

Europass Curriculum Vitae



Personal information

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Work experience

Dates 2015 up to now
Occupation or position held Associate Professor of Organic Chemistry
Main activities and responsibilities Teaching and Research Activity
Name and address of employer Sapienza University of Rome, P.le Aldo Moro 5, 00185 Roma (Italy)

Dates 2004-2015
Occupation or position held Assistant Professor of Organic Chemistry
Main activities and responsibilities Research Activity
Name and address of employer Sapienza University of Rome, P.le Aldo Moro 5, 00185 Roma (Italy)

Dates 2000-2004
Occupation or position held Temporary Research Associate in Organic Chemistry
Main activities and responsibilities Research Activity
Name and address of employer Sapienza University of Rome, P.le Aldo Moro 5, 00185 Roma (Italy)

Education and training

Dates May 1998
Title of qualification awarded Ph.D. degree in Pharmaceutical Sciences
Name and type of organisation providing education and training Sapienza University of Rome, P.le Aldo Moro 5, 00185 Roma (Italy)

Dates July 1993
Title of qualification awarded Degree in Medicinal Chemistry with full marks ("magna cum laude")
Name and type of organisation providing education and training Sapienza University of Rome, P.le Aldo Moro 5, 00185 Roma (Italy)

Mother tongue(s) **Italian**

Other language(s)

Self-assessment

European level (*)

English

English

Understanding		Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production	
B1		B1		B1		B1	

(*) [Common European Framework of Reference for Languages](#)

Annexes

Scientific Publications
(2017-2010)

