

# LAURA CHRONOPOULOU

## Curriculum Vitae

### Part I – General Information

Full Name	Laura Chronopoulou
Spoken Languages	italian, greek, english, french

### Part II – Education

Type	Year	Institution	Notes (Degree, Experience,...)
University graduation	2006	Sapienza University of Rome- Chemistry Department	5-year Degree in Chemistry. Title of the thesis: “Bioconiugati lipasi-nanoparticelle polimeriche: sintesi, caratterizzazione e impiego in processi di biocatalisi”. Final mark: 110/110
PhD	2009	Sapienza University of Rome- Chemistry Department	PhD in Materials Science. Title of the thesis: “Bioconiugati enzima-nanoparticella polimerica: sintesi, caratterizzazione ed applicazioni biotecnologiche”
ASN	2020	MIUR	National Scientific Abilitation (Abilitazione Scientifica Nazionale alle funzioni di Professore Universitario di Seconda Fascia per il settore concorsuale 03/C2, Chimica Industriale, SSD: CHIM/04)

### Part III – Appointments

#### IIIA – Academic Appointments

Start	End	Institution	Position
Nov 2006	Oct 2009	Sapienza University of Rome- Chemistry Department	PhD scholarship of the Italian Ministry of Instruction and Research (MIUR). Title of the research: “Bioconiugati enzima-nanoparticella polimerica: sintesi, caratterizzazione ed applicazioni biotecnologiche”
Mar 2010	Feb 2014	Sapienza University of Rome- Chemistry Department	Post-doctoral fellow (Assegnista di ricerca ai sensi dell’art. 51, comma 6, della legge 27 dicembre 1997, n. 449). Title of the research: “Sintesi e caratterizzazione di materiali

May 2014	Oct 2015	Sapienza University of Rome- C.E.R.I. Research Center for the prevision, prevention and control of geological risks	nanoibridi a base polimerica per applicazioni biotecnologiche”
May 2016	Apr 2017	Sapienza University of Rome- Chemistry Department	Research scholarship (Borsa di studio per attività di ricerca). Title of the research: “Sviluppo e caratterizzazione di materiali a supporto di processi biotecnologici per la bonifica di falde contaminate”
Oct 2017	Sep 2019	Sapienza University of Rome- Chemistry Department	Research scholarship (Borsa di studio per attività di ricerca). Title of the research: “Sviluppo e caratterizzazione di materiali a supporto di processi biotecnologici per la bonifica di falde contaminate”
Oct 2019	Nov 2020	Sapienza University of Rome- Chemistry Department	Post-doctoral fellow (Assegnista di ricerca, Categoria B-Tipologia II-settore concorsuale 03/C2, ai sensi dell’art. 22 della legge 30 dicembre 2010, n. 240). Title of the research: “Approcci innovativi di chimica verde per il recupero di PHA da cellule microbiche”
Jan 2021	Dec 2021	Sapienza University of Rome- Chemistry Department	Post-doctoral fellow (Assegnista di ricerca, Categoria B-Tipologia II-settore concorsuale 03/C2, ai sensi dell’art. 22 della legge 30 dicembre 2010, n. 240). Title of the research: “Estrazione mediante fluidi supercritici e caratterizzazione di composti fenolici da reflui oleari”
			Post-doctoral fellow (Assegnista di ricerca, Categoria B-Tipologia II-settore concorsuale 03/C2, ai sensi dell’art. 22 della legge 30 dicembre 2010, n. 240). Title of the research: “Biosintesi di idrogeli compositi per applicazioni nel trattamento delle infiammazioni osteoarticolari”

### IIIB – Other Appointments

Start	End	Institution	Position
2013	2021	MDPI, Elsevier, Hindawi Publishing Corporation, RSC Publishing	Reviewer for the journals: Journal of Drug Delivery Science and Technology, Colloids and Surfaces B: biointerfaces, International Journal of Biological Macromolecules, Colloids and Surfaces A: physicochemical and engineering aspects, Journal of Materials Chemistry B, Materials,

			Polymers, Materials Science and Engineering C, Biomed Research International, Nanomedicine, Frontiers, Gels
2016	2016	European Society of Colloids and Interface Science	Member of the staff of the 30th Conference of the European Colloid and Interface Society, held in Rome (I) on 4-9/09/2016
2019	2019	Sapienza University of Rome	Member of the “Laboratorio Zio Tungsteno” of the Chemistry Department of the Sapienza University of Rome: organization of laboratory activities for children and youth during the event “Primo Levi: la chimica narrata” on 10/05/2019 and during the 2019 edition of the European Researchers’ Night
2020	ongoing	Sapienza University of Rome	Appointment as Expert on the subject (Cultore della materia) for the course BIO E NANOMATERIALI PER APPLICAZIONI TECNOLOGICHE of the Master Degree in Biotechnology and Genomic for Industry and Environment of the Sapienza University of Rome
2020	ongoing	MDPI	Member of the Reviewer Board of the journal Gels (ISSN: 2310-2861)
2021	ongoing	MDPI	Lead Guest-Editor of the Special Issue “Hydrogel nanocomposites for biomedical applications” of the journal Micro (ISSN: 2673-8023)
2021	ongoing	Sapienza University of Rome	Co-inventor (inventive contribution: 30%) of the patent “Metodo per il recupero e la purificazione di PHA da colture microbiche miste” deposited by Sapienza University of Rome
2021	ongoing	MDPI	Member of the Editorial Board of the journal Micro (ISSN: 2673-8023)
2021	ongoing	Hindawi	Member of the Editorial Board of the journal BioMed Research International (ISSN: 2314-6133)
2021	ongoing	Polymer Networks Group	Referee for the evaluation of the abstracts submitted to the Conference PNG 2022 Polymer Networks Group, to be held in Rome (Italy) on 12-16 June 2022

#### Part IV – Teaching experience

Year	Institution	Lecture/Course
2016	Istituto Superiore di Sanità	Invited teacher for the 3 <sup>rd</sup> course on BIOMATERIALI: APPLICAZIONI DI RIGENERAZIONE TISSUTALE IN ODONTOSTOMATOLOGIA E ORTOPEDIA, held in Rome (Italy) on 20–21/10/2016
2017	Istituto Superiore di Sanità	Invited teacher for the 4th course on Biomaterials (BIOMAT2017) Tecnologie innovative in odontoiatria, chirurgia maxillo-facciale e ortopedia, held in Rome (Italy) on 26-27/10/2017
2018	Istituto Superiore di Sanità	Invited teacher for the 5th course on Biomaterials (BIOMAT2018) Biomateriali e metodiche di rigenerazione tissutale in odontoiatria, chirurgia maxillo-facciale e ortopedia, held in Rome (Italy) on 11-12/10/2018
2019	Istituto Superiore di Sanità	Invited teacher for the 6th course on Biomaterials (BIOMAT2019) Biomateriali, metodiche di rigenerazione tissutale e strumentazione per la realizzazione di dispositivi utilizzati in odontoiatria, chirurgia maxillo-facciale e ortopedia, held in Rome (Italy) on 17–18/10/2019
2021	Sapienza University of Rome	Member of the Examination Committees for the course BIO E NANOMATERIALI PER APPLICAZIONI TECNOLOGICHE of the Master Degree in Biotechnology and Genomic for Industry and Environment of the Sapienza University of Rome
2021/22	Chemistry Department- Sapienza University of Rome	Teacher of the course CHIMICA INDUSTRIALE II of the Bachelor Degree in Industrial Chemistry of the Sapienza University of Rome (9 CFU)

