

PERSONAL INFORMATION

Gennaro Pescitelli



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🆔 0000-0002-0869-5076 🏠 Gennaro Pescitelli

Sex M | *Date of birth* 17/03/1972 | *Nationality* Italian

RESUME

Gennaro Pescitelli received his M.Sc. and Ph.D. (2001) degrees in Chemistry from the University of Pisa under the supervision of prof. Piero Salvadori and Lorenzo Di Bari, working on the development of new chiroptical methods for the structural analysis of chiral organic compounds. Thereafter, he spent a postdoc period at Columbia University working with Prof. Koji Nakanishi and Nina Berova. From 2002 to 2006 he was research fellow at the University of Pisa. He was appointed Lecturer in Organic Chemistry at the University of Pisa in 2006, Associate Professor in 2014, and Full Professor in 2023. He is co-author of over 240 publications including research papers, reviews and book chapters, in collaboration with over 670 co-authors worldwide. His research is focused on spectroscopic and computational investigations of chiral organic molecules, especially natural products, metal compounds, organic crystals, organo-gelators, conjugated functional oligomers, and polymers. He is a member of the Scientific Board of the series of conferences "International Conference on Chiroptical Spectroscopy - CD" and has co-organized CD2019 edition in Pisa. He is associated editor of journal Chirality (Wiley) since 2019.

WORK EXPERIENCE

From November 2023

Full Professor

University of Pisa

- Research, teaching, tutoring, administration

Organic Chemistry

2014 - 2023

Associate Professor

University of Pisa

- Research, teaching, tutoring, administration

Organic Chemistry

2018 - 2022

Coordinator of PhD school

University of Pisa

- Coordinating and organizing activities and development of the doctoral program

Chemistry and Material Sciences

2006 - 2014

Lecturer (Ricercatore)

University of Pisa

- Research, teaching, tutoring

Organic Chemistry

EDUCATION AND TRAINING

2002-2006

Post-doc research stage in Chemistry

University of Pisa, Italy

2001-2002

Post-doc research stage in Chemistry

Columbia University, New York, USA

1997-2001

PhD in Chemistry

University of Pisa, Italy

1990-2001

BSc and MSc degree in Chemistry

University of Pisa, Italy

WORK ACTIVITIES

- Editorial activity**
- 2013-2019 Member of the Editorial Board of the journal *Chirality*, published by Wiley
 - From 2019 Associate Editor of the journal *Chirality*, published by Wiley (see last page for detailed activity)
 - Referee for several journals, including *Nature Communications*, *Angewandte Chemie International Edition*, *Advanced Optical Materials*, *Journal of the American Chemical Society*, *Chemical Communications*, *Journal of Organic Chemistry*, *ACS Omega*, *Chemistry – A European Journal*, *Journal of Natural Products*, *Tetrahedron*, *Chirality*, *Biomacromolecules*, *Organic Letters*, *Chemical Physics Letters*, *RSC Advances*, *European Journal of Organic Chemistry*, *ChemMedChem*, *Journal of Physical Chemistry*, *Physical Chemistry Chemical Physics*, *Beilstein Journal of Organic Chemistry*, *Marine Drugs*, *Molecules*.
- International conferences**
- Co-organizer of *CD2019 - 17th International Conference on Chiroptical Spectroscopy* (Pisa, Italy, 23-27/06/2019)
 - Co-organizer of *Chemobionics* (Pisa, Italy, 5-7/09/2022)
 - Member of the scientific committee of the series of conferences *International Conference on Chiroptical Spectroscopy*
- Invited presentations**
- CD2011 – 13th International Conference on Chiroptical Spectroscopy (Oxford, UK, 24-28/07/2011)
 - CD2013 – 14th International Conference on Chiroptical Spectroscopy (Nashville, TN, USA, 9-13/06/2013)
 - CD2015 - 15th International Conference on Chiroptical Spectroscopy (Sapporo, Japan, 30/08-03/09/2015)
 - 28th International Symposium on Chiral Discrimination (Heidelberg, Germany, 24-27/07/2016)
 - CD2017 - 17th International Conference on Chiroptical Spectroscopy (Rennes, France, 11-15/06/2017)
 - Hel4Chiroled Training course (online, 9-11/12/2020)
 - GDR Chirafun days (online, 19-21/04/2021)
 - Chirtaly21 (Matera, Italy, 19-21/09/2022)
- Research grants**
- PRA project n. 2020_77 "Investigation of the effects of endocrine disruptors on thyroid function and carcinogenesis", financed by University of Pisa (member)
 - PRIN project n. 2017_2M3K5N "Towards a Cheap and portable Instrument for bioAnalysis based on enAntiospecific luminescence and aBSorption essays (CHIRALAB)", financed by MIUR (member)
 - PRA project n. 2017_75 "Transition metal compounds as potential antitumoral agents", financed by University of Pisa (member)
- Research interests**
- Structural investigation of natural products, biomolecules, biomimetic systems and supramolecular adducts, and of organic compounds endowed with biological and pharmaceutical activity
 - Design, development and structural investigation of organic compounds, oligomers and polymers employed as active layers in technological devices
 - Structural elucidation of organic and organometallic molecules employed as chiral catalysts and auxiliaries in enantioselective catalysis and other molecular recognition processes
 - Development of new methods for stereochemical determinations by means of spectroscopic techniques (NMR, CD, VCD)
 - Molecular modelling of organic molecules with molecular mechanics, semi-empirical and ab initio methods
 - Non-empirical calculations of chiroptical and electronic properties of organic molecules and metal complexes