1. Aiello, F.; Balzano, F.; Ghirga, F.; D'Acquarica, I.; Botta, B.; Uccello-Barretta, G.; Quaglio, D. *First detection of a ruthenium-carbene-resorc[4]arene complex during the progress of a metathesis reaction*. **Eur. J. Org. Chem.** (2017) 2407–2415.
2. Di Marcotullio, L.; Infante, P.; Alfonsi, R.; Ingallina, C.; Quaglio, D.; D'Acquarica, I.; Ghirga, F.; Di Magno, L.; Canettieri, G.; Screpanti, I.; Gulino, A.; Botta, B.; Mori, M.; Bernardi, F. "Inhibition of Hedgehog-dependent tumors and cancer stem cells by a newly-identified naturally occurring chemotype". **Cell Death Dis.** 7 (2016) e2376.
3. Iovine, V.; Benni, I.; Sabia, R.; D'Acquarica, I.; Fabrizi, G.; Botta, B.; Calcaterra, A. "Total synthesis of kuwanol E". **J. Nat. Prod.**, 79 (2016) 2495–2503.
4. Ingallina, C.; D'Acquarica, I.; Delle Monache, G.; Ghirga, F.; Quaglio, D.; Ghirga, P.; Berardozi, S.; Markovic, V.; Botta, B. "The Pictet-Spengler reaction still on stage". **Curr. Pharm. Des.**, 22 (2016) 1808–1850.
5. D'Acquarica, I.; Ghirga, F.; Quaglio, D.; Cerreto, A.; Ingallina, C.; Tafi, A.; Botta, B. "Molecular recognition of natural products by resorc[4]arene receptors". **Curr. Pharm. Des.**, 22 (2016) 1715–1729.
6. Bonamore, A.; Calisti, L.; Calcaterra, A.; Ismail, O.H.; Gargano, M.; D'Acquarica, I.; Botta, B.; Boffi, A.; Macone, A. "A novel enzymatic strategy for the synthesis of substituted tetrahydroisoquinolines". **ChemistrySelect**, 1 (2016) 1525–1528.
7. Ghirga, I.; Quaglio, D.; Ghirga, P.; Berardozi, S.; Zappia, G.; Botta, B.; Mori, M.; D'Acquarica, I. "Occurrence of enantioselectivity in nature: the case of (S)-norcoclaurine". **Chirality**, 28 (2016) 169–180.
8. Ghirga, F.; Quaglio, D.; Iovine, V.; Botta, B.; Pierini, M.; Mannina, L.; Sobolev, A.P.; Ugozzoli, F.; D'Acquarica, I. "Synthesis of a double-spanned-resorc[4]arene via ring-closing metathesis and calculation of aggregation propensity". **J. Org. Chem.**, 79 (2014) 11051–11060.
9. Cavazzini, A.; Marchetti, N.; Guzzinati, R.; Pierini, M.; Ciogli, A.; Kotoni, D.; D'Acquarica, I.; Villani, C.; Gasparini, F. "Enantioseparation by ultra-high-performance liquid chromatography". **TrAC-Trends Anal. Chem.**, 63 (2014) 95–103.
10. D'Acquarica, I.; Kotoni, D.; Ciogli, A.; Pierini, M.; Kocergin, J.; Ritchie, H.; Villani, C.; Gasparini, F. "The evolution of chiral stationary phases from HPLC to UHPLC". **LC-GC Europe**, 27 (2014) 128–137.
11. D'Acquarica, I.; Calcaterra, A.; Sacco, F.; Balzano, F.; Aiello, F.; Tafi, A.; Pesci, N.; Uccello-Barretta, G.; Botta, B. "Stereochemical preference of 2-deoxycytidine for chiral bis(diamido)-bridged basket resorc[4]arenes". **Chirality**, 25 (2013) 840–851.
12. Ghirga, F.; D'Acquarica, I.; Delle Monache, G.; Toscano, S.; Mannina, L.; Sobolev, A.P.; Ugozzoli, F.; Crocco, D.; Antiochia, R.; Botta, B. "Undecenyl resorc[4]arene in the chair conformation as preorganized synthon for olefin metathesis". **RSC Adv.**, 3 (2013) 17567–17576.
13. Ghirga, F.; D'Acquarica, I.; Delle Monache, G.; Mannina, L.; Molinaro, C.; Nevola, L.; Sobolev, A.P.; Pierini, M.; Botta, B. "Reaction of nitrosonium cation with resorc[4]arenes activated by supramolecular control: covalent bond formation". **J. Org. Chem.**, 78 (2013) 6935–6946.
14. Kotoni, D.; Ciogli, A.; D'Acquarica, I.; Kocergin, J.; Szczerba, T.; Ritchie, H.; Villani, C.; Gasparini, F. "Enantioselective ultra-high and high performance liquid chromatography: A comparative study of columns based on the Whelk-O1 selector". **J. Chromatogr. A**, 1269 (2012) 226–241.