#### Part V - Society memberships, Awards and Honors

Year	Title
2010-ongoing	Member of Centro Interuniversitario per le Biotecnologie (responsible of the Operative Unit: prof. Cleofe Palocci)
2012	Award “Premio Dipartimento di Chimica” at the Quinto Convegno Giovani-la Chimica per lo Sviluppo, held in Rome (Italy) on 12-13/06/2012
2015	Best Oral Presentation award at the 8th European Symposium on Biopolymers, held in Rome (Italy) on 15-18/09/2015

## Part VI - Funding Information

Year	Title	Program	Grant value
2008	Sintesi e caratterizzazione di scaffolds altamente porosi, nanoparticelle a base polimerica e loro materiali compositi. Role: Investigator. PI: Prof. M. Dentini	PRIN 2008	€100.000
2009	Biotechnologie per il rilascio sito specifico di molecole per l'igiene orale. Role: Investigator. PI: Prof. M. Castagnola	Progetto di Ricerca Industriale e Sviluppo sperimentale, Bando Filas Bioscienze 2009	€166.650
2011	Biomateriali innovativi per l'ingegneria tissutale e la veicolazione di molecole bioattive. Role: Investigator. PI: Prof. M. Dentini	Progetti di Ateneo 2011	€37.818
2012	Ruolo dello stress ossidativo nell'alterazione dell'omeostasi muscolare e approccio terapeutico mediate antiossidanti veicolati da liposomi specifici. Role: Investigator. PI: Dr. V. Moresi	FIRB 2012 Futuro in Ricerca	€1.063.421
2012	Novel biomaterials for tissue engineering and the controlled delivery of bioactive molecules. Role: Investigator. PI: Prof. M. Dentini	Progetti di Ateneo 2012	€40.000
2013	Sintesi di nanoparticelle magnetiche coreshell per il trattamento di biofilm batterici. Role: Principal Investigator	Progetto di Avvio alla Ricerca 2013	€2.000
2013	Nuovi vettori nanobiopolimerici per la veicolazione di molecole di difesa contro funghi patogeni in <i>Vitis vinifera</i> . Role: Investigator. PI: Prof. G. Pasqua	Progetto di Ateneo 2013	€13.000
2014	An improved therapeutic effect of doxorubicin embedded into PLGA-based nanobiopolymeric vectors: in vitro effect on breast cancer cell line and circulating tumor Cell. Role: Investigator. PI: Dr. I. Silvestri	Progetto di Ateneo 2014	€11.000
2015	Development and characterization of reactive materials for groundwater remediation. Role: Investigator. PI: Prof. M. Petrangeli	Progetto di Ateneo 2015	€25.000

	Papini		
2016	New insight into microfluidic assisted production of nano and micro beads for biotechnological applications. Role: Investigator. PI: Prof. C. Palocci	Progetto di Ateneo 2016	€11.000
2017	Materiali innovativi nella bonifica di falde acquifere contaminate: caratterizzazione, reattività e ipotesi di implementazione tecnologica. Role: Investigator. PI: Prof. M. Petrangeli Papini	Progetto di Ateneo 2017	€11.000
2017	Tecnologie "green" per una agricoltura sostenibile: protezione da fitopatogeni e fertilizzanti di colture agroalimentari mediante biomolecole ottenute da reflui oleari. Acronym: ABASA (Agricultural By-products into valuable Assets for Sustainable Agriculture). Role: Investigator. PI: Prof. D. Bellincampi	Progetti Regione Lazio 2017	€150.000
2017	Resources from Urban Biowaste. Acronym: Res Urbis. Role: Investigator. PI: Prof. M. Majone	EU Horizon 2020	€3.000.000
2017	Immunomodulatory properties of the Amniotic Stromal cell SEcretome: from Multi-omics profiling to nanotechnology-aided delivery for controlled release in osteoarthritis. Acronym: ASSEMBLe. Role: Investigator. PI: Prof. O. Parolini	Progetto PRIN 2017	€656.490
2018	I fluidi supercritici nelle attività di downstream di processi biotecnologici: applicazione nella estrazione di PHAs da cellule microbiche. Role: Investigator. PI: Prof. C. Palocci	Progetto di Ateneo 2018	€14.000
2018	Network CIB: Catalisi nell'innovazione nelle biotecnologie. Un approccio "glocal" alle bioraffinerie di terza generazione. Role: Investigator. PI: Prof. L. Pollegioni	MIUR - Progetti Competitivi 2018	€125.000
2019	Innovative approaches for controlling Botrytis cinerea, causal agent of the grey mold disease in tomato by using poly(lactic-co-	Progetto di Ateneo 2019	€39.000

	glycolic acid) nanoparticles for the controlled release of the antifungal fluopyram. Role: Investigator. PI: Prof. G. Pasqua		
2020	A new life for plastic waste: conversion into polyhydroxyalkanoates via an integrated physical-chemical and biotechnological process. Role: Investigator. PI: Prof. M. Majone	Progetto di Ateneo 2020	€48.000
2021	Biosintesi di idrogeli compositi a base peptidica contenenti nanoparticelle d'argento per applicazioni biomediche. Role: Principal Investigator.	Progetto di Avvio alla ricerca 2021	€2.200

## Part VII – Research Activities

Research line: **Bioproduction of peptide-based hydrogels for biotechnological applications**

### Keywords

Hydrogels
Self-assembly
Composites
Scaffolds
Biosynthesis

### Brief Description

Hydrogel materials, thanks to their biocompatibility and biodegradability, are very promising for the development of new biocompatible scaffolds for controlled drug release, tissue regeneration and tissue engineering. Low molecular weight peptide-based hydrogels (LMWPGs) are an interesting class of soft materials for the preparation of versatile systems that can be easily modified, both chemically and biologically. Within the research group I am working, we developed an enzymatic approach for the preparation of injectable, self-assembling materials based on Fmoc-oligopeptides. The reaction products (Fmoc peptides) spontaneously self-assemble in water to originate fibrils, that become entangled to form a three-dimensional structure of fibers with a diameter of approximately 7 nm, as evidenced by atomic force microscopy (AFM) measurements. Macroscopically, a stable, self-supporting hydrogel material is produced. We have evaluated the use of these materials as controlled drug delivery systems for a wide spectrum of bioactive molecules. For biomedical applications, hydrogel biomaterials require adequate structural stability, sufficient mechanical properties and biocompatibility. I therefore investigated the possibility of improving the mechanical properties of the hydrogels by using cross-linking agents such as genipin, as well as unconventional aminoacid precursors or carbon-based fillers (graphene oxide). We have employed Fmoc-oligopeptide hydrogels for the preparation of composite materials specifically designed for bone tissue regeneration. These tailor-made hydrogel systems contain biopolymeric spheres delivering bioactive molecules, as well as pure and substituted calcium phosphate (CaP) nanoparticles to provide bioactivity, osteoconductivity and improved mechanical properties. The morphological and viscoelastic properties of the synthesized hydrogels were investigated by SEM and rheological measurements. The biocompatibility of the composite materials with different mammalian cells was also assessed. The injectability of the prepared materials makes them suitable for in vivo applications. Moreover,

