

# CLEOFE PALOCCI

## Curriculum Vitae

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## Part I – General Informations

Full Name	Cleofe Palocci
Date of Birth	20/09/1962
Place of Birth	Roma
Citizenship	Italian
Mobile Phone Number	
E-mail	cleofe.palocci@uniroma1.it
Spoken Languages	Italian, english

## Part II – Education

Type	Year	Institution	Notes (Degree, Experience,...)
Biological Sciences Degree	1986	University of Rome “La Sapienza”	Full marks (110/110 e lode)
Qualification for biologist profession	1987	University of Rome “La Sapienza”	
PhD in Chemical Sciences IV° cycle	1988-1991	University of Rome “La Sapienza”	
PhD in Chemical Sciences	1991	University of Rome “La Sapienza”	PhD thesis title: “Lipolytic activity of enzymatic preparation and its use in biocatalyzed hydrolysis reactions”

## Part III – Appointments

### IIIA – Academic Appointments

Start	End	Institution	Position
1991-ongoing		University of Rome “La Sapienza”	Ranked 1° at the completion for 1 position of “Ricercatore Universitario” in Industrial Chemistry (CHIM04)
1991	1994	University of Rome “La Sapienza”	Ricercatore Universitario (RU)
1994	ongoing	University of Rome “La Sapienza”	Ricercatore Universitario confermato (RU)
31/03/2017	31/03/2023	University of Rome “La Sapienza”	Qualified for the role “Professore II fascia” for the “Settore Concorsuale 03/C2, SSD CHIM04, Industrial chemistry

## Part IV – Teaching experience

### IV A –Courses in Academic Institutions

Year	Institution	Course
Academic years: 1996/97-2001/02	University of Rome “La Sapienza”	Biochimica Industriale (6CFU) for the Five year Industrial Chemistry Degree
Academic years: 1997/98-2001/02	University of Rome “La Sapienza”	Laboratorio di Biochimica Industriale (6CFU) for the Five year Industrial Chemistry Degree
Academic years: 2001/02-2010/11	University of Rome “La Sapienza”	Biochimica Industriale (6CFU) for the Bachelor Degree in Industrial Chemistry
Academic years: 2001/02-2010/11	University of Rome “La Sapienza”	Laboratorio di Biochimica Industriale (6CFU) for the Bachelor Degree in Industrial Chemistry
Academic years: 2006/07-2009/10	University of Rome “La Sapienza”	Bioproduzione e bioconversioni: principi (3CFU) Master Degree in Industrial Chemistry, curriculum Organico-biochimico
Academic years: 2005/6-2009/2010	University of Rome “La Sapienza”	Corso modulare (2 CFU): “Enzimi nella modifica di composti bioattivi: recenti progressi” nell’ambito del corso di Chimica Organica Industriale II , for the Master Degree in Industrial Chemistry, curriculum Organico-biochimico
Academic years : 2009/2010,2010/11, 2011/12, 2012/13, 2013/14, 2014/15,	University of Rome “La Sapienza”	Biotrasformazioni Industriali (9CFU) for the Master Degree in Industrial Chemistry, curriculum Organico biotecnologico

2015/16,	2016/17,
2017/	2018/19-
ongoing	

Academic years: 2014/15, 2015/16, 2016/17, 2017/18, 2018/19-ongoing
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University of Rome “La Sapienza”
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Biomateriali (6CFU) for the Master Degree in Genomic, Industrial and Environmental Biotechnology
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#### **IV B – Evaluation of academic courses by students (OPIS)**

Opinioni Studenti 2014/15 1° Semestre Questionario Opis Studenti Frequentanti  
**[1022453] Biotrasformazioni Industriali : 92%** (percentuale di soddisfazione studenti)

Opinioni Studenti 2015/16 1° Semestre Questionario Opis Studenti Frequentanti  
**[1022453] Biotrasformazioni Industriali : 98,30%** (percentuale di soddisfazione studenti)

Opinioni Studenti 2016/17 1° Semestre Questionario Opis Studenti Frequentanti  
**[1022453] Biotrasformazioni Industriali : 85%**(percentuale di soddisfazione studenti)