ADDITIONAL INFORMATION

- Publications**
- Total number of publications in peer-review journals: **239**
 Total number of publications in peer-review journals in the last 5 years (2019-2023): **55**
 Total Impact Factor (IF2022): **1417.04**
 Total number of citations (scopus): **9305**; h index (scopus): **46**

List of publications of the last 5 years:

- 1) H. Yin, W. J. Dan, B. Y. Fan, C. Guo, K. Wu, D. Li, K. F. Xian, G. Pescitelli,* J.-M. Gao Anti-inflammatory and α -Glucosidase Inhibitory Activities of Labdane and Norlabdane Diterpenoids from the Rhizomes of *Amomum villosum*; *Journal of Natural Products*, **2019**, *82*, 2963-2971.
- 2) M. Vargiu, L. Favero, A. Menichetti, V. Di Bussolo, F. Marchetti, G. Pescitelli, S. Di Pietro, M. Pineschi Direct enantioselective vinylogous Mannich-type reactions of acyclic enals: New experimental insights into the E/Z-dilemma; *Chirality*, **2019**, *31*, 522-533.
- 3) G. Pescitelli,* S. Lüdeke, M. Górecki, L. Di Bari Symmetry-Dependent Vibrational Circular Dichroism Enhancement in Co(II) Salicylaldiminato Complexes; *Journal of Physical Chemistry Letters*, **2019**, *10*, 650-654.
- 4) A. Menichetti, F. Berti, L. Guazzelli, L. Favero, S. Di Pietro, G. Pescitelli, M. Pineschi Organocatalytic alkylation of carbohydrate-containing aldehydes with dihydroquinoline N,O-acetals: Absolute configuration of 1,2-dihydroquinolines; *Chirality*, **2019**, *31*, 127-137.
- 5) D. Jakšić, M. S. Klaric, I. Cmolatac, N. S. Vujičić, V. Smrečki, M. Górecki, G. Pescitelli, I. Piantanida Unique aggregation of sterigmatocystin in water yields strong and specific circular dichroism response allowing highly sensitive and selective monitoring of bio-relevant interactions; *Marine Drugs*, **2019**, *17*, 629.
- 6) W.-B. Han, Y.-J. Zhai, Y. Gao, H. Y. Zhou, J. Xiao, G. Pescitelli, J.-M. Gao Cytochalasins and an Abietane-Type Diterpenoid with Allelopathic Activities from the Endophytic Fungus *Xylaria* Species; *Journal of Agricultural and Food Chemistry*, **2019**, *67*, 3643-3650.
- 7) M. Górecki, V. Zullo, A. Iuliano, G. Pescitelli* On the absolute stereochemistry of tolterodine: A circular dichroism study; *Pharmaceuticals*, **2019**, *12*, 21.
- 8) C. Dee, F. Zinna, W. R. Kitzmann, G. Pescitelli, K. Heinze, L. Di Bari, M. Seitz Strong circularly polarized luminescence of an octahedral chromium(III) complex; *Chemical Communications*, **2019**, *55*, 13078-13081.
- 9) M. A. M. Capozzi, V. Frascaro, G. Pescitelli, C. Cardellicchio New insights into the titanium-mediated enantioselective oxidation of fluorinated aryl benzyl sulfides and aryl phenacyl sulfides; *Tetrahedron*, **2019**, *75*, 2406-2412.
