



Europass Curriculum Vitae



Personal information

First name(s) / Surname(s) **Maria Carafa**

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Nationality Italian

Date of birth 1961

Gender Female

Occupational field Pharmaceutical technology

Work experience

Since November 2008
Associate Professor of Pharmaceutical Technology – Faculty of Pharmacy and Medicine, University "Sapienza", Roma

2001-2008
Associate Professor of Pharmaceutical Technology – Faculty of Pharmacy, University "G. D'Annunzio", Chieti-Pescara

1991-2001
Assistant Professor of Pharmaceutical Technology at the Faculty of Pharmacy of the University "La Sapienza", Rome.

11/4/1988 - 31/10/1988 Researcher - R&D Laboratory - Wellcome Italia S.p.A

September 1987- March 1988 – Researcher - Laboratory of Galenic Formulations - Laboratoires de Pharmacologie Homeopatique DOLISOS Italia S.r.l.

Education and training

Elementary and High School until 1980

1980-1987 Pharmaceutical Chemistry and Technology studies
University "La Sapienza", Rome, Italy

1987 Degree in Pharmaceutical Chemistry and Technology (Laurea)
(110/110 cum laude)
Dissertation on "Novel synthesis of alfa-chetoacids catalyzed
by Palladium" - Supervisor: Prof. Aurelio Romeo

1988 Qualifying examination for Pharmacists

1988 Fellowship "Technological Innovation" by IMI

1988-1991 Ph.D. courses in "Pharmaceutical Sciences" - University "La Sapienza", Rome, Italy

1989 Degree in Pharmacy - University "La Sapienza", Rome, Italy
Dissertation on "Hydrophilic matrices for oral formulations" - Supervisor:
Prof.ssa Eleonora Santucci

1992 Ph. D. in "Pharmaceutical Sciences" - University "La Sapienza", Rome, Italy
Final dissertation on "Polysaccharidic matrix for controlled release
in oral formulations"
Supervisor: Prof. Fulvio M. Riccieri;
Advisors: Prof. Franco Alhaique, Prof.ssa Eleonora Santucci

Personal skills and competences

Preparation and characterization of vesicular systems: phospholipid and surfactant vesicles and pH-sensitive vesicles as drug delivery systems for several pharmaceutical applications: topical, ophthalmic, diagnostic, pulmonary, oral, drug delivery in CNS disorders and cellular targeting.
Deep physico-chemical characterization of vesicular formulations as drug delivery systems.

Mother tongue(s)

Italian

Other language(s)

English
French

Self-assessment

European level ()*

English

French

Understanding		Speaking		Writing	
Listening	Reading	Spoken interaction	Spoken production		
C1	C1	C1	C1	C1	
B1	B1	A2	A2	A2	

(*) [Common European Framework of Reference for Languages](http://www.cedefop.europa.eu)

Additional information

The research programs are carried out in cooperation with:

Dott. Heinz Amenitsch, Institute of Biophysics and Nanosystems Research, Austrian Academy of Sciences, Graz, Austria
Prof Enrico Gratton, Laboratory for Fluorescence Dynamics, Department of Biomedical Engineering, University of California, Irvine, USA
Prof.ssa Ijeoma Uchegbu, School of Pharmacy, University College of London, London, UK.
Dott. Joy Wolfram, Department of Nanomedicine, The Methodist Hospital Research Institute, Houston, USA.
Prof Kanji Kajiwara, Research Institute for Textile Science at Kyoto Institute of Technology, Japan
Dott. Francesco Pampaloni EMBL University of Heidelberg, Germany
Dott Mathias Fleury, Formulacion SA, France
Dott. Christelle Tisserand, Formulacion SA, France
Prof. Federico Bordi, Dipartimento di Fisica, Università "Sapienza" di Roma
Dott. Giulio Caracciolo, Dipartimento di Medicina Molecolare, Università "Sapienza" di Roma
Dott.ssa Daniela Pozzi, Dipartimento di Medicina Molecolare, Università "Sapienza" di Roma
Prof.ssa Irene Bozzoni, Dipartimento di Biologia e Biotecnologie Charles Darwin, Università "Sapienza" di Roma
Prof. Marco Rossi, Dipartimento di Scienze di Base ed Applicate per l'Ingegneria, Università "Sapienza" di Roma
Prof. Massimo Fresta, Dipartimento di Scienze Farmacobiologiche, Università "Magna Graecia" di Catanzaro
Dott.ssa Donatella Paolino, Scienze della Salute, Università "Magna Graecia" di Catanzaro
Dott.ssa Luisa Di Marzio, Dipartimento di Farmacia, Università "G. D'Annunzio" di Chieti
Prof.ssa Maria Grazia Cifone, dipartimento di Medicina clinica, Università degli Studi de L'Aquila
Dott. Andrea Masotti, Ospedale Pediatrico "Bambino Gesù", Roma
Dott. Federico Martini, I.N.M.I. "L. Spallanzani" I.R.C.C.S.
Dott.ssa Chiara Agrati, I.N.M.I. "L. Spallanzani" I.R.C.C.S.
Dott. Stefano Pieretti Istituto Superiore di Sanità, Roma
Prof.ssa Luciana Dini, Dipartimento di Scienze e Tecnologie Biologiche ed Ambientali, Università del Salento, Lecce
Prof.ssa Laura Cantù, Dipartimento di Biotecnologie Mediche e Medicina Traslazionale, Università di Milano
Istituto Italiano di Tecnologia (IIT), Genova

