2016 June** – XII Congress of the International Group of Organometallic Chemistry (Co.G.I.C.O. 2016), Genova, Italy (plenary speaker); **2015 December** – Pacificchem 2015, Honolulu, Hawaii, USA (invited speaker); **2014 September** – XXV National Congress of the Italian Chemical Society, Rende (CS), Italy (Lectureship Award of the Organic Chemistry Division of the Italian Chemical Society) (invited speaker); **2014 February** – Departmental Colloquium at the University of Camerino (MC), Italy (host: Prof. Enrico Marcantoni) (invited speaker); **2013 January** – Departmental Colloquium at the Georg-August Universität, Institut für Anorganische Chemie (Anorganisch-Chemisches Kolloquium), Göttingen, Germany (host: Prof. Dietmar Stalke) (invited speaker); **2012 June** – XXXVII “A. Corbella” Summer School on Organic Synthesis, Gargnano (BS), Italy (invited speaker); **2011 February** – Departmental Colloquium at the Faculty of Chemistry and Pharmacy Ludwig-Maximilians Universität (LMU), “Organic Chemistry Seminars”, Munich, Germany (host: Prof. Paul Knochel) (invited speaker); **2010 July** – 8th Italian-Spanish Symposium on Organic Chemistry (SISOC-VIII), Padova, Italy (invited speaker); **2010 May** – “Recent Advances in Organolithium Chemistry” – A celebratory one-day Symposium on the occasion of Prof. Saverio Florio’s 70th Birthday, Bari, Italy (speaker and co-chair); **2010 May** – SardiniaChem 2010, A One-day Seminar Devoted to the Organic Chemistry of Biologically Active Molecules, Cagliari, Italy (plenary speaker); **2010 January** – Departmental Colloquium at the University Bari, Italy, within the framework “Giornata Pugliese su Farmaco e Prodotti della Salute (1<sup>st</sup> ed.)”, in collaboration with “Confindustria Bari” (host: Prof. Roberto Perrone) (invited speaker); **2009 September** – International Congress “The Centenary”, Padova, Italy (C.I.N.M.P.I.S. Prize Lectureship) (invited speaker); **2008 September** – Lectureship, Awarding the Gold Seal to Prof. Jean-Marie Pierre Lehn, Bari, Italy (invited speaker); **2006 September** – National Conference on Physical Organic Chemistry (COFEM 2006), Catania (Acicastello), Italy (plenary speaker); **2003 May** – Departmental Colloquium at the Göteborg University, Göteborg, Sweden (hosts: Prof. Mohamed Amedjokouh and Prof. Per Ahlberg) (invited speaker); **2002 June** – Trans Mediterranean Colloquium on Heterocyclic Chemistry (TRAMECH 2002), Bari, Italy (invited speaker).

## APPOINTMENTS AND OTHER INFORMATION

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- **Board of Directors' member** of the Doctorate School in "Chemical and Molecular Sciences" (2009–2018).
- **Board of Directors' member** of the Doctorate School in "Drug Sciences" (2019-).
- **Board of Directors' member** of the Doctorate School in "Sustainable Technologies for the Industrial Development of Drugs and Diagnostics" (2022-).
- **Departmental Coordinator of 4 Erasmus programmes** with (a) The Ludwig-Maximilians-Universität (München, Germany), (b) The Oslo University (Oslo, Norway), (c) The University of Grenoble-Alpes (Grenoble, France), and (d) The University of Göttingen (Göttingen, Germany) (agreement is underway)
- **Application reviewer** for MIUR-Italian Ministry of University and Research and other European Agencies (e.g., National Research Agency, ANR, France; Croatian Science Foundation, Croatia), and **regular reviewer** for several internationally leading peer-reviewed chemistry Journals of ACS, Wiley-VCH, RSC, Thieme Verlag, Elsevier, Bentham and others (average number of papers reviewed > 50 per year) (see: <https://publons.com/author/1175139/vito-capriati#profile>) (Top Peer Reviewer for Chemistry in September 2017, September 2018, and September 2019).
- **PhD External Examiner:** University of Florence (I), Department of Chemistry (Italy-France co-tutorship PhD programme, 2010); University of Camerino (I), Department of Chemistry (2014); University of Oslo, Department of Chemistry (Norway) (2016); University of Calabria (I), Department of Chemistry and Chemical Technologies (2016); University of Alicante, Department of Organic Chemistry (Spain) (2017); University of Napoli Federico II, Department of Chemical Sciences (Italy) (2018); University of Strathclyde, Department of Pure and Applied Chemistry (Glasgow, UK) (2019); University of Calabria (I) Department of Chemistry and Chemical Technologies (2021); University of Milano-Bicocca (I), Department of Material Sciences (2022).
- **Legally authorized representative** on behalf of the University of Bari "Aldo Moro" within the Consortium C.I.N.M.P.I.S. (since 2012).
- **Hobbies:** trekking, golf, shooting, stamp collecting, and chess.