- 10) G. Albano, M. Górecki, G. Pescitelli, L. Di Bari, T. Jávorfí, R. Hussain, G. Siligardi Electronic circular dichroism imaging (CDi) maps local aggregation modes in thin films of chiral oligothiophenes; *New Journal of Chemistry*, **2019**, *43*, 14584-14593.
- 11) F. Zinna, G. Pescitelli, L. Di Bari Circularly polarized light at the mirror: Caveats and opportunities; *Chirality*, **2020**, *32*, 765-769.
- 12) F. Zinna, G. Albano, A. Taddeucci, T. Colli, L. A. Aronica, G. Pescitelli, L. Di Bari Emergent Nonreciprocal Circularly Polarized Emission from an Organic Thin Film; *Advanced Materials*, **2020**, *32*, 2002575.
- 13) S. M. Zhang, L. Zhang, L. J. Kou, Q. L. Yang, B. Qu, G. Pescitelli,* Z. Xie Isolation, stereochemical study, and racemization of (\pm)-pratenone A, the first naturally occurring 3-(1-naphthyl)-2-benzofuran-1(3H)-one polyketide from a marine-derived actinobacterium; *Chirality*, **2020**, *32*, 299-307.
- 14) X. Yin, T. M. L. Tuong, J. M. Tian, G. Pescitelli,* J.-M. Gao Ganorbifates A and B from *Ganoderma orbiforme*, determined by DFT calculations of NMR data and ECD spectra; *Chemical Communications*, **2020**, *56*, 10195-10198.
- 15) K. Matsumoto, K. Miki, R. Tanaka, T. Matsuda, T. Nehira, Y. Hirao, H. Kurata, G. Pescitelli, T. Kubo Chiral Tetraarylmethane Derivative with Metal-Coordinating Ability; *Asian Journal of Organic Chemistry*, **2020**, *9*, 652-659.
- 16) M. Masi, P. Reveglia, R. Baaijens-Billones, M. Górecki, G. Pescitelli, S. Savocchia, A. Evidente Phytotoxic Metabolites from Three *Neofusicoccum* Species Causal Agents of *Botryosphaeria* Dieback in Australia, Luteopyroxin, Neoanthraquinone, and Luteoxepinone, a Disubstituted Furo- α -pyrone, a Hexasubstituted Anthraquinone, and a Trisubstituted Oxepi-2-one from *Neofusicoccum luteum*; *Journal of Natural Products*, **2020**, *83*, 453-460.
- 17) M. Masi, P. Nocera, A. Boari, M. C. Zonno, G. Pescitelli, S. Sarrocco, R. Baroncelli, G. Vannacci, M. Vurro, A. Evidente Secondary metabolites produced by *Colletotrichum lupini*, the causal agent of anthracnose of lupin (*Lupinus* spp.); *Mycologia*, **2020**, *112*, 533-542.
- 18) M. Masi, A. Cimmino, F. Salzano, R. Di Lecce, M. Górecki, V. Calabrò, G. Pescitelli,* A. Evidente Higginsianins D and E, Cytotoxic Diterpenoids Produced by *Colletotrichum higginsianum*; *Journal of Natural Products*, **2020**, *83*, 1131-1138.
- 19) S. Ka, M. Masi, N. Merindol, R. Di Lecce, M. B. Plourde, M. Seck, M. Górecki, G. Pescitelli, I. Desgagne-Penix, A. Evidente Gigantelline, gigantellinine and gigancrinine, cherylline- and crinine-type alkaloids isolated from *Crinum jagus* with anti-acetylcholinesterase activity; *Phytochemistry*, **2020**, *175*, 112390.
- 20) S. Di Silvio, F. Bologna, L. Milli, D. Giuri, N. Zanna, N. Castellucci, M. Monari, M. Calvaresi, M.

