



## Europass Curriculum Vitae

### Personal information

First name(s) / Surname(s) **Tommasina Coviello**  
Address(es) Department of Drug Chemistry and Technologies, "Sapienza" University of Rome, P.le Aldo Moro 5, 00185 Rome, Italy  
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E-mail tommasina.coviello@uniroma1.it  
Nationality Italian  
Date of birth 1959  
Gender female

**Occupational field** (S s/d)  
Pharmaceutical technology

### Work experience

#### VISITS ABROAD

1/10/83-1/11/83

University of Freiburg im Breisgau (Germany) - Institut für Makromolekulare Chemie. Cooperation with prof. Walther Burchard (supported by the University of Rome "La Sapienza").

1/07/85-28/02/86

University of Freiburg im Breisgau (Germany) - Institut für Makromolekulare Chemie. Cooperation with prof. Walther Burchard (supported by the University of Freiburg).

1/07/87-31/08/87

University of Freiburg im Breisgau (Germany) - Institut für Makromolekulare Chemie. Cooperation with prof. Walther Burchard (supported by the Italian Doctorate funds).

4/03/90-5/03/91

University of Freiburg im Breisgau (Germany) - Institut für Makromolekulare Chemie – Cooperation with prof. Walther Burchard (supported by a NATO-CNR "Advanced Fellowship Program").

5/11/96-21/12/96

University of Kyoto – Kyoto Institute of Technology. Cooperation with prof. Kanji Kajiwara (supported by a grant CNR-JSPS).

18/08/01-10/10/01

University of Freiburg im Breisgau (Germany) - Institut für Makromolekulare Chemie – Cooperation with prof. Walther Burchard (supported by a DAAD (Deutscher Akademischer Austausch Dienst German Academic Exchange Service) Fellowship).

Dates

Occupation or position held

Main activities and responsibilities

Name and address of employer

University of Rome "La Sapienza", P.le Aldo Moro 5, 00185 Rome, Italy

Sector

## Education and training

1978-1984 8/02/84	Elementary and High School until 1978 - Chemistry studies at the University "La Sapienza", Rome, Italy. - Degree in Chemistry (Laurea) (110/110 cum laude) – Dissertation on "Diffusione elastica e quasi-elastica di luce laser su soluzioni di polistirene standard e del polisaccaride Xanthan depiruvato" ("Elastic and quasi-elastic light scattering on solutions of standard polystyrene and of pyruvate-free-Xanthan polysaccharide")- University of Rome "La Sapienza"(Supervisors: prof. Vittorio Crescenzi and prof. Mariella Dentini).
May 1984 28/08/89	The exam that allows to exert the profession of Chemist. - Ph. D. in "Chemistry" – Final dissertation on "Caratterizzazione chimico-fisica in mezzo acquoso del polisaccaride microbico esocellulare estratto da <i>Rhizobium trifolii</i> , ceppo TA-1" ("Physical-chemical characterization in aqueous solution of the exocellular microbial polysaccharide secreted by <i>Rhizobium trifolii</i> , strain TA-1")-University of Rome "La Sapienza" (Supervisor: prof. Vittorio Crescenzi; advisors: prof. Mariella Dentini (Univ. of Rome) and prof. Sergio Paoletti (Univ. of Trieste)).

Dates

Title of qualification awarded

1984 Degree in Chemistry (Laurea) (110/110 cum laude)  
1986 Official professor of Chemistry in the High School after national competitive exam.  
1989 Ph. D. in "Chemistry"  
1991-1998 Researcher of Pharmaceutical Technology at the Faculty of Pharmacy of the University "La Sapienza", Rome.  
1995-1998 Teaching "Pharmaceutical Technology" at the Faculty of Pharmacy of the University of Chieti "G. D'Annunzio"(Italy) .  
Since 1998: Associate Professor of Pharmaceutical Technology at the Department of "Drug Chemistry and Technologies" – Faculty of Pharmacy and Medicine, University of Rome "La Sapienza".  
2012-2018: President of the Master in "Industrial Pharmacy" ("Sapienza" University of Rome).  
2014. Qualified to Full Professor (2014-2020).