<p>we have developed new hydrogel composites through the incorporation of graphene based nanofillers, that offer the potential to tailor the mechanical strength of the native material, adding binding sites for further bio-functionalization with biological molecules, and supplying additional properties such as conductivity for regulating cell behaviors such as cell proliferation, differentiation or protein synthesis. We have used such hydrogel composites to entrap human amniotic mesenchymal stromal cells secretome, that possesses excellent anti-inflammatory properties that may be used for the treatment of osteoarthritis. Ongoing work is aimed at investigating the biological properties of the composite hydrogel systems, both in vitro and in vivo, using horses as animal models. Another topic within this research line is the development of peptide hydrogel composites containing Ag nanoparticles, that confer antimicrobial properties. We are developing in situ synthetic procedures for Ag nanoparticles formation inside the hydrogels, starting from AgNO<sub>3</sub> and using natural reducing agents (e.g. glucose, honey). Preliminary antibiofilm activity studies have afforded promising results for the use of these composites as effective antibacterial agents.</p>
<p>This research activity is supported by the MIUR program PRIN 2017 (ASSEMBLe).</p>
<p>The results have been disseminated through the publication of 10 papers, 1 book chapter and the participation to 14 conferences (with oral or poster presentations).</p>
<p>ERC codes: PE5_6; PE5_7; PE5_8; LS9_1; LS9_2</p>

**Research line: Supercritical fluids as green solvents for the extraction of bioactive molecules and biopolymers from plant matrices or microbial cells**

Keywords	Brief Description
Supercritical fluids	<p>Supercritical fluids represent a sustainable alternative to organic solvents for the extraction of bioactive compounds from natural matrices (plant as well as microbial cells). Different matrices can be employed, including waste materials, that are usually regarded as worthless, but often contain precious bioactives that may be recovered. The use of waste materials may be advantageous also from an economic point of view, as their disposal represents a significant cost for many industries. Moreover, the valorization of waste materials is intimately linked to the development of a circular and sustainable economy. In this field, I conducted a study on the supercritical fluid extraction (SFE) of biomolecules like oleanolic acid from grape pomace, which represents a yet unexploited source of highly added-value products. This SFE technique proved successful in extracting oleanolic acid from grape pomace samples, with extraction yields that were comparable with conventional, yet sometimes disadvantageous, techniques such as solid-liquid extraction. Also, I am currently investigating the SFE of bioactives from waste materials derived from olive oil manufacturing, a major economic activity in Mediterranean countries. In recent years, aquatic species such as microalgae have been identified as a promising source of vitamin K, carotenoids, and other fat-soluble vitamins and great attention has been focused on rapid, selective, and environmentally friendly extraction methods for their recovery. I recently studied the possibility of</p>
polyhydroxycarboxylate	
Waste materials	
Circular economy	
biomass	



extracting carotenoids and fat-soluble vitamins from *T. obliquus* with SFE. I investigated the effect of several parameters such as the CO<sub>2</sub> physical variables, the addition of co-solvents (methanol and limonene) and of an inert dispersing phase on the recovery of different carotenoids and fat-soluble vitamins. SFE was compared with conventional extraction methods in terms of yield and selectivity. In particular, a remarkable selectivity was observed when SFE was carried out in the presence of ethanol at 10 MPa and 40 °C: under these conditions, it was possible to isolate menaquinone-7, a homologous of vitamin K2, which, otherwise, cannot be recovered by using traditional extraction procedures. Another ongoing research line is focused on the extraction of biodegradable polymers (specifically polyhydroxyalkanoates, PHA) produced by mixed microbial cultures from urban wastes. In fact, while the strategies for maximizing productivity, as well as PHA intracellular content, are now known, the extraction step still remains a weak point of the process, with a wide margin of performance improvement, in terms of purity and recovery of the product, as well as thermal and mechanical properties. Our studies of PHA extraction from pure microbial cells using supercritical CO<sub>2</sub> permitted to obtain particularly encouraging results with PHA recovery yields between 70 and 100%.

This research activity has been supported by the EU (Horizon 2020-RES URBIS project), Regione Lazio (ABASA project), MIUR (program Progetti Competitivi 2018-Network CIB: Catalisi dell'innovazione nelle biotecnologie) and Sapienza University (progetti di Ateneo 2018).

The results have been disseminated through the publication of 4 papers, 2 book chapters and the participation to 2 conferences (poster presentations). One patent has been developed and deposited.

ERC codes: PE5\_7; LS9\_5; LS9\_6

**Research line: Innovative bulk and microfluidic technologies for the fabrication of biopolymeric micro or nanoparticles for biotechnological applications**

**Keywords**

Nanoprecipitation
Microfluidics
Drug delivery
Enzyme immobilization
Biopolymers

**Brief Description**

Currently, one of the major problems in liquid phase synthetic processes of nanostructured polymeric materials in bulk systems is the control of the size and polydispersion of the obtained nanoparticles, which, together with the difficulty of standardizing the physico-chemical reaction conditions, severely limit the scale up of these technologies. The research group I have been working with patented a membrane-based approach for the control of nanoparticle morphology and dimensions in the 100-1000 nm range. By using this simple synthetic procedure, I begun my work on the use of nanostructured polymers as carriers for enzyme immobilization. In particular, I demonstrated that the interaction with micro or nanostructured matrices can cause conformational changes in the structure of an enzymatic protein, depending on the size of the carrier, and such conformational variations may result in a modulation of the catalytic properties as well as of the stability of the biocatalyst. More recently, I have turned my attention to the use of flow focusing microfluidic reactors for the synthesis of nanomaterials. In this field one of my research lines was focused on the development of a capillary flow microreactor, with flow-focusing mode, that was assembled by using stainless steel capillary tubes and connecting

them through a cross junction. Within this work, I identified and optimized the main chemico-physical parameters that control the size and polydispersion of the polymeric nanoparticles obtained with such microfluidic reactor. Following the optimization of the operating parameters, it was possible to synthesize polymeric nanoparticles in the range from 20 to 300 nm with low polydispersion index. By using the above innovative techniques, as well as more traditional ones, we have synthesized micro or nanomaterials with controlled dimensions and features (eg. core-shell nanoparticles, surface-decorated particles, fluorescent nanoparticles, drug-loaded micro or nanoparticles), tailored for different biotechnological applications. An innovative research line is dedicated to the development of biodegradable nanostructured systems for the delivery of bioactives against plant pathogens, for a more sustainable agriculture. In fact, nanoscale particles have properties which can allow to increase the agrochemical efficiency of pesticides, fertilizers and genetic material, delivering them in a controlled and sustained manner. Nanodelivery could significantly reduce the indiscriminate use of conventional pesticides and ensure their safe application. My research activity is currently exploring the interaction of nanosize materials with crop plants and common pathogenic fungi. Another research line has focused on the development of composites for advanced bioremediation applications, combining the well-known reducing properties of Zero-valent Iron (ZVI) towards chlorinated pollutants and a slow-releasing carbon source such as polyhydroxybutyrate (PHB). Batch experiments confirmed that nanosized ZVI/PHB particles are not only more stable but also more reactive towards perchloroethene (PCE) and Cr(VI) in comparison with the bare nanosized ZVI. These results suggested that PHB can be developed as an inexpensive and environmentally friendly material for the stabilization of nanosized ZVI particles. Part of the current research focus is on micro and nanostructured gene delivery systems (e.g. siRNAs) for the treatment of cancer and HIV. A recent research line is dedicated to the development of smart nanostructured materials and composites for cultural heritage applications (e.g. anti-graffiti materials, wood protectants).