- Górecki, G. Angelici, C. Tomasini, G. Pescitelli* Elusive π -helical peptide foldamers spotted by chiroptical studies; *Organic and Biomolecular Chemistry*, **2020**, *18*, 865-877.
- 21) F. Del Bello, A. Bonifazi, G. Giorgioni, A. Piergentili, M. G. Sabbieti, D. Agas, M. Dell'Aera, R. Matucci, M. Górecki, G. Pescitelli, G. Vistoli, W. Quaglia Novel Potent Muscarinic Receptor Antagonists: Investigation on the Nature of Lipophilic Substituents in the 5-and/or 6-Positions of the 1,4-Dioxane Nucleus; *Journal of Medicinal Chemistry*, **2020**, *63*, 5763-5782.
 - 22) S. Bashiri, J. Abdollahzadeh, R. Di Lecce, D. Alioto, M. Górecki, G. Pescitelli, M. Masi, A. Evidente Rabenchromenone and Rabenzophenone, Phytotoxic Tetrasubstituted Chromenone and Hexasubstituted Benzophenone Constituents Produced by the Oak-Dieback-Associated Fungus *Fimmetariella rabenhorstii*; *Journal of Natural Products*, **2020**, *83*, 447-452.
 - 23) G. Albano, G. Pescitelli,* L. Di Bari Chiroptical Properties in Thin Films of π -Conjugated Systems; *Chemical Reviews*, **2020**, *120*, 10145-10243.
 - 24) R. Di Lecce, M. Masi, B. T. Linaldeddu, G. Pescitelli, L. Maddau, A. Evidente Bioactive secondary metabolites produced by the emerging pathogen *Diplodia olivarum*; *Phytopathologia Mediterranea*, **2021**, *60*, 129-138.
 - 25) D. Ghosh, M. Górecki, G. Pescitelli, K. K. Damodaran Enantioselective Gel Phase Synthesis of Metal-Organic Materials; *Angewandte Chemie-International Edition*, **2021**, *60*, 1-6.
 - 26) M. Górecki, M. Enamullah, M. A. Islam, M. K. Islam, S. P. Hofert, D. Woschko, C. Janiak, G. Pescitelli* Synthesis and Characterization of Bis[(R or S)-N-1-(X-C6H4)ethyl-2-oxo-1-naphthalidinato- κ^2 N,O]- Λ -cobalt(II) (X = H, p-CH₃O, p-Br) with Symmetry- and Distance-Dependent Vibrational Circular Dichroism Enhancement and Sign Inversion; *Inorganic Chemistry*, **2021**, *60*, 14116-14131.
 - 27) M. Masi, F. Sautua, R. Zatout, S. Castaldi, L. Arrico, R. Isticato, G. Pescitelli, M. A. Carmona, A. Evidente Phaseocyclopentenones A and B, Phytotoxic Penta- and Tetrasubstituted Cyclopentenones Produced by *Macrophomina phaseolina*, the Causal Agent of Charcoal Rot of Soybean in Argentina; *Journal of Natural Products*, **2021**, *84*, 459-465.
 - 28) M. Pollastrini, F. Lipparini, L. Pasquinelli, F. Balzano, G. U. Barretta, G. Pescitelli, G. Angelici A Proline Mimetic for the Design of New Stable Secondary Structures: Solvent-Dependent Amide Bond Isomerization of (S)-Indoline-2-carboxylic Acid Derivatives; *Journal of Organic Chemistry*, **2021**, *86*, 7946-7954.