**FINANCIAL SUPPORTS (from 2005)**

2015 Ricerche Universitarie grant [C26A15MH7C](#) Participant  
"Sviluppo di nuovi "nanomedicine devices" di tipo nanoidrogel per la veicolazione di farmaci"  
2014 Ricerche Universitarie grant [C26A1432FH](#) Participant  
"Eradicating bacterial lung infections in Cystic Fibrosis disease using levofloxacin loaded Hyaluronan Nanohydrogels"  
2013 Ricerche Universitarie grant [C26A13JTRW](#) Participant  
"Nanohydrogels based on polysaccharide-drug conjugates for drug delivery and targeting"  
2012 Ricerche Universitarie grant [C26A12PZL3](#) Participant  
"Antitubercular drug-loaded chitosan-Niosome (ChyNo) vectors as innovative inhalable drug-delivery systems for pulmonary tuberculosis"  
2011 Ricerche Universitarie grant [C26A119N2S](#) Participant  
"Innovative Polysaccharide Hydrogels as Drug Carrier and Scaffold for Cell Cultures"  
2010 Convenzione attuativa Regione Lazio Participant  
"Target and delivery: nuove strategie per la farmaceutica"  
2009 Ricerche UNIVERSITARIE grant [C26A09BYX9](#) Co-ordinator  
"Gel polimerici: caratterizzazione e impieghi in ambito biomedico"  
2008 Ricerche UNIVERSITARIE grant [C26A08YZXC](#) Co-ordinator  
"Gel polimerici e sistemi vescicolari: caratterizzazione e impieghi in ambito biomedico"

Ricerche di ATENEO FEDERATO di Scienze delle Politiche Pubbliche e Sanitarie SPPS  
grant [C26F08KTF5](#) Participant  
"Utilizzo delle ciclodestrine in campo farmaceutico studio del complesso reina/ciclodestrina"

2007 Ricerche Universitarie (ex ricerche Ateneo) grant [C26A07TYTJ](#) Participant  
"Matrici, micro e nanoparticelle, vescicole per il rilascio modificato e il "targeting" di farmaci"

Ricerche di ATENEO FEDERATO (ex ricerche di FACOLTÀ) di Scienze delle Politiche Pubbliche e Sanitarie SPPS grant [C26F074WYS](#) Participant

"Studio comparativo delle caratteristiche e delle proprietà tecnologiche dei farmaci equivalenti"  
FIRB, Fondo per gli Investimenti della Ricerca di Base, Research Program: Ricerca e Sviluppo del Farmaco (CHEM-PROFARMA-NET), grant no. RBPR05NWWC\_003 Participant

2006 Ricerche di Ateneo grant [C26A06X5RX](#) Participant  
"Matrici, micro e nanoparticelle, vescicole per il rilascio modificato e il "targeting" di farmaci"

Ricerche di Facoltà grant [C26F06TM98](#) Participant  
"Sistemi liposomiali come veicoli di sostanze biologicamente attive"

2005 PRIN - Università degli Studi di ROMA "La Sapienza" Protocollo 2005035525 Participant  
"Idrogel per il rilascio modificato di farmaci: sintesi, caratterizzazione, applicazioni"

Ricerche di ATENEO progetto [C26A053972](#) Participant  
"Sistemi polimerici e vescicolari per il rilascio modificato di sostanze biologicamente attive"

Ricerche di FACOLTÀ grant [C26F059423](#) Participant  
"Sistemi liposomiali come veicoli di sostanze biologicamente attive"

**FINANCIAL SUPPORTS FOR "VISITING PROFESSOR"**

2001 Prof. Kanji Kajiwara, University of Kyoto (Kyoto Institute of Technology), Japan  
2003 Prof. Kanji Kajiwara, University of Kyoto (Kyoto Institute of Technology), Japan  
2009 prof. Mitsuhiro Shibayama, Director, Neutron Science Laboratory, The Institute for Solid State Physics, The University of Tokyo, Japan

**OTHER ACTIVITIES**

Guest Editor of special issue of *Molecules*, "[Macromolecules Applied to Pharmaceutics](#)" (2009)

Member of the Organizing committee of the "Convegno A.I.M. su "Ricerche in Italia su biopolimeri e polimeri biocompatibili: aspetti chimici e macromolecolari" (1991).

Member of the Organizing committee of the CRS workshop 2010: Polysaccharides for pharmaceutical and biomedical applications.

2005 and 2010: Member of the Committee for the qualifying examination of pharmacists (two sessions)

Name and type of organisation providing education and training

University of Rome “La Sapienza”

**Personal skills and competences**

Expert in polymeric drug delivery systems: preparation, characterization (rheology, Light Scattering, dynamo mechanical analysis), applications.

Mother tongue(s)

**Italian**

Other language(s)

Self-assessment

European level (\*)

**English**

**French**

Understanding		Speaking		Writing	
Listening	Reading	Spoken interaction	Spoken production		
good	good	good	good		good
good	good	poor	poor		poor

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

**Additional information**

Include here any other information that may be relevant, for example contact persons, references, etc.