Receiving

Monday and Tuesday 11-13 a.m. and by preliminary appointment (by e-mail)

- 1 **M. Carafa***, c. marianecci, G. lucania, E. marchei, e. Santucci
"New vesicular ampicillin – loaded delivery systems for topical application : characterization, in vitro permeation experiments and antimicrobial activity"
J. Contr. Rel. 95, 67-74 (Amsterdam, The Netherlands, 2004). IF 7.633
- 2 A. Di Stefano, **M. Carafa**, P. Sozio, F. Pinnen, D. Baghiroli, G. Orlando, G. Cannazza, M. Ricciutelli, C. Marianecci, E. Santucci
"Evaluation of rat striatal L-Dopa and DA concentration after intraperitoneal administration of L-Dopa prodrugs in liposomal formulation"
J. Control. Release 99, 293-300 (Amsterdam, The Netherlands, 2004). IF 7.633
- 3 C. Terzano, L. Allegra, F. Alhaique, C. Marianecci, **M. Carafa***
"Non phospholipid vesicles for pulmonary glucocorticoid delivery"
Eur. J. Pharm. Biopharm. 59, 57-62 (Amsterdam, The Netherlands, 2005). IF 3.826
- 4 **M. Carafa***, L. Di Marzio, C. Marianecci, B. Cinque, G. Lucania, K. Kajiwara, M.G. Cifone, E. Santucci
"Designing novel pH-sensitive non-phospholipid vesicle: characterization and cell interaction"
Eur. J. Pharm. Sci. , 28 385-393 (Amsterdam, The Netherlands 2006). IF 2.987
- 5 **Carafa, M***, Marianecci, C., Annibaldi, V., Di Stefano, A., Sozio, P., Santucci, E. Novel O-palmitoylscleroglucan-coated liposomes as drug carriers: Development, characterization and interaction with leuprolide. Int. J. Pharm., 325 155-162. (Amsterdam, The Netherlands 2006). IF 3.458
- 6 Masotti, A., Remollino, L., **Carafa, M.**, Marianecci, C., Santucci, E., Ortaggi, G. (2006).
Synthesis of a novel lipophilic gadolinium complex as a potential MRI contrast agent.
Synlett, (17), 2815-2817. IF 2.655
- 7 A. Masotti, F. Moretti, F. Mancini, G. Russo, N. Di Lauro, P. Checchia, C. Marianecci, **M. Carafa**, E. Santucci, G. Ortaggi Physicochemical and biological study of selected hydrophobic polyethylenimine-based polycationic liposomes and their complexes with DNA
Bioorganic & Medicinal Chemistry 15 (2007) 1504–1515 IF 2.903
- 8 S. Sennato, F. Bordi, C. Cametti, C. Marianecci, **M. Carafa**, M. Cametti, Hybrid Niosome Complexation in the Presence of Oppositely Charged Polyions
Journal of Physical Chemistry B 112(12) (2008) 3720-3727. IF 3.607
- 9 G. Caracciolo, D. Pozzi, R. Caminiti, C. Marianecci, S. Moglioni, **M. Carafa**, H. Amenitsch,
Effect of hydration on the structure of solid-supported niosomal membranes investigated by in situ Energy Dispersive X-ray Diffraction
Chemical Physics Letters 462, 307-312 (Amsterdam, The Netherlands, 2008)
IF 2.145
- 10 Di Marzio L, Marianecci C, Cinque B, Nazzari M, Cimini AM, Cristiano L, Cifone MG, Alhaique F, **Carafa M.**
pH-sensitive non-phospholipid vesicle and macrophage-like cells: Binding, uptake and endocytotic pathway.
Biochimica Biophysica Acta-Biomembranes. vol. 1778, pp. 2749-2756 (Amsterdam, The Netherlands, 2008).
IF 3.389
- 11 **M. Carafa***, C. Marianecci, F. Rinaldi, E. Santucci, S. Tampucci, D. Monti
Span® and Tween® neutral and pH-sensitive vesicles: characterization and *in vitro* skin permeation
Journal of Liposome Research 19, pp 332-340 (London, UK, 2009) IF 1.909
- 12 D. Pozzi, R. Caminiti, C. Marianecci, **M. Carafa**, E. Santucci, S. Candeloro De Sanctis, G. Caracciolo
Effect of Cholesterol on the Formation and Hydration Behaviour of Solid-Supported Niosomal Membranes *Langmuir* 26, pp 2268-2273 (Washington, USA, 2010) IF 4.187
- 13 Andrea Masotti; Paola Vicennati; Anna Alisi; Carlotta Marianecci; Federica Rinaldi; **Maria Carafa**;
Giancarlo Ortaggi
Novel Tween®20 derivatives enable the formation of efficient pH-sensitive drug delivery vehicles for human hepatoblastoma *Bioorganic & Medicinal Chemistry Letters* 20, 3021-3025
(Amsterdam, The Netherlands 2010), IF 2.338
- 14 **M. Carafa**, C. Marianecci, L. Di Marzio, V. De Caro, G. Giandalia, L. I. Giannola, E. Santucci Potential dopamine prodrug-loaded liposomes: preparation, characterization, and *in vitro* stability studies *Journal of Liposome Research* 20, 250–257 (London, UK, 2010) IF 1.909