 - 29) M. N. Rebizi, K. Sekkoum, A. Petri, G. Pescitelli, N. Belboukhari Synthesis, enantioseparation, and absolute configuration assignment of iminoflavans by chiral high-performance liquid chromatography combined with online chiroptical detection; *Journal of Separation Science*, **2021**, *44*, 3551-3561.
 - 30) V. Zullo, M. Górecki, L. Guazzelli, A. Mezzetta, G. Pescitelli, A. Iuliano Exploiting isohexide scaffolds for the preparation of chiral ionic liquids tweezers; *Journal of Molecular Liquids*, **2021**, *322*, 114528.
 - 31) L. Guo, Q. Yang, G. Wang, S. Zhang, M. Liu, X. Pan, G. Pescitelli,* Z. Xie Ring D-Modified and Highly Reduced Angucyclinones From Marine Sediment-Derived *Streptomyces* sp; *Frontiers in Chemistry*, **2021**, *9*, 761.
 - 32) V. Zullo, A. Iuliano, G. Pescitelli, F. Zinna Tunable Excimer Circularly Polarized Luminescence in Isohexide Derivatives from Renewable Resources; *Chemistry – A European Journal*, **2022**, *28*, e202104226.
 - 33) O. G. Willis, F. Zinna, G. Pescitelli, C. Micheletti, L. Di Bari Remarkable near-infrared chiroptical properties of chiral Yb, Tm and Er complexes; *Dalton Transactions*, **2022**, *51*, 518-523.
 - 34) O. G. Willis, F. Petri, G. Pescitelli, A. Pucci, E. Cavalli, A. Mandoli, F. Zinna, L. Di Bari Efficient 1400-1600 nm Circularly Polarized Luminescence from a Tuned Chiral Erbium Complex; *Angewandte Chemie - International Edition*, **2022**, *61*, e202208326.
 - 35) Gennaro Pescitelli* ECD exciton chirality method today: a modern tool for determining absolute configurations; *Chirality*, **2022**, *34*, 333-363 [review].
 - 36) Y. Nikolova, B. Fabri, P. M. Lorente, A. Guarnieri-Ibanez, A. de Aguirre, Y. Soda, G. Pescitelli, F. Zinna, C. Besnard, L. Guenee, D. Moreau, L. Di Bari, E. Bakker, A. I. Poblador-Bahamonde, J. Lacour Chemo- and Regioselective Multiple C(sp²)-H Insertions of Malonate Metal Carbenes for Late-Stage Functionalizations of Azahelicenes; *Angewandte Chemie - International Edition*, **2022**, *61*, e202210798.
 - 37) M. Masi, S. Castaldi, F. Sautua, G. Pescitelli,* M. A. Carmona, A. Evidente Truncatenolide, a Bioactive Disubstituted Nonenolide Produced by *Colletotrichum truncatum*, the Causal Agent of Anthracnose of Soybean in Argentina: Fungal Antagonism and SAR Studies; *Journal of Agricultural and Food Chemistry*, **2022**, *70*, 9834-9844.
 - 38) M. Górecki, F. Lipparini, G. Albano, T. Jávorfi, R. Hussain, G. Siligardi, G. Pescitelli, L. Di Bari Electronic Circular Dichroism Imaging (ECDi) Casts a New Light on the Origin of Solid-State Chiroptical Properties; *Chemistry – A European Journal*, **2022**, *28*, e202103632.
 - 39) M. Enamullah, M. M. Rahman, M. K. Islam, D. Woschko, C. Janiak, G. Pescitelli*