The research programs are carried out in cooperation with:  
prof. Mario Grassi, University of Trieste (Italy)  
dr. Donatella Bulone, CNR, Palermo (Italy)  
dr. Giovanna Pitarresi, University of Palermo (Italy)  
prof. Antonio Palleschi, University of Tor Vergata (Italy)  
dr. Gianfranco Bocchinfuso, University of Tor Vergata (Italy)  
dr. Donatella Capitani, CNR, Rome, (Italy)  
dr. Raffaele La manna, ENEA, Trisaia Research Center, Rotondella, MT (Italy)  
prof. Mitsuhiro Shibayama, Università di Tokyo (Japan)  
prof. Takamasa Sakai, Università di Tokyo (Japan)  
prof. Erik Geissler, Université Joseph Fourier C.N.R.S./U.M.R. (France)  
prof. Maria Dolores Veiga, Universidad Complutense de Madrid (Spain)  
prof. Silvia Patachia, "Transilvania" University of Brasov (Romania)

Receiving

Tuesday 15-16.30 p.m. or by preliminary appointment via e-mail.

**Annexes**

- 1) Mazzuca C., Bocchinfuso G., Palleschi A., Conflitti P., Grassi M., Di Meo C., Alhaique F., Coviello T. The influence of pH on the scleroglucan and scleroglucan/borax systems *Molecules*. 2017; (22): 435.
- 2) Coviello T., Trotta A.M., Marianecchi C., Carafa M., Di Marzio L., Rinaldi F., Di Meo C., Alhaique F., Matricardi P. Gel-embedded vesicles: preparation, characterization and release studies of a new drug delivery system *Colloids and Surfaces B: Biointerfaces*. 2015; (125): 291-299.
- 3) Mazzuca C., Micheli L., Cervelli E., Basoli F., Cencetti C., Coviello T., Iannuccelli S., Sotgiu S., Palleschi A. Cleaning of paper artworks: development of an efficient gel-based material able to remove starch paste *ACS Applied Materials & Interfaces*. 2014; (6): 16519-16528.
- 4) Coviello T., Matricardi P., Alhaique F., Farra R., Tesi G., Fiorentino S., Asaro F., Milcovich G., Grassi M. Guar gum/borax hydrogel: Rheological, low field NMR and release characterizations *eXPRESS Polymer Letters*. 2013; (7): 733-746.
- 5) S. A. Ansari, P. Matricardi, C. Di Meo, F. Alhaique, T. Coviello Evaluation of rheological properties and swelling behaviour of sonicated Scleroglucan samples *Molecules*. 2012; (17): 2283-2297.
- 6) Di Meo C., Coviello T., Matricardi P., Alhaique F., Capitani D., Lamanna R. Anisotropic enhanced water diffusion in scleroglucan gel tablets *Soft Matter*. 2011; (7): 6068-6075.
- 7) Pescosolido L., Schuurman W., Malda J., Matricardi P., Alhaique F., Coviello T., van Weeren P. R., Dhert W. J. A., Hennink W. E., Vermonden T. Hyaluronic acid and Dextran based Semi-IPN hydrogels as biomaterials for bioprinting *Biomacromolecules*. 2011; (12): 1831-1838.
- 8) Sandolo C., Péchiné S., Le Monnier A., Hoys S., Janoir C., Coviello T., Alhaique F., Collignon A., Fattal E., Tsapis N. Encapsulation of Cwp84 into pectin beads for oral vaccination against *Clostridium difficile* *Eur. J. Pharm. Biopharm.* 2011; in press. doi: 10.1016/j.ejpb.2011.05.011
- 9) Bocchinfuso G., Mazzuca C., Sandolo C., Margheritelli S., Alhaique F., Coviello T., Palleschi A. Guar Gum and Scleroglucan interactions with borax: experimental and theoretical studies of an unexpected similarity *J. Phys. Chem. B*. 2010; (114): 13059-13068.
- 10) Oddo L., Masci G., Di Meo C., Capitani D., Mannina L., Lamanna R., De Santis S., Alhaique F., Coviello T., Matricardi P. Novel thermo-sensitive calcium alginate microspheres: physico-chemical characterization and delivery properties *Acta Biomaterialia*. 2010; (6): 3657-3664.
- 11) Sandolo C., Bulone D., Mangione M., Margheritelli S., Di Meo C., Alhaique F., Matricardi P., Coviello T. Synergistic interaction of Locust Bean Gum and Xanthan investigated by rheology and light scattering *Carbohydr. Polym.* 2010; (82): 733-741.
- 12) Coviello T., Bertolo L., Matricardi P., Palleschi A., Bocchinfuso G., Maras A., Alhaique F. Peculiar behaviour of polysaccharide/borax hydrogel tablets: a dynamo-mechanical characterization *Colloid Polym. Sci.* 2009; (287): 413-423.