15. Kotoni, D.; Ciogli, A.; Molinaro, C.; D'Acquarica, I.; Kocergin, J.; Szczerba, T.; Ritchie, H.; Villani, C.; Gasparri, F. "Introducing enantioselective ultrahigh-pressure liquid chromatography (eUHPLC): theoretical inspections and ultrafast separations on a new sub-2- μm Whelk-O1 stationary phase". **Anal. Chem.**, 84 (2012) 6805–6813.
 16. Filippi, A.; Frascchetti, C.; Piccirillo, S.; Rondino, F.; Botta, B.; D'Acquarica, I.; Calcaterra, A.; Speranza, M. "Chirality effects on the IRMPD spectra of basket resorcinarene/nucleoside complexed". **Chem. Eur. J.**, 18 (2012) 8320–8328.
 17. Kotoni, D.; D'Acquarica, I.; Ciogli, A.; Villani, C.; Capitani, D.; Gasparri, F. "Design and evaluation of hydrolytically stable bidentate urea-type stationary phases for hydrophilic interaction chromatography". **J. Chromatogr. A**, 1232 (2012) 196–211.
 18. Cabri, W.; D'Acquarica, I.; Simone, P.; Di Iorio, M.; Di Mattia, M.; Gasparri, F.; Giorgi, F.; Mazzanti, A.; Pierini, M.; Quaglia, M.; Villani, C. "Stereolability of dihydroartemisinin, an antimalarial drug: a comprehensive thermodynamic investigation – Part 1". **J. Org. Chem.**, 76 (2011) 1751–1758.
 19. Cabri, W.; D'Acquarica, I.; Simone, P.; Di Iorio, M.; Di Mattia, M.; Gasparri, F.; Giorgi, F.; Mazzanti, A.; Pierini, M.; Quaglia, M.; Villani, C. "Stereolability of dihydroartemisinin, an antimalarial drug: a comprehensive kinetic investigation – Part 2". **J. Org. Chem.**, 76 (2011) 4831–4840.
 20. D'Acquarica, I.; Cerreto, A.; Delle Monache, G.; Subrizi, F.; Boffi, A.; Tafi, A.; Forli, S.; Botta, B. "N-Linked peptidoresorc[4]arene-based receptors as noncompetitive inhibitors for α -chymotrypsin". **J. Org. Chem.**, 76 (2011) 4396–4407.
 21. Badaloni, E.; Barbarino, M.; Cabri, W.; D'Acquarica, I.; Forte, M.; Gasparri, F.; Giorgi, F.; Pierini, M.; Simone, P.; Ursini, O.; Villani, C. "Efficient organic monoliths prepared by γ -radiation induced polymerization in the evaluation of histone deacetylase inhibitors by capillary(nano)-high performance liquid chromatography and ion trap mass spectrometry". **J. Chromatogr. A**, 1218 (2011) 3862–3875.
 22. Botta, B.; Frascchetti, C.; D'Acquarica, I.; Sacco, F.; Mattay, J.; Letzel, M. C.; Speranza, M. "Unprecedented gas-phase chiroselective logic gates". **Org. Biomol. Chem.**, 9 (2011) 1717–1719.
 23. Ciogli, A.; D'Acquarica, I.; Gasparri, F.; Molinaro, C.; Rompietti, R.; Simone, P.; Villani, C.; Zappia, G. "Hybrid polyacrylamide chiral stationary phases for HPLC prepared by surface-initiated photopolymerization". **J. Sep. Sci.**, 33 (2010) 3022–3032.
 24. Moni, L.; Ciogli, A.; D'Acquarica, I.; Dondoni, A.; Gasparri, F.; Marra, A. "Synthesis of sugar-based silica gels by copper-catalysed azide-alkyne cycloaddition via a single-step azido-activated silica intermediate and the use of the gels in hydrophilic interaction chromatography". **Chem. Eur. J.**, 16 (2010) 5712–5722.
 25. D'Acquarica, I.; Gasparri, F.; Kotoni, D.; Pierini, M.; Villani, C.; Cabri, W.; Di Mattia, M.; Giorgi, F. "Stereodynamic investigation of labile stereogenic centres in dihydroartemisinin". **Molecules**, 15 (2010) 1309–1323.
 26. Speranza, M.; D'Acquarica, I.; Frascchetti, C.; Botta, B.; Tafi, A.; Bellucci, L.; Zappia, G. "Diastereoselective gas-phase ion/molecule reactions of ethanolamine neurotransmitter/amido[4]resorcinarene adducts". **Int. J. Mass. Spectrom.**, 291 (2010) 84–89.
 27. Badaloni, E.; Cabri, W.; Ciogli, A.; D'Acquarica, I.; Deias, R.; Gasparri, F.; Giorgi, F.; Kotoni, D.; Villani, C. "Extending the use of the "Inverted Chirality Columns Approach" for enantiomeric excess evaluation in absence of reference compounds: application to a water-soluble camptothecin derivative". **J. Chromatogr. A**, 1217 (2010) 1024–1032.
 28. Cancelliere G.; Ciogli, A.; D'Acquarica, I.; Gasparri, F.; Kocergin, J.; Misiti, D.; Pierini, M.; Ritchie, H.; Simone, P.; Villani, C. "Transition from enantioselective high performance to ultra high performance liquid chromatography: A case study of a brush-type chiral stationary phase based on sub 5-micron to sub 2-micron silica particles". **J. Chromatogr. A**, 1217 (2010) 990–999.
- Textbooks (Chapters, etc.)
1. Gasparri, F.; D'Acquarica, I.; Pierini, M.; Villani, C.; Ismail, O.H.; Ciogli, A.; Cavazzini, A. "Chiral separations. Chiral dynamic chromatography in the study of stereolabile compounds". In M. Holčapek, W. Craig Byrdwell (Editors), **Handbook of Advances Chromatography/Mass Spectrometry Techniques**. AOCs Press, Elsevier Inc., 2017, p. 89–114.