- Characterization of Diastereomeric Equilibria of Pseudotetrahedral Bis[(R or S)-N-1-(Ar)Ethylsalicylaldiminato- κ^2 -N,O]zinc(II) with Λ/Δ -Chirality-At-Metal Induction; *Chemistry Open*, **2022**, *11*, e202200116.
- 40) G. Albano, F. Zinna, F. Urraci, M. A. M. Capozzi, G. Pescitelli, A. Punzi, L. Di Bari, G. M. Farinola Aggregation Modes of Chiral Diketopyrrolo[3,4-c]pyrrole Dyes in Solution and Thin Films; *Chemistry - A European Journal*, **2022**, *28*, e202201178.
 - 41) G. Albano, G. Pescitelli, L. Di Bari Reciprocal and Non-reciprocal Chiroptical Features in Thin Films of Organic Dyes; *ChemNanoMat*, **2022**, *8*, e202200219 [review].
 - 42) G. Albano, M. Gorecki, T. Javorfi, R. Hussain, G. Siligardi, G. Pescitelli,* L. Di Bari Spatially resolved chiroptical study of thin films of benzo[1,2-b:4,5-b']dithiophene-based oligothiophenes by synchrotron radiation electronic circular dichroism imaging (SR-ECDI) technique; *Aggregate*, **2022**, *3*, e193.
 - 43) M. Pollastrini, L. Pasquinelli, M. Górecki, F. Balzano, L. Cupellini, F. Lipparini, G. Uccello Barretta, F. Marchetti, G. Pescitelli,* G. Angelici A Unique and Stable Polyproline I Helix Sorted out from a Conformational Equilibrium by Solvent Polarity; *Journal of Organic Chemistry*, **2022**, *87*, 13715-13725.
 - 44) X.-Z. Fu, S.-M. Zhang, G.-F. Wang, Q.-L. Yang, L. Guo, G. Pescitelli,* Z.-P. Xie Atypical Angucyclinones with Ring Expansion and Cleavage from a Marine Streptomyces sp.; *Journal of Organic Chemistry*, **2022**, *87*, 15998–16010.
 - 45) K. F. Zhang, N. Saleh, M. Swierczewski, A. Rosspeintner, F. Zinna, G. Pescitelli, C. Besnard, L. Guénee, T. Bürgi, J. Lacour Multistate Aggregation-Induced Chiroptical Properties of Enantiopure Disulfide-Mediated Bispyrene Macrocycles; *Angewandte Chemie - International Edition*, **2023**, *62*, e202304075.
 - 46) Y. J. Zhai, Z. Z. Zhou, L. L. Gao, J. N. Li, G. Pescitelli, J. M. Gao, W. B. Han Ethylidene-Tethered Chromene-Pyrone Hybrids as Potential Plant-Growth Regulators from an Endolichenic Phaeosphaeria Species; *Journal of Agricultural and Food Chemistry*, **2023**, *71*, 4615-4624.
 - 47) D. Pecorari, E. Giuliani, A. Mazzanti, S. Stagni, V. Fiorini, G. Vigarani, F. Zinna, G. Pescitelli, M. Mancinelli Synthesis and Stereodynamic and Emission Properties of Dissymmetric Bis-Aryl Carbazole Boranes and Identification of a CPL-Active B-C Atropisomeric Compound; *Journal of Organic Chemistry*, **2023**, *88*, 871-881.
 - 48) 7. D. Pál, C. Besnard, A. de Aguirre, A. I. Poblador-Bahamonde, G. Pescitelli, J. Lacour 2,4,5,7-Tetranitrofluorenone Oximate for the Naked-Eye Detection of H-Bond Donors and the Chiroptical Sensing of Enantiopure Reagents; *Chemistry - A European Journal*, **2023**, *29*, e202302169.
 - 49) 8. K. Nowak, O. Morawski, F. Zinna, G. Pescitelli, L. Di Bari, M. Górecki, M. Grzybowski Strong Chiroptical Effects in the Absorption and Emission of Macrocycles Based on the 2,5-Diaminoterephthalate Minimal Fluorophore; *Chemistry - A European Journal*, **2023**, *29*, e202300932.
 - 50) C. A. Guido, F. Zinna, G. Pescitelli* CPL calculations of [7]helicenes with alleged exceptional emission dissymmetry values; *Journal of Materials Chemistry C*, **2023**, *11*, 10474-10482.
 - 51) G. Albano, F. Zinna, A. Taddeucci, M. A. M. Capozzi, G. Pescitelli, A. Punzi, L. Di Bari, G. M. Farinola Chiral Diketopyrrolo[3,4-c]pyrrole-1,2,3-1H-triazole Dyes with Highly Tuneable Properties in Solution and Thin Films; *Chemistry - A European Journal*, **2023**, *29*, e202301394.
 - 52) F. Zinna, G. Pescitelli Magnetic Circularly Polarized Luminescence of Organic Compounds; *European Journal of Organic Chemistry*, **2023**, *26*, e202300509.
 - 53) G. Albano, A. Taddeucci, G. Pescitelli, L. Di Bari Spatially Resolved Chiroptical Spectroscopies Emphasizing Recent Applications to Thin Films of Chiral Organic Dyes; *Chemistry - A European Journal*, **2023**, in press. DOI: 10.1002/chem.202301982.
 - 54) G. Preda, S. Jung, G. Pescitelli, L. Cupellini, D. Armspach, D. Pasini Enabling Stereochemical Communication and Stimuli-Responsive Chiroptical Properties in Biphenyl-Capped Cyclodextrins; *Chemistry - A European Journal*, **2023**, in press. DOI: 10.1002/chem.202302376.