- 15 Daniela Pozzi, Carlotta Marianecchi, **Maria Carafa**, Cristina Marchini, Maura Montani, Augusto Amici, Giulio Caracciolo Programmed Packaging of Multicomponent Envelope-type Nanoparticle System for Gene Delivery *Applied Physics Letters* 96, 183702-1 -183702-3 2010 (Melville, USA, 2010) IF 3.794
- 16 C Marianecchi; D Paolino; C Celia ; M Fresta; **M Carafa**; F Alhaique
Non-ionic surfactant Vesicles in Pulmonary Glucocorticoid Delivery: Characterization and Interaction with Human Lung Fibroblasts *J. Control. Release* 147 pp.127-135 (Amsterdam, The Netherlands, 2010). IF 7.633
- 17 D Pozzi, C Marianecchi, **M Carafa**, C Marchini, M Montani, A Amici, G Caracciolo
Programmed packaging of multicomponent envelope-type nanoparticle system (MENS). *J. Control. Release* 148, pp e87-e89 (Amsterdam, The Netherlands, 2010). IF 7.633
- 18 Luisa Di Marzio, Carlotta Marianecchi, Mariadea Petrone, Federica Rinaldi, **Maria Carafa**
Novel pH-sensitive non-ionic surfactant vesicles: comparison between Tween 21 and Tween 20 *Colloids and Surface B: Biointerfaces* 82 18–24 (Amsterdam, The Netherlands, 2011). IF 3.554
- 19 Agrati, C. , Marianecchi, C. , Sennato, S. , **Carafa M***, Bordoni, V. , Cimini, E. , Tempestilli, M. , Pucillo, L.P. , Turchi, F. , Martini, F. , Borioni, G. , Bordi, F. Multicompartiment vectors as novel drug delivery systems: Selective activation of T_H lymphocytes after zoledronic acid delivery
Nanomedicine: Nanotechnology, Biology, and Medicine 7 153-161 (Amsterdam, The Netherlands, 2011). IF 6.930
- 20 G Caracciolo, D Pozzi, A L Capriotti, C Marianecchi, **M Carafa**, C Marchini, M Montani, A Amici, H Amenitsch, M A. Digman, E Gratton, S S. Sanchez, A Laganà Factors Determining the Superior Performance of Lipid/DNA/Protamine Nanoparticles over Lipoplexes *J Med Chem* 54 (12) 4160–4171 (Washington, DC, USA, 2011) IF 5.614
- 21 C Marianecchi, **M Carafa***, L Di Marzio, F Rinaldi, C Di Meo, P Matricardi, F Alhaique, T Coviello
A New Vesicle-loaded Hydrogel System Suitable for Topical Applications: Preparation and Characterization” *J Pharm Pharmaceut Sci (www.cspscanada.org)* 14(3) 336 - 346, (Edmonton, Canada, 2011) IF 2.200
- 22 C Marianecchi; F Rinaldi; M Mastriota; S Pieretti; E Trapasso; D Paolino; **M Carafa***
Anti-inflammatory activity of novel ammonium glycyrrhizinate/niosomes delivery system: human and murine models *J. Control. Release* 164 (1) 17-25 (Amsterdam, The Netherlands, 2012) IF 7.633
- 23 Di Marzio Luisa, Esposito Sara, Rinaldi Federica, Marianecchi Carlotta, **Carafa Maria**
Polysorbate 20 vesicles as oral delivery system: in-vitro characterization” *Colloids and Surfaces B: Biointerfaces* 104 200-206 (Amsterdam, The Netherlands, 2013) IF 3.554
- 24 Carlotta Marianecchi, Federica Rinaldi, Luisa Di Marzio, Daniela Pozzi, Giulio Caracciolo, Daniela Manno, Luciana Dini, Donatella Paolino, Christian Celia , **Maria Carafa***
Interaction of pH-sensitive non-phospholipid liposomes with cellular mimetic membranes
Biomedical Microdevices 15 299–309 (New York, USA, 2013) IF 2.718
- 25 C Marianecchi, F Rinaldi, S Esposito, L Di Marzio, **M Carafa*** Niosomes Encapsulating Ibuprofen–Cyclodextrin Complexes: Preparation and Characterization
Current Drug Targets, 2013, 14 (9), 1070-1078 IF 3.848
- 26 C. Celia, E. Trapasso, M. Locatelli, M. Navarra, C.A. Ventura, J. Wolfram, **M. Carafa**, V.M. Morittu, D. Britti, L. Di Marzio, D. Paolino, Anticancer Activity of Liposomal Bergamot Essential Oil (BEO) on Human Neuroblastoma Cells,
Colloids and Surfaces B: Biointerfaces 112, 548-553 (Amsterdam, The Netherlands, 2013) IF 3.554
- 27 Roberto Molinaro, Joy Wolfram, Cinzia Federico, Felisa Cilurzo, Luisa Di Marzio, Cinzia A Ventura, **Maria Carafa**, Christian Celia, Massimo Fresta Polyethylenimine and chitosan carriers for the delivery of RNA interference effectors *Expert Opinion on Drug Delivery*, 10, 1653-1668. (London, UK, 2013). IF 4.869
- 28 Emanuela Gentile, Felisa Cilurzo, Luisa Di Marzio, **Maria Carafa**, Cinzia Anna Ventura, Joy Wolfram, Donatella Paolino, Christian Celia Liposomal chemotherapeutics
Future oncology, 9, 1849-1859 (London, UK, 2013) IF 3.202
- 29 C Marianecchi, F Rinaldi, L Di Marzio, M Mastriota, S Pieretti, C Celia, D Paolino, M Iannone, M Fresta, **M Carafa*** Ammonium glycyrrhizinate-loaded Niosomes as potential nanotherapeutic system for anti-inflammatory activity in murine models *Int. Journal of Nanomedicine*, 9(1), 635 – 651 (Auckland, New Zealand, 2014) IF 3.463
- 30 Carlotta Marianecchi, Luisa Di Marzio, Federica Rinaldi, Christian Celia, Donatella Paolino, Franco Alhaique, Sara Esposito, **Maria Carafa***
Niosomes from 80s to present: the state of the art
Adv Colloid Interface Sci 205, 187–206 (Amsterdam, The Netherlands, 2014) IF 6.169