This research activity has been supported by MIUR (PRIN 2008, FIRB 2012), Regione Lazio (Progetto di Ricerca Industriale e Sviluppo sperimentale 2012 Bando Filas Bioscienze) and Sapienza University (progetti di Ateneo 2011, 2012, 2013, 2014, 2016, 2017, 2019, Awards 2015, Avvio alla Ricerca 2013).

The results have been disseminated through the publication of 24 papers, 1 book chapter and the participation to 16 conferences (with oral or poster presentations).

ERC codes: PE4\_18; PE5\_10; PE5\_15; LS9\_1; LS9\_2; LS9\_4; LS9\_5; LS9\_7

### Part VIII– Participation to a research group characterized by national and international collaborations

Year	Description
2006-ongoing	I have worked within the research group of Nanobiotechnologies for Industrial applications led by Prof. Cleofe Palocci at the Chemistry Department of the Sapienza University of Rome since 2006, first as a PhD student and later as a Post-doc

researcher. The group is characterized by a highly interdisciplinary approach, with numerous collaborations with scientists with different backgrounds and expertise (i.e. physicists, biologists, chemical engineers), at a local, national and international level. The group has participated in various research projects, funded by Sapienza University of Rome, the Italian Ministry of Education and Research (MIUR), as well as the EU (RES URBIS project). I have actively participated to all the activities of the research group, participating to its research projects, co-authoring scientific publications and sharing the scientific results at national and international conferences.

#### Part IX – Selected scientific collaborations

Name	Institution
Prof. Federico Bordi	Sapienza University of Rome-Physics Department
Prof. Gaio Paradossi	University of Rome Torvergata- Dipartimento di Scienze e Tecnologie Chimiche
Prof. Giuseppina Nocca	Catholic University of the Sacred Heart, Rome-Dipartimento di Scienze biotecnologiche di base, cliniche intensivologiche e perioperatorie
Dr. Simona Sennato	Italian National Research Council, Rome-Istituto dei Sistemi Complessi
Prof. Stefano Lupi	Sapienza University of Rome-Physics Department
Dr. Gihan Kamel	Synchrotron-light project for Experimental Science and Applications in the Middle East (SESAME)
Prof. Robertino Zanoni	Sapienza University of Rome-Chemistry Department
Prof. Luciano Galantini	Sapienza University of Rome-Chemistry Department
Prof. Iliaria Cacciotti	University Niccolò Cusano, Rome-Engineering Department
Prof. Aurelio Muttini	Teramo University-Faculty of Bioscience and Agro-Food Environmental Technology
Prof. Mirella Falconi	Bologna University-Department of Experimental, Diagnostic and Specialty Medicine
Prof. Ornella Parolini	Catholic University of the Sacred Heart, Rome-Department of Life Sciences and Public Health
Prof. Iliaria Fratoddi	Sapienza University of Rome-Chemistry Department
Prof. Francesca Pagnanelli	Sapienza University of Rome-Chemistry Department
Dr. Enea Gino Di Domenico	Istituti Fisioterapici Ospitalieri, Istituto San Gallicano, Rome
Prof. Franco Mazzei	Sapienza University of Rome-Department of Chemistry and Technologies of Drug
Prof. Antonio Di Martino	Tomsk Polytechnic University-Research School of Chemistry and Applied Biomedical Sciences
Prof. Yujie Chen	Shanghai Jiao Tong University-School of Materials Science and Engineering
Prof. Gabriella Pasqua	Sapienza University of Rome-
Prof. Ombretta	Sapienza University of Rome-Department of Molecular Medicine

Turriziani	
Dr. Loubna Nasri	University of Constantine 3, Algeria-Pharmaceutical Engineering Department
Prof. Mauro Majone	Sapienza University of Rome-Chemistry Department
Dr. Nadia Felli	Istituto Superiore di Sanità, Rome-Department of Oncology and Molecular Medicine
Prof. Miroslav Cernik	Technical University of Liberec, Czech Republic-Faculty of Mechatronics, Informatics and Interdisciplinary Studies
Dr. Francesco Valentino	Ca' Foscari University of Venice-Department of Environmental Sciences, Informatics and Statistics

### Part IX – Summary of Scientific Achievements

Product type	Number	Data Base	Start	End
Papers [international]	42	Scopus	2007	2022
Books [scientific]	4	Scopus	2010	2017
Patents	1		2021	2021

Total Citations (Google Scholar)	1193
Average Citations per Product (Google Scholar)	28.4
Hirsch (H) index (Google Scholar)	20
First author, second author or corresponding author	80.95% (34/42)

### Part X– Publications

1. **L. Chronopoulou**, A. Di Nitto, M. Papi, O. Parolini, M. Falconi, G. Teti, A. Muttini, W. Lattanzi, V. Palmieri, G. Ciasca, A. Del Giudice, L. Galantini, R. Zanoni, C. Palocci. Biosynthesis and physico-chemical characterization of high performing peptide hydrogels@graphene oxide composites. *Colloids and Surfaces B: Biointerfaces* 2021, 207, 111989. Doi: 10.1016/j.colsurfb.2021.111989.
2. C. Palocci, **L. Chronopoulou**, F. Valentino, L. Lorini. Metodo per il recupero e la purificazione di PHA da colture microbiche miste. Patent submitted by Sapienza University of Rome on 15/07/2021 to the Italian Patent and Trademark Office (application n. 102021000018761).
3. G. Nocca, G. D'Avenio, A. Amalfitano, **L. Chronopoulou\***, A. Mordente, C. Palocci, M. Grigioni. Controlled Release of 18- $\beta$ -Glycyrrhetic Acid from Core-Shell Nanoparticles: Effects on Cytotoxicity and Intracellular Concentration in HepG2 Cell Line. *Materials* 2021, 14, 3893. Doi: 10.3390/ma14143893.
4. **L. Chronopoulou**, V. Couto Sayalero, H. Rahimi, A. Rughetti, C. Palocci. Polymeric Nanoparticles Decorated with Monoclonal Antibodies: A New Immobilization Strategy for Increasing Lipase Activity. *Catalysts* 2021, 11(6), 744-751. Doi: 10.3390/catal11060744.
5. **L. Chronopoulou**, I. Cacciotti, A. Amalfitano, A. Di Nitto, V. D'Arienzo, G. Nocca, C. Palocci. Biosynthesis of innovative calcium phosphate/hydrogel composites. Physicochemical and biological characterisation. *Nanotechnology* 2021, 32(9), 095102. Doi: 10.1088/1361-6528/abc5f6.