- 13) Grassi M., Lapasin R., Coviello T., Matricardi P., Di Meo C., Alhaique F. Scleroglucan/borax/drug hydrogels: structure characterisation by means of rheological and diffusion experiments *Carbohydr. Polym.* 2009; (78): 377-383.
- 14) Sandolo C., Matricardi P., Alhaique F., Coviello T. Effect of temperature and cross-linking density on rheology of chemical cross-linked guar gum at the gel point *Food Hydrocolloid*. 2009; (23): 210-220.
- 15) Bocchinfuso G., Palleschi A., Mazzuca C., Coviello T., Alhaique F., Marletta G. Theoretical and experimental study on a self-assembling polysaccharide forming nanochannels: static and dynamic effects induced by a soft confinement *J. Phys. Chem. B*. 2008; (112): 6473-6483.
- 16) Matricardi P., Pontoriero M., Coviello T., Casadei M. A., Alhaique F. In situ crosslinkable novel alginate-dextran methacrylate IPN hydrogels for biomedical applications. Mechanical and drug delivery properties *Biomacromolecules*, 2008; (9): 2014-2020 (2008).
- 17) Coviello T., Alhaique F., Dorigo A., Matricardi P., Grassi M. Two galactomannans and scleroglucan as matrices for drug delivery: preparation and release studies *Eur. J. Pharm. Biopharm.*, 2007; (66): 200-209.
- 18) Coviello T., Matricardi P., Marianecchi C., Alhaique F. Polysaccharide hydrogels for modified release formulations *J. Control. Release*. 2007; (119): 5-24.
- 19) Sandolo C., Matricardi P., Alhaique F., Coviello T. Dynamo-mechanical and rheological characterization of guar gum hydrogels *Eur. Polym. J.* 2007; (43) 3355-3367.
- 20) Matricardi P., Onorati I., Coviello T., Alhaique F. Drug delivery matrices based on Scleroglucan/Alginate/borax gels *Int. J. Pharm.* 2006; (316): 21-28.
- 21) Palleschi A., Coviello T., Bocchinfuso G., Alhaique F. Investigation of a new scleroglucan/borax hydrogel: structure and drug release *Int. J. Pharm.* 2006; (322): 13-21.
- 22) Coviello T., Alhaique F., Parisi C., Matricardi P., Bocchinfuso G., Grassi M. A new polysaccharidic gel matrix for drug delivery: preparation and mechanical properties *J. Control. Release*. 2005; (102) 643-656.
- 23) Coviello T., Grassi M., Palleschi A., Bocchinfuso G., Coluzzi G., Banishoeb F., Alhaique F. A new Scleroglucan/borax hydrogel: anomalous swelling and drug release *Int. J. Pharm.* 2005; (289): 97-107.
- 24) Coviello T., Grassi M., Lapasin R., Marino A., Alhaique F. Scleroglucan/borax: characterization of a novel hydrogel system suitable for drug delivery *Biomaterials*. 2003; (24): 2789-2798.
- 25) Coviello T., Grassi M., Rambone G., Alhaique F. A crosslinked system from Scleroglucan derivative: preparation and characterization *Biomaterials*. 2001; (22): 1899-1909.
- 26) Maeda H., Rambone G., Coviello T., Yuguchi Y., Urakawa H., Alhaique F., Kajiwara K. Low-Degree Oxidized Scleroglucan and Its Hydrogel *Int. J. Biol. Macromol.* 2001; (28): 351-358.
- 27) Coviello T., Grassi M., Rambone G., Santucci E., Carafa M., Murtas E., Riccieri F.M., Alhaique F. Novel hydrogel system from scleroglucan: synthesis and characterization *J. Control. Release*. 1999; (60): 367-378.
- 28) Matricardi P., Di Meo C., Coviello T., Hennink W.E., Alhaique F. Interpenetrating Polymer Networks polysaccharide hydrogels for drug delivery and tissue engineering *Adv. Drug Del. Rev.* 2013; (65): 1172-1187.
- 29) Coviello T., Matricardi P., Alhaique F., Farra R., Tesi G., Fiorentino S., Asaro F., Milcovich G., Grassi M. Guar gum/borax hydrogel: Rheological, low field NMR and release characterizations *eXPRESS Polymer Letters*. 2013; (7): 733-746.
- 30) Pescosolido L., Feruglio L., Farra R., Fiorentino S., Colombo I., Coviello T., Matricardi P., Hennink W.E., Vermonden T., Grassi M. Mesh Size Distribution Determination of Interpenetrating Polymer Networks Hydrogels *Soft Matter*. 2012; (8): 7708-7715.

Works |  
Textbooks (Chapters, etc.)