	<p>Patent - Maria Carafa, Franco Alhaique, Carlotta Marianecchi, Donatella Paolino, Massimo Fresta "Niosomi, polvere liofilizzata di essi e loro uso in terapia" RM/2010/A000002 (7 gennaio 2010)</p> <p>- Maria Carafa, Franco Alhaique, Carlotta Marianecchi, Donatella Paolino, Massimo Fresta "Niosomes, lyophilized powder thereof and their uses in therapy" PCT/IB2011/050041 (5 gennaio 2011) WO 2011/083428 A1 (14 luglio 2011)</p>
Textbooks (Chapters, etc.)	<p>F. Alhaique, C. Marianecchi, E. Santucci, S. Petralito, A. Memoli, L. Di Marzio, M. Carafa "Veicoli cosmetici" in Manuale di Scienze e Tecnologie Cosmetologiche Maurizio Giuliani e Ferdinando Di Iorio ARACNE Editrice S.r.l. Roma pp. 345-384 (2005)</p> <p>M. Carafa, C. Marianecchi, P. Donatella, L. Di Marzio, C. Celia, M. Fresta , F. Alhaique "Novel concept in pulmonary delivery" Chronic Obstructive Pulmonary Disease, ISBN 979-953-307-038-3 InTech - Open Access Publisher <i>in press</i> (2011)</p> <p>Carlotta Marianecchi, Luisa Di Marzio, Federica Rinaldi, Sara Esposito, Maria Carafa "Niosomes" In Fundamentals of Pharmaceutical Nanoscience, ISBN 978-1-4614-9163-7 Eds. Uchegbu, I.F.; Schätzlein, A.; Cheng, W.P.; Lalatsa, A. Springer Science + Business Media New York (2013)</p>