6. **L. Chronopoulou**, F. Scaramuzzo, R. Fioravanti, A. Di Nitto, S. Cerra, C. Palocci, I. Fratoddi. Noble metal nanoparticle-based networks as a new platform for lipase immobilization. *International Journal of Biological Macromolecules* 2020, 146, 790-797. Doi: 10.1016/j.ijbiomac.2019.10.047.
7. F. Sciubba, **L. Chronopoulou**, D. Pizzichini, V. Lionetti, C. Fontana, R. Aromolo, S. Socciarelli, L. Gambelli, B. Bartolacci, E. Finotti, A. Benedetti, A. Miccheli, U. Neri, C. Palocci, D. Bellincampi. Olive mill wastes. A source of bioactive molecules for plant growth and protection against pathogens. *Biology* 2020, 9 (12), 1–20. Doi: 10.3390/biology9120450.
8. **L. Chronopoulou**, L. Donati, M. Bramosanti, R. Rosciani, C. Palocci, A. Valletta, G. Pasqua. Microfluidic synthesis of methyl jasmonate-loaded PLGA nanocarriers as a new strategy to improve natural defenses in *Vitis vinifera*. *Scientific reports* 2019, 9, 1-9. Doi: 10.1038/s41598-019-54852-1.
9. **L. Chronopoulou**, C. Dal Bosco, F. Di Caprio, L. Prosini, A. Gentili, F. Pagnanelli, C. Palocci. Extraction of Carotenoids and Fat-Soluble Vitamins from *Tetrademus obliquus* Microalgae: An Optimized Approach by Using Supercritical CO<sub>2</sub>. *Molecules* 2019, 24, 2581-2594. Doi: 10.3390/molecules24142581.
10. G. Simonetti, C. Palocci, A. Valletta, O. Kolesova, **L. Chronopoulou**, L. Donati, A. Di Nitto, E. Brasili, P. Tomai, A. Gentili, G. Pasqua. Anti-Candida Biofilm Activity of Pterostilbene or Crude Extract from Non-Fermented Grape Pomace Entrapped in Biopolymeric Nanoparticles. *Molecules* 2019, 24, 2070-2084. Doi: 10.3390/molecules24112070.
11. **L. Chronopoulou**, F. Domenici, S. Giantulli, F. Brasili, C. D’Errico, G. Tsaouli, E. Tortorella, F. Bordi, S. Morrone, C. Palocci, I. Silvestri. PLGA based particles as “drug reservoir” for antitumor drug delivery: characterization and cytotoxicity studies. *Colloids and Surfaces B: Biointerfaces* 2019, 180, 495-502. Doi: 10.1016/j.colsurfb.2019.05.006.
12. I. Cacciotti, **L. Chronopoulou**, C. Palocci, A. Amalfitano, M. Cantiani, M. Cordaro, C. Lajolo, C. Callà, A. Boninsegna, D. Lucchetti, P. Gallenzi, A. Sgambato, G. Nocca, A. Arcovito. Controlled release of 18-β-Glycyrrhetic Acid by nanodelivery systems increases cytotoxicity on oral carcinoma cell line. *Nanotechnology* 2018, 29, 285101-285112. Doi: 10.1088/1361-6528/aabecc.
13. **L. Chronopoulou**, M. Daniele, V. Perez, A. Gentili, T. Gasperi, S. Lupi, C. Palocci. A physico-chemical approach to the study of genipin crosslinking of biofabricated peptide hydrogels. *Process Biochemistry* 2018, 70, 110-116. Doi: 10.1016/j.procbio.2018.04.005.
14. G. Fusco, **L. Chronopoulou**, L. Galantini, A. Zerillo, Z.M. Rasik, R. Antiochia, G. Favero, A. D’Annibale, C. Palocci, F. Mazzei. Evaluation of novel Fmoc-tripeptide based hydrogels as immobilization supports for electrochemical biosensors. *Microchemical Journal* 2018, 137, 105-110. Doi: 10.1016/j.microc.2017.10.002.
15. C. Palocci, A. Valletta, **L. Chronopoulou**, L. Donati, M. Bramosanti, E. Brasili, B. Baldan, G. Pasqua. Endocytic pathways involved in PLGA nanoparticle uptake by grapevine cells and role of cell wall and membrane in size selection. *Plant Cell Reports* 2017, 36(12), 1917-1928. Doi: 10.1007/s00299-017-2206-0.
16. M. Bramosanti, **L. Chronopoulou**, F. Grillo, A. Valletta, C. Palocci. Microfluidic-assisted nanoprecipitation of antiviral-loaded polymeric nanoparticles. *Colloids and surfaces A: Physicochemical and Engineering Aspects* 2017, 532, 369-376. Doi: 10.1016/j.colsurfa.2017.04.062.
17. **L. Chronopoulou**, Y. Toumia, B. Cerroni, A. Gentili, G. Paradossi, C. Palocci. Biosynthesis and characterization of a novel Fmoc-tetrapeptide based hydrogel for biotechnological applications. *Colloids and surfaces A: Physicochemical and Engineering Aspects* 2017, 532, 535-540. Doi: 10.1016/j.colsurfa.2017.04.003.

18. **L. Chronopoulou**, Y. Toumia, B. Cerroni, D. Pandolfi, G. Paradossi, C. Palocci. Biofabrication of genipin-crosslinked peptide hydrogels and their use in the controlled delivery of Naproxen. *New Biotechnology* 2017, 37, 138-143. Doi: 10.1016/j.nbt.2016.04.006.
19. M. Majone, **L. Chronopoulou**, L. Lorini, A. Martinelli, C. Palocci, S. Rossetti, F. Valentino, M. Villano. PHA copolymers from microbial mixed cultures: Synthesis, extraction and related properties. *Current Advances in Biopolymer Processing and Characterization*, Nova Science Publishers, 2017. Editor: M. Koller. ISBN: 978-153612711-9;978-153612710-2.
20. S. Waclawek, **L. Chronopoulou**, M. Petrangeli Papini, V.T.P. Vinod, C. Palocci, J. Kupčik, M. Černík. Enhancement of stability and reactivity of nanosized zero-valent iron with polyhydroxybutyrate. *Desalination and Water Treatment* 2017, 1-6. Doi: 10.5004/dwt.2017.0704.
21. S. Cerbelli, A. Borgogna, M.A. Murmura, M.C. Annesini, C. Palocci, M. Bramosanti, **L. Chronopoulou**. A Tunable Microfluidic Device to Investigate the Influence of Fluid-Dynamics on Polymer Nanoprecipitation. *Chemical Engineering Transactions* 2017, 57, 853-858. Doi: 10.3303/CET1757143.
22. **L. Chronopoulou**, C. Palocci, F. Valentino, I. Pettiti, S. Waclawek, M. Černík, M. Petrangeli Papini. Stabilization of iron (micro)particles with polyhydroxybutyrate for *in situ* remediation applications. *Applied Sciences* 2016, 6, 417-425. Doi: 10.3390/app6120417.
23. **L. Chronopoulou**, E.G. Di Domenico, F. Ascenzioni, C. Palocci. Positively charged biopolymeric nanoparticles for the inhibition of *Pseudomonas aeruginosa* biofilms. *Journal of Nanoparticle Research* 2016, 18, 308-317. Doi: 10.1007/s11051-016-3611-y.
24. **L. Chronopoulou**, G. Nocca, M. Castagnola, G. Paludetti, G. Ortaggi, F. Sciubba, M. Bevilacqua, A. Lupi, G. Gambarini, C. Palocci. Chitosan based nanoparticles functionalized with peptidomimetic derivatives for oral drug delivery. *New Biotechnology* 2016, 33, 23-31. Doi: 10.1016/j.nbt.2015.07.005.
25. **L. Chronopoulou**, S. Margheritelli, Y. Toumia, G. Paradossi, F. Bordi, S. Sennato, C. Palocci. Biosynthesis and characterization of cross-linked Fmoc peptide-based hydrogels for drug delivery applications. *Gels* 2015, 1(2), 179-193. Doi: 10.3390/gels1020179.
26. **L. Chronopoulou**, G. Nocca, A. Amalfitano, C. Callà, A. Arcovito, C. Palocci. Dexamethasone-loaded biopolymeric nanoparticles promote gingival fibroblasts differentiation. *Biotechnology Progress* 2015, 31(5), 1381-1387. Doi: 10.1002/btpr.2141.
27. I. Venditti, C. Palocci, **L. Chronopoulou**, I. Fratoddi, L. Fontana, M. Diociaiuti, M.V. Russo. *Candida rugosa* lipase immobilization on hydrophilic charged gold nanoparticles as promising biocatalysts: Activity and stability investigations. *Colloids and surfaces B: Biointerfaces* 2015, 131, 93-101. Doi: 10.1016/j.colsurfb.2015.04.046.
28. N. Cifani, **L. Chronopoulou**, B. Pompili, A. Di Martino, F. Bordi, S. Sennato, E.G. Di Domenico, C. Palocci, F. Ascenzioni. Improved stability and efficacy of chitosan/pDNA complexes for gene delivery. *Biotechnology Letters* 2015, 37, 557-565. Doi: 10.1007/s10529-014-1727-7.
29. C. Palocci, **L. Chronopoulou**. Supercritical Fluid Extraction of Pharmaceutical Compounds from Waste Materials Derived from Vinification Processes. *Fruit and Pomace Extracts: Biological Activity, Potential Applications and Beneficial Health Effects*, Nova Publishers, 2015. Editor: J.P. Owen. ISBN: 9781634825108.
30. **L. Chronopoulou**, C. Sparago, C. Palocci. A modular microfluidic platform for the synthesis of biopolymeric nanoparticles entrapping organic actives. *Journal of Nanoparticle Research* 2014, 16, 2703-2713. Doi: 10.1007/s11051-014-2703-9.

