

## CURRICULUM VITAE

### PERSONAL INFORMATION

Name, Surname	<b>Francesca D'Acunzo</b>
Address House number, street name, postcode, city, country	
Telephone	
Fax	
E-mail	<b>Francesca.dacunzo@cnr.it</b>
Website	<b><a href="http://www.isb.cnr.it/istituto/personale/">http://www.isb.cnr.it/istituto/personale/</a></b>
Nationality	<b>Italian</b>
Place and Date of birth	<b>Rome April 19, 1969</b>

### WORK EXPERIENCE

Dates (from – to)	October 2011 to present
Name and address of employer	CNR Institute of Biological Systems (ISB) (former IMC), Rome Unit at Sapienza University of Rome, Department of Chemistry, Edificio Cannizzaro, P.le Aldo Moro, 5 00185 Rome (Italy)
Type of business or sector	Public Research Institution
Occupation or position held	Research Scientist, III level
Dates (from – to)	October 2008 –September 2011
Name and address of employer	Sapienza Università di Roma – Department of Public Health and Infectious Diseases. Piazzale Aldo Moro, 5 – 00185 Rome (Italy)
Type of business or sector	Accademia
Occupation or position held	Postdoctoral fellow
Main activities and responsibilities	Microbiological monitoring of workplace environments; evaluation of quality of water in industrial food processing
Dates	April 2004 – October 2008
Name and address of employer	ICI Rende, Via Salaria 1240 – 00138 Rome (Italy)
Type of business or sector	Pharmaceutical
Occupation or position held	Quality Control Manager and Qualified Person
Main activities and responsibilities	Quality Control of raw materials and finished products; Batch certification in accordance to

	Eudralex
Dates	September 2000-March 2004
Name and address of employer	Sapienza Università di Roma – Chemistry Department. Piazzale Aldo Moro, 5 – 00185 Rome (Italy)
Type of business or sector	Academia
Occupation or position held	Collaborator and Postdoctoral fellow
Main activities and responsibilities	Research on laccase-mediator systems for the EU-supported OXYDELIGN project (grant QLK5-CT-1999-01277; Organization: Stiftelsen STFI Skogsindustrins Tekniska Forskning)

## EDUCATION AND TRAINING

Dates	1996-2000
Name and type of organisation providing education and training	Rutgers, The State University of New Jersey – New Jersey Center for Biomaterials
Main subjects and occupational skills covered	Research on synthesis and characterization of amphiphilic polymers for biomedical applications. HPLC, GPC, Light Scattering, NMR, DSC.
Title of qualification awarded	PhD in Chemistry
Dates	1989 - 1994
Name and type of organisation providing education and training	Sapienza Università di Roma – Chemistry Department.
Principal subjects occupational skills covered	Organic Chemistry and Physical Organic Chemistry. Research on biomimetic enzymatic reactions. GC-FID and GC-MS.
Title of qualification awarded	Laurea (5-year)
Institution ranking	World rank 67; National Rank: 1 (CWUR World University Rankings 2018-2019)

## RESEARCH ACTIVITIES

Research sectors	Synthesis of monomers and polymers; photochemistry; Enzymatic and biomimetic reactions
Recent Scientific Activities	Synthesis of novel monomers towards multistimuli-responsive polymers. Controlled radical polymerizations (RAFT). Studies on polymer aggregation in solution and changes induced by light, temperature, pH Development of photo-NMR techniques for the investigation of photoinduced isomerization reactions Click Chemistry