Opinioni Studenti 2017/18 1° Semestre Questionario Studenti Frequentanti  
**[1022453] Biotrasformazioni Industriali : 98%**(percentuale di soddisfazione studenti)

Opinioni Studenti 2016/17 1° Semestre Questionario Opis Studenti Frequentanti  
**[1035087] Biomateriali : 83%** (percentuale di soddisfazione studenti)

Opinioni Studenti 2017/18 1° Semestre Questionario Studenti Frequentanti  
**[1035087] Biomateriali : 90%**(percentuale di soddisfazione studenti)

#### **IV C –Other teaching experiences**

The candidate held thematic courses and seminars at National and International University Masters, Specialization Schools and Italian University PhD courses

Academic years: 2018/19
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University of Rome La Sapienza
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“Biopolymers degradation mechanism” Lectures for the International Moplen School Ferrara 1/02/2019
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Academic years: 2014/15, 2015/16, 2016/17, 2017/18, 2018/19-
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University of Rome La Sapienza Department of Chemistry
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Nanotecnologie e Nanomateriali per applicazioni industriali (6CFU) for the students of the PhD School in Chemical Sciences
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Academic years:
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University of Rome La Sapienza
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“Biomaterials and their applications in drug and gene delivery” Lectures for the
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2016/17

International Moplen School , Ferrara 2016

Academic years: 2014/15	University of Rome La Sapienza	TFA 2015-Didattica della Chimica Industriale A013, A057
Academic years: 2011/12	University of Rome La Sapienza	“Nanotecnologie e Medicina rigenerativa: drug delivery e gene delivery” MASTER di I° livello in : Scienze della vita nel giornalismo e nei rapporti politico istituzionali (SGP)
Academic years: 2013/14	University of Rome La Sapienza	TFA 2013-Didattica della Chimica Industriale A013, A057
Academic years: 1998/99- 2010/11	University of Rome La Sapienza	Tecnologie di produzione di sostanze naturali” Scuola di Specializzazione in Sostanze Naturali e Master II livello in sostanze Naturali
Academic years: 1994/95- 2008/2009	University of Rome La Sapienza	“Le bioconversioni nelle trasformazioni industriali ”Scuola di Specializzazione e Master di I° livello in Applicazioni e Controlli Biotecnologici
Academic years: 2008/09	University of Rome La Sapienza	"Biomolecola-nanoparticella polimerica: sintesi, caratterizzazione ed applicazioni biotecnologiche" Conferenza di Facoltà di Scienze MFN
<b>IV D – Supervisor of PhD Thesis works in Chemical Sciences, Material Sciences, Physics and Chemical Engineering carried out at University of Rome La Sapienza</b>		
Cycle XXII	PhD title	Student
Academic years: 2008/09	Bioconiugati enzima-nanoparticella polimerica: sintesi, caratterizzazione ed applicazioni biotecnologiche	Laura Chronopoulou, PhD in Material Sciences, University of Rome La Sapienza
Cycle XXX	PhD title	Student
Academic years: 2016/17	Un nuovo reattore microfluidico flow-focusing per la sintesi di nanocarriers biopolimerici: studio dei parametri operativi e applicazioni in “plant medicine	Marco Bramosanti, PhD in Chemical Sciences, University of Rome La Sapienza

**IV E – Supervisor of more than 50 Bachelor and Master Thesis Works in Chemistry and Industrial chemistry, Chemistry and Pharmaceutic Technology, Biotechnology at Università di Roma La Sapienza**

**IVF – Tutoring activities for foreign students (Internship abroad of 3 foreign students)**

Year	Intership duration and object	Student
2015/16	May 2015-July 2015, “Entrapment of Rolipram within PLGA based nanoparticles”	Te Gai student of the Engineering Materials Degree of Polytech, Grenoble, France
2017/18	May 2018-July 2018, “Study of <i>Candida rugosa</i> lipase activity”	Justine Dobies, student of 4th year internship of the Engineering Materials Degree of Polytech, Grenoble, France
2018/19	May 2019-July 2019, “PLGA base nanoparticle for drug delivery application in melanoma cells”	Miryam Rabahi, student of 4th year internship of the Engineering Materials Degree of Polytech, Grenoble, France