31. **L. Chronopoulou**, S. Sennato, F. Bordi, D. Giannella, A. Di Nitto, A. Barbeta, M. Dentini, A.R. Togna, G.I. Togna, S. Moschini, C. Palocci. Designing unconventional Fmoc-peptide-based biomaterials: structure and related properties. *Soft Matter* 2014, 10, 1944-1952. Doi: 10.1039/C3SM52457D.
32. A. Valletta, **L. Chronopoulou**, C. Palocci, B. Baldan, L. Donati, G. Pasqua. Poly(lactic-co-glycolic) acid nanoparticle uptake by *Vitis vinifera* L. cells and tissues and by grapevine-pathogenic fungi. *Journal of Nanoparticle Research* 2014, 16, 2744-2758. Doi: 10.1007/s11051-014-2744-0.
33. F. Bordi, **L. Chronopoulou**, C. Palocci, F. Bomboi, A. Di Martino, N. Cifani, B. Pompili, F. Ascenzioni, S. Sennato. Chitosan–DNA complexes: Effect of molecular parameters on the efficiency of delivery. *Colloids and surfaces A: Physicochemical and Engineering Aspects* 2014, 460, 184-190. Doi: 10.1016/j.colsurfa.2013.12.022.
34. F. Amaduzzi, F. Bomboi, A. Bonincontro, F. Bordi, S. Casciardi, **L. Chronopoulou**, M. Diociaiuti, F. Mura, C. Palocci, S. Sennato. Chitosan-DNA complexes: charge inversion and DNA condensation. *Colloids and surfaces B: Biointerfaces* 2014, 114, 1-10. Doi: 10.1016/j.colsurfb.2013.09.029.
35. **L. Chronopoulou**, A. Agatone, C. Palocci. Supercritical CO<sub>2</sub> extraction of oleanolic acid from grape pomace. *International Journal of Food Science and Technology* 2013, 48, 1854-1860. Doi: 10.1111/ijfs.12161.
36. **L. Chronopoulou**, M. Massimi, M.F. Giardi, C. Cametti, L. Conti Devirgiliis, M. Dentini, C. Palocci. Chitosan-coated PLGA nanoparticles: a sustained drug release strategy for cell cultures. *Colloids and surfaces B: biointerfaces* 2013, 103, 310-317. Doi: 10.1016/j.colsurfb.2012.10.063.
37. **L. Chronopoulou**, A. Cutonilli, C. Cametti, M. Dentini, C. Palocci. PLGA-based nanoparticles: effect of chitosan in the aggregate stabilization. A dielectric relaxation spectroscopy study. *Colloids and surfaces B: biointerfaces* 2012, 97, 117-123. Doi: 10.1016/j.colsurfb.2012.04.016.
38. **L. Chronopoulou**, A. R. Togna, G. Guarguaglini, G. Masci, F. Giammaruco, G. I. Togna, C. Palocci. Self-assembling peptide hydrogels promote microglial cells proliferation and NGF production. *Soft Matter* 2012, 8, 5784-5790. Doi: 10.1039/C2SM25528F.
39. I. Fratoddi, I. Venditti, C. Cametti, C. Palocci, **L. Chronopoulou**, M. Marino, F. Acconcia, M.V. Russo. Functional polymeric nanoparticles for dexamethasone loading and release. *Colloids and surfaces B: biointerfaces* 2012, 93, 59-66. Doi: 10.1016/j.colsurfb.2011.12.008.
40. G. Kamel, F. Bordi, **L. Chronopoulou**, S. Lupi, C. Palocci, S. Sennato, P.V. Verdes. Adsorption of *Candida rugosa* lipase at water-polymer interface: The case of poly(DL)lactide. *Surface Science* 2011, 605, 2017-2024. Doi: 10.1016/j.susc.2011.07.021.
41. **L. Chronopoulou**, G. Kamel, C. Sparago, F. Bordi, S. Lupi, M. Diociaiuti, C. Palocci. Structure-activity relationships of *Candida rugosa* lipase immobilized on polylactic acid nanoparticles. *Soft Matter* 2011, 7, 2653–2662. Doi: 10.1039/C0SM00712A.
42. C. Palocci, **L. Chronopoulou**. Biotechnological routes to synthesize peptide based hydrogels in aqueous medium. *Green Chemistry*, Nova Publishers, 2011. Editor: R. Luque. ISBN: 9781613248775.
43. **L. Chronopoulou**, S. Lorenzoni, G. Masci, M. Dentini, A. R. Togna, G. I. Togna, F. Bordi, C. Palocci. Lipase-supported synthesis of peptidic hydrogels. *Soft Matter* 2010, 6, 2525-2532. Doi: 10.1039/C001658F.