## Publications (last 5 years)

26. D'Acunzo, F.; Carbonaro, L.; Dalla Cort, A.; Di Sabato, A.; Filippini, D.; Leonelli, F.; Mancini, L.; Gentili, P. Click-Connected 2-(Hydroxyimino)aldehydes for the Design of UV-Responsive Functional Molecules *European Journal of Organic Chemistry* **2020**, <https://doi.org/10.1002/ejoc.202001303>
25. Cruciani F.; Pasquini C.; D'Acunzo F.; D'Annibale A.; Fratoddi I.; Cerra S.; Pulci G.; Bassetti M. Synthesis and characterization of stereoregular  $\pi$ -conjugated polyarylenynes, (-Ar-(E)-CH=CHC $\equiv$ C-)n, decorated with branched bis-alkoxy side chains *Synthetic Metals* **2020**, 269,116538
24. D'Acunzo, F.; Carbonaro, L.; Dalla Cort, A.; Di Sabato, A.; Filippini, D.; Leonelli, F.; Mancini, L.; Gentili, P. Click-Connected 2-(Hydroxyimino)aldehydes for the Design of UV-Responsive Functional Molecules *European Journal of Organic Chemistry* **2020**, <https://doi.org/10.1002/ejoc.202001303>
23. D'Acunzo F.; De Santis S.; Masci G.; M. Nardi.; Renzi P., Sobolev A. A Remarkably Large Phase-Transition Effect in a Random Copolymer of Oligo(ethylene glycol) Methyl Ether Methacrylate (OEGMA)500 Induced by the Photochemistry of the 2-(Hydroxyimino)aldehyde Group *Macromolecular Chemistry and Physics* **2019**, 1900200
22. Gentili P.; Nardi M.; Antignano I.; Cambise P.; D'Abramo M.; D'Acunzo F.; Pinna A.; Ussia E. 2-(Hydroxyimino)aldehydes: Photo- and Physicochemical Properties of a Versatile Functional Group for Monomer Design. *Chemistry – A European Journal* **2018**, 24 (30), 7683-7694
21. Nardi, M.; D'Acunzo, F.; Clemente, M.; Proietti, G.; Gentili, P. A first study on copolymers of a methacrylate containing the 2-(hydroxyimino)aldehyde group and OEGMA. RAFT polymerization and assessment of thermal and photoresponsive polymer behavior. *Polymer Chemistry* **2017**, 8 (29), 4233-4245
20. D'Acunzo, F.; Giannino, D.; Longo, V.; Ciardi, M.; Testone, G.; Mele, G.; Nicolodi, C.; Gonnella, M.; Renna, M.; Arnesi, G.; Schiappa, A.; Ursini, O. Influence of cultivation sites on sterol, nitrate, total phenolic contents and antioxidant activity in endive and stem chicory edible products. *International Journal of Food Sciences and Nutrition* **2017**, 68 (1), 52-64
19. Bernini, R.; Crisante, F.; D'Acunzo, F.; Gentili, P.; Ussia, E. Oxidative cleavage of 1-aryl-isochroman derivatives using the: *Trametes villosa* laccase/1-hydroxybenzotriazole system. *New Journal of Chemistry* **2016**, 40 (4), 3314-3322
18. D'Acunzo, F.; Gentili, P.; Masci, G.; Ursini, O. Towards controlled cationic polymer growth from inorganic oxide defects: Directing the mechanism of polystyrene grafting from  $\gamma$ -irradiated silica. *Polymer (United Kingdom)* **2014**, 55 (20), 5043-5049
17. D'Acunzo, F.; Capitani, D.; Masci, G.; Cherubini, C.; Ursini, O. Polymerization, grafting and adsorption in the presence of inorganic substrates: Thermal polymerization of styrene with untreated and  $\gamma$ -irradiated silica gel as a case study. *Polymer (United Kingdom)* **2013**, 54 (25), 6695-6701
16. D'Acunzo, F.; Del Cimmuto, A.; Marinelli, L.; Aurigemma, C.; De Giusti, M. Ready-to-eat vegetables production with low-level water chlorination. An evaluation of water quality and of its impact on end products. *Annali dell'Istituto Superiore di Sanita* **2012**, 48 (2), 151-160
15. del Cimmuto, A.; D'Acunzo, F.; Marinelli, L.; de Giusti, M.; Boccia, A. Microbiological air quality in an urban solid waste selection plant. *Italian Journal of Public Health* **2010**, 7 (1), 20-27
14. D'Acunzo, F.; Galli, C.; Gentili, P.; Sergi, F. Mechanistic and steric issues in the oxidation of phenolic and non-phenolic compounds by laccase or laccase-mediator systems. the case of bifunctional substrates. *New Journal of Chemistry* **2006**, 30 (4), 583-591
13. D'Acunzo, F.; Lanzalunga, O. First synthesis of a polysaccharide-supported lignin model compound and study of its oxidation promoted by lignin peroxidase. *Biochemical and Biophysical Research Communications* **2004**, 313 (1), 17-21
12. D'Acunzo, F.; Barreca, A. M.; Galli, C. Determination of the activity of laccase, and mediated oxidation of a lignin model compound, in aqueous-organic mixed solvents. *Journal of Molecular Catalysis B: Enzymatic* **2004**, 31 (1-3), 25-30
11. D'Acunzo, F.; Galli, C. First evidence of catalytic mediation by phenolic compounds in the laccase-induced oxidation of lignin models. *European Journal of Biochemistry* **2003**, 270 (17), 3634-3640
10. D'Acunzo, F.; Baiocco, P.; Galli, C. A study of the oxidation of ethers with the enzyme laccase under mediation by two N-OH-type compounds. *New Journal of Chemistry* **2003**, 27 (2), 329-332
9. Cantarella, G.; D'Acunzo, F.; Galli, C. Determination of laccase activity in mixed solvents: Comparison between two chromogens in a spectrophotometric assay. *Biotechnology*