2. D'Acquarica, I.; Ghirga, F.; Ingallina, C.; Quaglio, D.; Zappia, G.; Uccello-Barretta, G.; Balzano, F.; Botta, B. "*Resorc[4]arenes as preorganized synthons for surface recognition and host-guest chemistry*". In P. Neri, J.L. Sessler, M.-X. Wang (Editors), **Calixarenes and Beyond**. Springer International Publishing (Verlag), 2016, p. 175–193.
3. Menendez, P.; D'Acquarica, I.; Delle Monache, G.; Ghirga, F.; Calcaterra, A.; Barba, M.; Maccone, A.; Boffi, A.; Bonamore, A.; Botta, B. "*Production of bioactive compounds: the importance of Pictet-Spengler reaction in the XXI century*". In V. Cechinel-Filho (Editor), **Plant Bioactives and Drug Discovery: Principles, Practice, and Perspectives**. John Wiley & Sons, Inc., Hoboken, NJ-USA, 2012, p. 453–487.
4. D'Acquarica, I. "*The combination of high performance liquid chromatography with mass spectrometry (HPLC/MS) as a powerful tool for modern organic chemistry*". In E. Marcantoni, G. Renzi (Editors), **Seminars in Organic Synthesis**. Società Chimica Italiana, Roma (Italy), 2011, p. 235–262.
5. Gasparrini, F.; D'Acquarica, I.; Pierini, M.; Villani, C. "*Chiral dynamic chromatography pushed to its extreme low temperature or high speed limits (chiral DUHPLC): a very effective tool in the study of stereolabile compounds*". In W.C. Byrdell, M. Holčapek (Editors), **Extreme Chromatography: Faster, Hotter, Smaller**. AOCS Press, Urbana, IL, 2011, p. 103–128.
6. D'Acquarica, I.; Gasparrini, F.; Misiti, D.; Pierini, M.; Villani, C. "*HPLC chiral stationary phases containing macrocyclic antibiotics: practical aspects and recognition mechanism*" in E. Grushka, N. Grinberg (Editors), **Advances in Chromatography**. CRC Press Taylor & Francis Group, Boca Raton, FL, 2008, 46, p. 108–173.

Patents

Nunziata, A.; Lionetti, G.; Pierri, E.; Botta, B.; Cancelliere, G.; D'Acquarica, I.; Delle Monache, G.; Gasparrini, F.; Nevola, L.; Subissati, D.; Villani, C.; Cassani, M. "Synthesis of resorcin[4]arenes and their use to adsorb nitrogen oxides from tobacco smoke". PCT Int. Appl. (2006) WO 2006136950, Deposit 28.12.2006.

Nunziata, A.; Lionetti, G.; Pierri, E.; Botta, B.; Cancelliere, G.; D'Acquarica, I.; Delle Monache, G.; Gasparrini, F.; Nevola, L.; Subissati, D.; Villani, C.; Cassani, M. "Method of reducing the level of nitrogen oxides in a medium by adsorption with resorcin[4]arenes." Application: EP 1738821, Deposit 03.01.2007.

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