44. C. Palocci, **L. Chronopoulou**. Hybrid systems biomolecule-polymeric nanoparticle: synthesis, properties and biotechnological applications. *Advances in macromolecules*, Springer, 2010. Editor: M.V. Russo. ISBN: 978-90-481-3191-4.
45. **L. Chronopoulou**, I. Fratoddi, C. Palocci, I. Venditti, M.V. Russo. Osmosis Based Method Drives the Self-Assembly of Polymeric Chains into Micro- and Nanostructures. *Langmuir* 2009, 25, 11940-46. Doi: 10.1021/la9016382.
46. C. Palocci, M. Falconi, **L. Chronopoulou**, E. Cernia. Lipase-catalyzed regioselective acylation of tritylglycosides in supercritical carbon dioxide. *The Journal of Supercritical Fluids* 2008, 45, 88-93. Doi: 10.1016/j.supflu.2007.11.009.
47. C. Palocci, **L. Chronopoulou**, I. Venditti, E. Cernia, M. Diociaiuti, I. Fratoddi, M.V. Russo. Lipolytic enzymes with improved activity and selectivity upon adsorption on polymeric nanoparticles. *Biomacromolecules* 2007, 8, 3047-3053. Doi: 10.1021/bm070374l.

## Part XI– Main Conference Participations

1. 35th Conference of the European Colloid and Interface Society, ECIS, Athens (GR) 5-10/09/2021  
**L. Chronopoulou**, F. Portoghesi, E. Brasili, G. De Angelis, A. Orekhova, G. Simonetti, G. Pasqua, C. Palocci. Microfluidic-assisted nanoprecipitation of polymeric nanoparticles for the delivery of bioactive compounds in plant systems. Oral-presenting author
2. Nanotextology 2021, Thessaloniki (GR) 3-10/07/2021  
C. Palocci, **L. Chronopoulou**, N. Felli , B. Arasi, F. Felicetti. Surface conjugated CS based nanoparticles for targeting miRNA towards human melanoma cells. Oral
3. Applied Nanotechnology and Nanoscience International Conference 2021, Online 24-26/03/2021  
**L. Chronopoulou**, F. Portoghesi, E. Brasili, G. De Angelis, A. Orekhova, G. Simonetti, G. Pasqua, C. Palocci. Microfluidic synthesis of PLGA nanocarriers for the controlled delivery of bioactive compounds in plants of agronomic interest. Oral-presenting author
4. 7° Convegno Nazionale del Forum On Regenerative Methods, Online 20-21/05/2021  
**L. Chronopoulou**, A. Di Nitto, R. Zanoni, A. Muttini, M. Papi, W. Lattanzi, O. Parolini, C. Palocci. Idrogeli peptidici compositi iniettabili per applicazioni nella rigenerazione del tessuto osteoarticolare. Oral-presenting author
5. Nanotextology 2019, Thessaloniki (GR) 2-5/07/2019  
**L. Chronopoulou**, A. Di Nitto, A. Valletta, L. Donati, E. Brasili, G. Pasqua, C. Palocci. Microfluidic synthesis of polymeric nanoparticles for innovative applications in plant drug delivery. Oral-presenting author
6. Convegno Giovani Ricercatori, Roma (I) 25-26/06/2019  
**L. Chronopoulou**, M.A. D'Aurelio, L. Lorini, F. Valentino, M. Villano, M. Majone, C. Palocci. Innovative green chemistry approaches to recover and purify biopolymers from bacterial complex biomass. Poster
7. Nanomedicine Rome 2018, Rome (I) 18-20/06/2018  
**L. Chronopoulou**, A. DI Nitto, A. Amalfitano, G. Nocca, A. Arcovito, I. Silvestri, F. Domenici, S. Giantulli, F. Brasili, C. Palocci. Innovative nanofabrication methodologies for the preparation of drug delivery systems. Oral-presenting author
8. Composite Materials Congress, Stockholm (S) 3-6/06/2018



- L. Chronopoulou**, A. Di Nitto, A. Amalfitano, G. Nocca, A. Arcovito, I. Cacciotti, R. Zanoni, C. Palocci. Injectable hydrogel composites for biotechnological applications. Invited oral-presenting author
9. Italian Forum on Industrial Biotechnology and Bioeconomy, Rome (I) 5-6/10/2017  
**L. Chronopoulou**, M. Majone, F. Valentino, L. Lorini, F. Pagnanelli, F. di Caprio, C. Palocci. Supercritical fluid extraction of biomolecules and polymers from plant and microbial cells. Poster
  10. 28th Annual Conference of the European Society for Biomaterials, Athens (GR) 4-8/09/2017  
**L. Chronopoulou**, A. Amalfitano, G. Nocca, M. Valente, J. Tirillò, C. Palocci. Lipase-catalyzed synthesis of injectable peptide hydrogels for biotechnological applications. Oral
  11. VII Workshop AICing (Associazione Italiana di Chimica per Ingegneria), Milano (I) 12-13/06/2017  
**L. Chronopoulou**, A. Amalfitano, G. Nocca, M. Valente, C. Palocci. Biosynthesis of injectable peptide hydrogels for biotechnological applications. Poster
  12. Nanomedicine Viterbo 2016, Viterbo (I) 21-23/09/2016  
A. Amalfitano, A. Arcovito, C. Callà, **L. Chronopoulou**, M. Cordaro, M. Cantiani, G. Nocca, C. Palocci. Evaluation of the antiproliferative effect of 18 $\beta$ -Glycyrrhetic acid-loaded nanoparticles for treatment of drug-induced gingival overgrowth. Poster
  13. Nanomedicine Viterbo 2016, Viterbo (I) 21-23/09/2016  
**L. Chronopoulou**, G. Nocca, A. Amalfitano, A. Arcovito, S. Sennato, F. Bordi, I. Cacciotti, C. Palocci. Biosynthesis of injectable gelling peptides for applications in bone tissue regeneration. Oral-presenting author
  14. 30th Conference of the European Colloid and Interface Society, ECIS, Rome (I) 4-9/09/2016  
M. Bramosanti, **L. Chronopoulou**, F. Grillo, A. Valletta, L. Donati, G. Pasqua, C. Palocci. Ribavirin entrapment into PLGA NPs by a novel microfluidic approach. Poster
  15. 30th Conference of the European Colloid and Interface Society, ECIS, Rome (I) 4-9/09/2016  
**L. Chronopoulou**, S. Sennato, G. Nocca, A. Amalfitano, Y. Toumia, B. Cerroni, A. Arcovito, I. Cacciotti, F. Bordi, G. Paradossi, C. Palocci. Injectable peptidic hydrogels for bone tissue repair and regeneration. Oral-presenting author
  16. 3° Convegno Nazionale del Forum On Regenerative Medicine, Rome (I) 7-8/04/2016  
**L. Chronopoulou**, A. Amalfitano, G. Nocca, S. Sennato, F. Bordi, A. Arcovito, Y. Toumia, G. Paradossi, C. Palocci. Biosintesi di idrogeli peptidici per applicazioni di tissue engineering e medicina rigenerativa. Oral-presenting author
  17. Biosensors 2016, Gothenburg (S) 25-27/05/2016  
G. Fusco, A. D'Annibale, C. Tortolini, R. Antiochia, G. Favero, **L. Chronopoulou**, C. Palocci, F. Mazzei. A new immobilization procedure based on gelling oligopeptides for biosensors development. Poster
  18. 8th European Symposium on Biopolymers, Rome (I) 15-18/09/2015  
S. Sennato, **L. Chronopoulou**, F. Rinaldi, M.G. Belardinelli, F. Domenici, C. Marianecchi, A. Musarò, C. Palocci, F. Bordi. Chitosan-coated drug delivery vectors for skeletal muscle targeting. Poster
  19. 8th European Symposium on Biopolymers, Rome (I) 15-18/09/2015  
M. Bramosanti, **L. Chronopoulou**, C. Palocci. A modular microfluidic platform for the synthesis of biopolymeric nanoparticles entrapping organic actives. Poster
  20. 8th European Symposium on Biopolymers, Rome (I) 15-18/09/2015