## PART V- Organization Activities and Other Institutional Roles

Acad.Year	Role
2018/19	Member of commission “Affidamento assegni di Ricerca” D.R.1030, University of Rome La Sapienza
2018/19	President of Admission test Commission for knowledge verification TOLC-S, Faculty of Sciences, University of Rome La Sapienza
2018/19	President of Admission test Commission for knowledge verification of scheduled access to Biotechnology Degree , Faculty of Sciences, University of Rome La Sapienza
2017/18	Member for the commission for the admission to the PhD in Chemical Engineering Cycle XXXIII° University of Rome La Sapienza
2017-ongoing	Member of “Commissione Gestione Assicurazione Qualità” (CGAQ), Industrial Chemistry Degree, University of Rome La Sapienza
2016/17-ongoing	Member of the PhD Board of the PhD School in Chemical Engineering of the University of Rome La Sapienza
2015/16	President of Admission test Commission for knowledge verification of the Faculty of Sciences University of Rome La Sapienza
2015/16	Member for the Commission for the admission to the PhD in Chemical Science cycle XXX° University of Rome La Sapienza
2015	Member of the Organizing Committee of the VIII European Symposium on Biopolymers, University of Rome La Sapienza
2014/15	President of Admission test Commission for knowledge verification of the Faculty of Sciences University of Rome La Sapienza
2013/14-2015/16	Member of the PhD board of the PhD School in Chemistry of the University of Rome La Sapienza
2006-2009	Member of “Commissione affidamenti insegnamenti”, CAD in Industrial Chemistry of the University of Rome La Sapienza
2007-2010	Member of “Giunta di Dipartimento di Chimica” of the University of Rome La Sapienza

## Part VI - Society memberships, Awards and Honors

Year	Role
2018-ongoing	Scientific evaluator of National University Projects as Member of REPRISE Ministerial database scientific expert of MIUR for the section: basic research
2019-ongoing	Member of Scientific Commission of “Centro di Ricerca per le Scienze applicate alla Protezione dell’Ambiente e dei Beni Culturali dell’Ateneo “Sapienza”(CIABC)
2018-ongoing	Editor/Board Member of the Journal “Current Research in Biopolymers”, Gavin Publishers
2016-ongoing	Member of “Centro di Ricerca per le Scienze applicate alla Protezione dell’Ambiente e dei Beni Culturali dell’Ateneo “Sapienza”(CIABC)
2010-ongoing	Member of the “Consorzio Interuniversitario Biotecnologie” (CIB)

## Part VII - Funding Information [grants as PI-principal investigator or I-investigator]

### GRANTS as Principal Investigator (PI) : 12

Year	Title	Program	Grant value
2018	Un approccio “glocal” alle bioraffinerie di terza generazione (PI)	:Finanziamento CIB, NETWORK-CIB: Catalisi dell’Innovazione nelle Biotecnologie II. (Scientific Coordinator L. Pollegioni, University of Insubria)	487.000 euro 34.000 euro (scientific research unit)
2018	Tecnologie “green”per una agricoltura sostenibile: protezione da fitopatogeni e fertilizzanti di colture agroalimentari mediante biomolecole ottenute da reflui oleari(PI)	Progetto Regione Lazio 2017 (Scientific Coordinator D. Bellincampi, University of Rome La Sapienza)	150.000 euro 24.000 (scientific research unit)
2016	New insight into microfluidic assisted production of nano and microbeads for biotechnological applications. (PI)	Bando “Ateneo Ricerca Scientifica Sapienza” 2016	11.000 euro 166.650 euro
2012	Bioteecnologie per il rilascio sito specifico di molecole per l’igiene orale (PI)	Bando Filas ( Bando Bioscienze -Ricerca Industriale e/o sviluppo sperimentale) Coordinator: Farmafin spa	45.429 euro (scientific research unit)