## Publications (&gt;5 years)

and *Bioengineering* **2003**, *82* (4), 395-398

8. D'Acunzo, F., Le, T.-Q., Kohn, J. Alternating multiblock amphiphilic copolymers of PEG and tyrosine-derived diphenols. 2. Self-assembly in aqueous solution and at hydrophobic surfaces. *Macromolecules* **2002**, *35* (25), 9366-9371
7. D'Acunzo, F.; Kohn, J. Alternating multiblock amphiphilic copolymers of PEG and tyrosine-derived diphenols. 1. Synthesis and characterization. *Macromolecules* **2002**, *35* (25), 9360-9365
6. D'Acunzo, F.; Galli, C.; Masci, B. Oxidation of phenols by laccase and laccase-mediator systems. Solubility and steric issues. *European Journal of Biochemistry* **2002**, *269* (21), 5330-5335
5. D'Acunzo, F.; Baiocco, P.; Fabbrini, M.; Galli, C.; Gentili, P. The radical rate-determining step in the oxidation of benzyl alcohols by two N-OH-type mediators of laccase: The polar N-oxyl radical intermediate. *New Journal of Chemistry* **2002**, *26* (12), 1791-1794
4. D'Acunzo, F.; Baiocco, P.; Fabbrini, M.; Galli, C.; Gentili, P. A mechanistic survey of the oxidation of alcohols and ethers with the enzyme laccase and its mediation by TEMPO. *European Journal of Organic Chemistry* **2002**, (24), 4195-4201
3. Baciocchi, E.; D'Acunzo, F.; Galli, C.; Lanzalunga, O. Tertiary:secondary:primary C-H bond relative reactivity in the one-electron oxidation of alkylbenzenes. A tool to distinguish electron transfer from hydrogen atom transfer mechanisms. *Journal of the Chemical Society, Perkin Transactions 2* **1996**, *2*, 133-140
2. Baciocchi, E.; D'Acunzo, F.; Galli, C.; Ioele, M. Oxidation of isopropylbenzene by iron tetraphenylporphyrin: Evidence for the interaction of the cumyl radical with oxygen donors. *Journal of the Chemical Society, Chemical Communications* **1995**, (4), 429-430
1. Baciocchi, E.; d'Acunzo, F.; Galli, C. Steric effects and selectivity in the benzylic hydroxylation by metalloporphyrins and by the fungus *Mortierella isabellina*. *Tetrahedron Letters* **1995**, *36* (2), 315-318

#### ADDITIONAL INFORMATION

Proficient English and French speaker and writer