- L. Chronopoulou**, S. Sennato, F. Bordi, G. Nocca, C. Palocci. Biosynthesis, characterization and biomedical applications of peptide-based hydrogels. Oral-presenting author
21. 2° Convegno Nazionale del Forum On Regenerative Medicine, Rome (I) 19-20/03/2015  
**L. Chronopoulou**, G. Nocca, A. Amalfitano, A. Arcovito, C. Palocci. Nanoparticelle biopolimeriche caricate con desametasone promuovono il differenziamento dei fibroblasti gengivali umani. Oral-presenting author
22. ESGB meeting Biofilm-based healthcare-associated infections: from microbiology to clinics, Rome (I) 9-10/10/2014  
**L. Chronopoulou**, E. di Domenico, N. Cifani, P. del Porto, F. Ascenzioni, C. Palocci. Tobramycin-loaded biopolymeric nanoparticles for bacterial biofilms management. Oral-presenting author
23. IADR/PER Congress 2014, Dubrovnik (HR) 10-13/09/2014  
C. Palocci, G. Nocca, G. Spagnuolo, S. Rengo, C. Callà, **L. Chronopoulou**. PLGA nanoparticles: A sustained drug release strategy for cell cultures. Poster
24. VI Convegno Giovani Chimici, Rome (I) 17-18/06/2014  
**L. Chronopoulou**, C. Sparago, C. Palocci. Progettazione e realizzazione di un innovativo reattore microfluidico capillare per la sintesi di nanoparticelle polimeriche. Poster
25. 15th European Conference on Composite Materials, Venice (I) 24-28/06/2012  
**L. Chronopoulou**, G. Kamel, F. Bordi, S. Lupi, C. Palocci. Enzyme immobilization on polymeric nanoparticles as a tool to improve biocatalytic performance. Oral-presenting author
26. V Convegno Giovani Chimici, Rome (I) 12-13/06/2012  
**L. Chronopoulou**, C. Palocci, A. R. Togna. Lipase-supported synthesis of peptidic hydrogels. Oral-presenting author
27. 3rd International Congress on Biohydrogels, Florence (I) 8-12/11/2011  
**L. Chronopoulou**, C. Cametti, A. Barbetta, M. Massimi, M. F. Giardi, L. Conti Devirgiliis, M. Dentini, C. Palocci. Core-shell biopolymeric nanoparticles for DXM encapsulation and its in vitro cell uptake. Poster
28. 3rd International Congress on Biohydrogels, Florence (I) 8-12/11/2011  
F. Giammaruco, **L. Chronopoulou**, G. Masci, M. P. Bossa, A. R. Togna, C. Palocci. Biosynthesis of Fmoc peptides for mammalian microglial cells proliferation and activation. Oral
29. 10th International Symposium on Biocatalysis Biotrans 2011, Giardini Naxos (I) 2-6/10/2011  
**L. Chronopoulou**, G. Kamel, F. Bordi, M. Diociaiuti, S. Lupi, C. Palocci. Structure-performance relationships of lipolytic enzymes immobilized on polymeric nanoparticles. Poster
30. X National Conference on Nanophase Materials, Bologna (I) 6-8/09/2011  
A. Di Martino, **L. Chronopoulou**, F. Ascenzioni, F. Bordi, C. Palocci. Synthesis and physico-chemical characterization of nanocomplexes chitosan /DNA for gene delivery applications. Oral
31. NANO 2010 X International Conference on Nanostructured Materials, Rome (I) 13-17/09/2010  
D. Senigallia, **L. Chronopoulou**, A. Barbetta, M. Massimi, M. De Colli, L. Conti Devirgiliis, M. Dentini, C. Palocci. Encapsulation of dexamethasone into biodegradable polymeric nanoparticles for in vitro cell uptake. Poster
32. From Solid State to Biophysics V, Cavtat (HR) 12-19/06/2010  
**L. Chronopoulou**, G. Kamel, F. Bordi, M. Diociaiuti, S. Lupi, C. Palocci. Structure-performance relationships of lipolytic enzymes immobilized on polymeric nanoparticles. Oral-presenting author
33. 10 anni di microscopia a scansione al dipartimento di chimica, Rome (I) 19/01/2010

- C. Palocci, **L. Chronopoulou**, G. Masci, M. Dentini. La microscopia elettronica a scansione nella caratterizzazione di bioidrogeli a base peptidica. Oral-presenting author
34. 2nd International Congress on Biohydrogels, Viareggio (I) 10-15/11/2009  
C. Palocci, **L. Chronopoulou**, G. Masci, M. Dentini, A. R. Togna. Lipase-catalyzed synthesis in aqueous medium of self-assembling peptides for biomedical applications. Poster
35. XXIII Congresso Nazionale della Società Chimica Italiana, Sorrento (I) 5-10/07/2009  
I. Venditti, **L. Chronopoulou**, C. Palocci, I. Fratoddi, M.V. Russo. Polymeric nanobeads for bioactive molecules encapsulation. Poster
36. X National Biotechnology Congress, Perugia (I) 17-19/09/2008  
C. Palocci, **L. Chronopoulou**, A. Masotti, F. Bordi. A novel patented method to prepare polymeric micro and nanoparticles for biomedical applications. Poster
37. III Convegno Giovani Chimici, Rome (I) 18-19/06/2008  
**L. Chronopoulou**, C. Palocci, I. Fratoddi, I. Venditti, M. V. Russo. Carrier biopolimerici nanostrutturati per l'immobilizzazione di enzimi lipolitici. Poster
38. VI Convegno INSTM, Perugia (I) 12-15/04/2007  
I. Venditti, R. Vitaliano, F. Vitale, C. Palocci, I. Fratoddi, C. Battocchio, **L. Chronopoulou**, L. Tapfer, M.V. Russo. Nanostructured Polymers for Optoelectronics and Biotechnological applications. Poster
39. CNB9 IX Congresso Nazionale Biotecnologie, Torino (I) 7-9/09/06  
C. Palocci, **L. Chronopoulou**, I. Venditti, E. Cernia, M. V. Russo. Immobilization of lipolytic enzymes onto polymeric nanoparticles. Poster
40. XVI Congresso nazionale di Chimica Industriale: Scienze e Tecnologie Chimiche per uno Sviluppo Sostenibile, Verbania Pallanza (I) 14  
C. Palocci, M.V. Russo, **L. Chronopoulou**, I. Venditti, R. D'Amato, C. Belsito, E. Cernia, C. Coluzza, G. Piantanida, Nanoparticles-enzyme hybrid systems: novel catalyst for application in bioconversion reactions. Oral
41. Workshop Functional & Nanostructured Materials from Chemistry + Nanostructured Polymers from Processing, Dresden (D) 23 and 28/04/2005  
M.V. Russo, C. Palocci, **L. Chronopoulou**, C. Belsito, I. Venditti, R. D'Amato, E. Cernia. The improvement of lipolytic enzyme activity achieved by the adsorption on polymethylmethacrylate and polystyrene nanospheres. Poster