2008	“Struttura-attività di enzimi lipolitici adsorbiti su nanoparticelle polimeriche: studi mediante spettroscopia IR” ( <b>PI</b> )	AST (Ateneo della scienze e della tecnica) 2008, University of Rome La Sapienza	4.365 euro
2006	Sistemi coniugati nano particella enzima: sintesi, caratterizzazione ed impiego in biocatalisi ( <b>PI</b> )	Bando SMFN Faculty 2006, University of Rome La Sapienza	1.940 euro
2005	Sistemi coniugati nano particella enzima: sintesi, caratterizzazione ed impiego in biocatalisi ( <b>PI</b> )	Bando SMFN Faculty 2005 University of Rome La Sapienza	1.382,25 euro
2004	Attività e selettività di enzimi lipolitici da fonte microbica nella acilazione di monosaccaridi in fluidi supercritici ( <b>PI</b> )	Bando SMFN Faculty 2004 University of Rome La Sapienza	2.328 euro
2003	Sviluppi nel settore del tissue-enginnering mediante l’impiego di biopolimeri in media non convenzionali ( <b>PI</b> )	Consorzio Interuniversitario Biotecnologie (CIB)	25.000 euro
2001	Nuovi mezzi di reazione e nuovi sistemi catalitici nelle biotrasformazioni ( <b>PI</b> )	Progetto CNR, Programma Biotecnologie	114.000 euro 34.920 euro (Scientific Research Unit Sapienza)
2002	Modulazione della attività e selettività di lipasi microbiche nella acilazione ( <b>PI</b> )	PRIN 2002 (National Coordinator Lilia Alberghina, University of Milano Bicocca)	25.000 euro
2000	Ottenimento si S-carbossi -L-cisteina attraverso processi chemo-enzimatici ( <b>PI</b> )	Research Contract Dompè Farmaceutici	22.451,04 euro

**GRANTS as Investigator : 9**

Year	title	Program	Grant value
2017	RESources from URban Bio-waSte(RES URBIS)." (I)	EU Horizon 2020 (Sapienza Grant Agreement: 730349) (Project Coordinator M. Majone, University of Rome La Sapienza)	330.000 euro 24.000 euro (scientific research unit Sapienza)
2017	Materiali innovativi nella bonifica di falde acquifere contaminate: caratterizzazione, reattività e ipotesi di implementazione tecnologica (I)	Bando “Ateneo Ricerca scientifica Sapienza” RM11715C8212BC94(Scientific Coordinator M. Petrangeli Papini) University of Rome La Sapienza	11.000euro (+24.000 euro research grant)
2015	Development and characterization of reactive materials for groundwater remediation (I)	Bando “Ateneo Ricerca scientifica Sapienza” 2015 (Scientific Coordinator M. Petrangeli Papini)	11.000 euro
2014	Novel biomaterials for tissue engineering and the controlled release of biomolecules. (I)	Bando “Ateneo Ricerca scientifica Sapienza” 2014 (Scientific Coordinator M. Dentini, University of Rome La Sapienza)	10.000 euro
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.(I)	Bando “Ateneo Ricerca scientifica Sapienza” 2014 (Scientific Coordinator F. Bordi, University of Rome La Sapienza)	11.000 euro
2013	Nuovi vettori nanobiopolimerici per la veicolazione di molecole di difesa contro funghi patogeni in <i>Vitis vinifera</i> (I)	Bando “Ateneo Ricerca scientifica Sapienza” 2013 (Scientific Coordinator G. Pasqua, University of Rome La Sapienza)	13.000 euro
2011	Design and development of non-viral drug delivery vectors (I)	“Novel Nanotech-Based Approaches for the Study and Treatment of Neurodegenerative diseases” IIT@Sapienza Project A1 2011 (Scientific Coordinator F.Bordi University of Rome La Sapienza)	55.000 euro (scientific research unit Sapienza)

<b>2012</b>	Ruolo dello stress ossidativo nell'alterazione dell'omeostasi muscolare e approccio terapeutico mediate antiossidanti veicolati da liposomi specifici. (I)	Progetto FIRB 2012 Futuro in ricerca (progetto n RBFR12BUMH dd 735 MIUR , 6/11/2012(National Scientific Coordinator V.Moresi, Five national research units)	1.063.421 euro
<b>2008</b>	Biomateriali innovativi per l'ingegneria tissutale e la veicolazione di molecole bioattive. (I)	PRIN 2008 (National Scientific Coordinator M. Dentini, University of Rome La Sapienza)	243.000 euro (scientific research unit Sapienza) 100.000 euro 36.000 euro (scientific research unit Sapienza)

## Part VIII – Research Activities

\*In brackets the reference as reported in the publications list

Keywords

**Research line\*: Novel bulk and microfluidic technologies for polymeric nanoparticles fabrication: approaches to drug and gene delivery**

### Brief Description

Microfluidic reactors
Nanostructured materials
Flow-focusing
Nanofabrication
Drug delivery
Gene delivery
Controlled release
Kinetic studies

One of the major problems in the synthetic processes of nanostructured polymeric materials in bulk systems is the control of size and polydispersion degree of the obtained nanoparticles which, together with the difficulty of standardizing the chemico-physical reaction conditions, limits the large-scale transfer of these technologies. My research group and I patented a methodology (PCT Sapienza WO2006051572) to obtain micro and nanostructured materials by using a membrane based approach [29,30,38-42, 44]. Currently, the use of flow focusing microfluidic reactors represents a particularly interesting alternative 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, for the synthesis of polymeric nanoparticles[13,15,17]. As part of the study of this reactor system, the main chemico-physical parameters that control the synthesis of the polymer nanoparticles in the microfluidic reactor have been identified and optimized (i.e. continuous vs dispersed phase flow ratio, concentration of the polymer solution, size of the focusing channel). Following the optimization of these operating parameters, it was possible to synthesize polymeric nanoparticles with a low polydispersity[3-5]. By using such technologies. nano and microstructured biopolymeroc materials were prepared for their use in drug delivery approaches or as immobilization supports for industrial enzymes[26,27]. Part of the research focus is on antitumoral and antiproliferative micro and nano drug delivery systems for potential applications for in vitro treatment of cancer cells, delivery of genes or nucleic acid [1,4,14,16,19,20,21,26] (siRNA for HIV treatment) and delivery of biopesticides for plant pathogens [6]. Research in this area also included the design of novel polyesters [24,25] and polysaccharides based carriers specifically functionalized or core–shell NPs. The physico-chemical, surface properties and in vitro drug release profiles of the different nanoformulations were characterized.

This topic is represented by a total of 25 publications and supported by 12

grants
ERC PE_4_2; PE_4_5; PE_5_10; PE_5_15

**Research line: Supercritical fluids as “green solvents” for extractions, selective reaction media for biocatalyzed reactions and as application in emulsion templating of biopolymers**

Keywords	Brief Description
Supercritical fluids	
Solvent physico-chemical properties	
Green solvents	
Bioactive compounds	
PHA extraction from microbial cells	
Emulsion templating in SCCO <sub>2</sub>	<p>Supercritical fluids have been recently used as an eco-sustainable alternative to the extraction of bioactive compounds from natural matrices (plant as well as microbial cells). In this field one of my recent research lines is focused on the extraction of biodegradable polymers (specifically polyhydroxyalkanoates, PHA) from mixed microbial cultures from urban wastes. In fact, while the strategies for maximizing productivity, as well as the intracellular content of PHA, are now known, the extraction step still remains a "weak" point of the process, on which there is still a wide margin of performance improvement, in terms of purity and recovery of the PHA product, as well as thermal and mechanical properties. Preliminary studies of extraction of PHA from pure microbial cells using supercritical CO<sub>2</sub> have particularly encouraging results with recovery yields of about 70 to 100% in PHA. [1].book chapter list]. Another research line was the study of supercritical fluid extraction of biomolecules like oleanolic acid [22] from waste materials such as grape pomace, which can represent a yet unexploited source of highly added-value products. This supercritical fluid extraction technique proved successful in extracting oleanolic acid from grape pomace samples, and the extraction yield afforded was comparable with well-established, yet sometimes disadvantageous, extraction techniques such as SL extractions. Moreover, in addition to ongoing research in solvent-free systems, biosynthesis in supercritical fluids can potentially offer new alternatives also to enzyme-catalysed reactions, being a useful tool to modulate enzymatic performance by modifying solvent physico-chemical properties. On this basis a long research activity has been conducted in the past by studying the catalytic efficiency of model enzymatic catalysts of industrial interest [50,53,55]. With increasing pressure of the reaction medium the catalytic efficiency of the enzymes considered improved resulting in a negative activation volume (<math>-1340 \text{ cm}^3/\text{mol}</math>) approaching critical values [37,38,47]. Studies on the enzyme kinetics and stereoselectivity in SCCO<sub>2</sub> reaction medium were also performed. Finally another topic of my research has been the study of the possibility to prepare high internal porosity polymeric matrices (i.e.dextran) through the emulsion templating technique in supercritical media. Experimental and theoretical criteria for tailoring matrices porosity and morphology of the porous biomaterials obtained have been outlined [31].</p> <p>This topic is represented by a total of 8 publications and supported by 7 grants</p>

**Keywords****Research line: "Bioproduction" of nano and microstructured peptidic based hydrogels for biotechnological applications**

Hydrogelators
Peptidic hydrogels
Nanofibers
Mechanical properties
Tissue engineering

Today hydrogels are considered the most interesting biomaterials for biotechnological applications. In this framework the possibility of using enzymes, of different sources, for the preparation of peptide based hydrogels has been investigated [19,24,30]. The biosynthesized Fmoc-tripeptides are able to self-assemble in water forming highly interconnected nanofibrillar structures [7]. The synthesized materials are injectable systems, whose precursors, liquid at room temperature, can rapidly give rise to the formation of a gel at physiological temperature. The physico-chemical properties of these materials have been highlighted by means of SEM, AFM, FTIR, NMR and SAXS measurements [3]. Recently, the possibility of improving their properties by using cross-linking agents [2,9] (genipin), as well as by unconventional aminoacid precursors or nanocarbon based materials (graphene oxide) has also been investigated. These hydrogels, employed in drug delivery studies proved to be able to entrap and release them according to controlled release profiles [13]. Currently, the work is aimed at the use of such promising biomaterials as scaffolds for cell growth and differentiation in the biomedical field.

This topic is presented by a total of 8 publications and supported by 2 Grants. ERC codes: PE5\_11;PE5\_12;PE5\_24

**Keywords****Research line: Study of the enzymatic activity of lipolytic enzymes and applications in industrial biotechnologies****Brief description**

Lipolytic enzymes
Unconventional media
Enzyme Structure-performance studies
Nanocarries
enzyme activity and selectivity

In this field a long and thorough study of the enzymatic activity in hydrolysis or synthesis reactions (in unconventional media) to obtain optically active molecules of potential industrial interest has been carried out in the first years of my experimental activity as a University researcher. As an example, chemo-enzymatic procedures have been developed for the synthesis of chiral intermediates of pharmaceutical interest (S-carboxy-L-methyl cysteine (patent Dompè, Ital. Appl. (2003), 16pp. CODEN: ITXXCZ IT 2001MI2433). The interpretation of the kinetic data of the enzymatic transformations investigated has also allowed a better understanding of the enzyme mechanism of action at the molecular level with attention to the *structure-performance relationships* studies [33-48]. Innovative strategies have also been developed for modulating the catalytic performance of lipolytic enzymes that have involved the use of polymer matrices (both natural and synthetic) of nano and micrometric dimensions for the production of bioconjugates, enzymes and polymeric carriers [34,39]. Nanostructured polymers have been also recently used as carriers for enzymatic proteins as a tool for modulating

and/or improving the catalytic properties of the biocatalyst. In particular, it was demonstrated that the interaction with micro or nanostructured matrices can cause conformational changes in the structure of the enzymatic protein, depending on the size of the carrier [29,34,39]. Such conformational variations may result in a modulation of the catalytic properties as well as of the stability of the biocatalyst.

This topic is presented by a total of **8** publications and supported by **9 Grants**

ERC codes:PE5\_16;PE4\_14

## Part IX – Reviewer Activity

I have carried out reviewing activity for the following publishing houses (the journals for which I carried out the reviewing activity are in brackets):

-**Royal Society of Chemistry** (Soft Matter)

-**Bentham Science** (Current Pharmaceutical Biotechnology)

-**Science Domain International** (International Research Journal of Pure and Applied Chemistry)

-**Taylor and Francis**( Expert Opinion on drug delivery)

-**MDPI** (Catalysts)

-**Elsevier** (J. Molec. Catal. B, Trends in Biotechnology, international Journal of Pharmaceutics, Colloids and Interfaces B: biointerfaces, Colloids and surfaces A, Acta biomaterialia,Journal of controlled release)

- **American Chemical Society** (ACS nano)

## Part X – Summary of Scientific Achievements

Total number of papers	<b>58</b> (56 international papers +2 conference papers)	Scopus
Total number of papers in the last five years	<b>23</b>	Scopus
Total number of publications	<b>62</b> (58 papers + 4 book chapters)	Scopus
Total numbers of patents	<b>3</b>	Scopus
Hirsch (H) index*	<b>19</b>	Scopus
Total Citations	<b>1073</b>	Scopus

\* The Impact Factor is related to the year of publication (for the most recent publications, if not yet available, the IF related to the previous year of the publication year is used).

**Part XI– Direction or Participation to the activities of a research group characterized by international and national collaboration.**

**Collaborations with University groups of Sapienza University of Rome:**

-*Collaboration with the group of Prof. Mauro Majone and Marco Petrangeli Papini* (Department of Chemistry, University of Rome, La Sapienza)

a) ResUrbis EU project 2017-2019

b) Chronopoulou, L., **Palocci, C.**, Valentino, F., Pettiti, I., Wacławek, S., Černík, M., **Papini, M.P.**

"Stabilization of iron (micro)particles with polyhydroxybutyrate for in situ remediation application" (2016) *Appl. Sci.* 6(12), 417- 426.

c) Wacławek, S., Chronopoulou, L., **Petrangeli Papini**, M., Vinod, V.T.P., **Palocci, C.**, Kupčík, J., Černík, M. "Enhancement of stability and reactivity of nanosized zero-valent iron with polyhydroxybutyrate" (2017) Desalination and Water Treatment 69, 302–307

d) **Majone**, M., Chronopoulou, L., Lorini, L., Martinelli, A., **Palocci, C.**, Rossetti, S., Valentino, F., Villano, M."PHA copolymers from microbial mixed cultures: Synthesis, extraction and related properties(2017) Current Advances in Biopolymer Processing and Characterization, pp. 223-276, Nova Science Publishers

-*Collaboration with the group of Prof. Mariella Dentini and Andrea Barbetta*, (Department of Chemistry, University of Rome La Sapienza)

a) Chronopoulou 1., Sennato S., Bordi F., Giannella D., Di Nitto A., Barbetta A.,, **Dentini M.**, Togna A.R., Togna G.I., Moschini S., **Palocci C.**, "Designing unconventional Fmoc-peptide-based biomaterials: structure and related properties" (2014) *Soft Matter*, 10, 1944-1952

b) Chronopoulou L., Massimi M., Giardi M. F., Cametti C., Conti De Virgiliis L., **Dentini M.** **Palocci C.**, Chitosan-coated PLGA nanoparticles: a sustained drug release strategy for cell cultures,(2013) *Colloids and Surfaces B: Biointerfaces*, 103, 310-317.

c) Chronopoulou L., Cutonilli A., Cametti C., **Dentini M.**, **Palocci C.**, " PLGA-based nanoparticles: effect of chitosan in the aggregate stabilization. A dielectric relaxation spectroscopy study, (2012) *Colloids and Surfaces B: Biointerfaces* 97, 117– 123

-*Collaboration with the group of Prof. Gabriella Pasqua* (Department of Environmental Biology, University of Rome La Sapienza,)

a) **Cleofe Palocci**, Fulvio Fiorillo, Carmela Belsito, **Pasqua Gabriella** and Enrico Cernia "Plant Latex Lipases: physiological role and applications" *Recent Res. Devel. Biochem.* 6(2005):87-89, **Palocci, C.**, Valletta, A., Chronopoulou, L., Donati, L., Bramosanti, M., Brasili, E., Baldan, B., **Pasqua, G.** Endocytic pathways involved in PLGA nanoparticle uptake by grapevine cells and role of cell wall and membrane in size selection", (2017) *Plant Cell Reports* 36(12), pp. 1917-1928 Valletta A., Chronopoulou L., **Palocci C.**, Baldan B., Donati L., Pasqua G., "Poly(lactic-co-glycolic) acid nanoparticles uptake by *Vitis vinifera* L. cells and tissues and grapevine-pathogenic fungi" (2014) *J. Nanop. Research*, 16, 2744-2758

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-Collaboration with the groups of Prof), Federico Bordi (Dip. Fisica),

-*Collaboration with the groups of Prof Stefano Lupi* (Dept. Physics, University of Rome La Sapienza)

- a) Chronopoulou, L., Daniele, M., Perez, V., Gentili, A., Gasperi, T., **Lupi, S., Palocci, C\***., “A physico-chemical approach to the study of genipin crosslinking of biofabricated peptide hydrogels”, (2018) *Progress Biochemistry*, 70, pp. 110-116,
- c) Chronopoulou L., Kamel G. Bordi F., **Lupi S., Palocci C.**, “Enzyme immobilization on polymeric nanoparticles as a tool to improve biocatalytic performance” ECCM15, Composites at Venice, Proceedings of the 15<sup>th</sup> European Conference on Composite Materials, Venice, Italy, 24-28 June 2012, 1-8.(Conference paper)
- d) Kamel G., Bordi F., Chronopoulou L., **Lupi S., Palocci C.**, Sennato S., Verdes P. V., “Adsorption of *Candida rugosa* lipase at water polymer interfaces: the case of Poly(D,L)lactide” (2011) *Surface Science*, 605, 2017–2024.

-Collaboration with the groups of Professor Maria Cristina Annesini, Prof. Stefano Cerbelli (Department of Chemical Engineering, University of Rome La Sapienza)

**Cerbelli, S.**, Borgogna, A., Murmura, M.A., **Annesini, M.C., Palocci, C.**, Bramosanti, M., Chronopoulou, L.“A tunable microfluidic device to investigate the influence of fluid-dynamics on polymer nanoprecipitation”, (2017) *Chemical Engineering Transactions*, 57, 853-858,

-Collaboration with the groups of Prof. Bruno Botta , Department of Chemistry and Drug Technologies University of Rome La Sapienza)

- a) Manetti F., Mileto D., Corelli F., Soro S., **Palocci C.**, Cernia E., D’Acquarica I., Lotti M., Alberghina L., **Botta M.**, “Design and realization of a tailor made enzyme to modify the molecular recognition of 2-arylpropionic esters by *Candida rugosa* lipase”, (2000) *Biochimica et Biophysica acta*, 1543, 146-158;
- b) Delle Monache G., Scurria R., Vitali A., **Botta B.**, Pasqua G., Monacelli B., **Palocci C.**, Cernia E., "Two isoflavones and a flavone from the fruits of Maclura Pomifera" (1994) *Phytochemistry* 37(3), 893-898
- c) **Botta B.**, Zappia G., Tafi A., Botta M., Manetti F., Cernia E., Milana G., **Palocci C.**, Soro S., Delle Monache G., “Lipase-catalysed regioselective acylation of resor[4]arenes” (2002) *J. Mol. Catal. B: Enzymatic*, 16, 241-247,

-Collaboration with the group of prof. Luigi Frati, Faculty of Medicine, University of Rome La Sapienza

- a) Rahimi H., Soro S., Rughetti A., **Palocci C.**, Biffoni M., Barachini S., Taurino F., Cernia E., **Frati L.**, Nuti M. “Monoclonal antibodies against *Candida rugosa*” (2004) *Journal of Molecular catalysis: B enzymatic* 28, 71-74,
- b) **Frati, Luigi**; Biffoni, Mauro; Rughetti, Aurelia; Koshkaki, Hassan Rahimi; Barachini, Serena; Nuti, Marianna; **Palocci, Cleofe**; Soro, Simonetta; Cernia, Enrico. Antimicrobial lipase antibodies, their sequences, and uses thereof. PCT Int. Appl. (2004),

#### At National level:

- Collaboration with Prof. Gaio Paradossi, (Department of Chemical Sciences and Technologies, Univesity of Rome Tor Vergata,); Chronopoulou, L., Toumia, Y., Cerroni, B., Gentili, A., Paradossi, G., **Palocci, C\*** “Biosynthesis and characterization of a gelogenic Fmoc-tetrapeptide for biotechnological applications” (2017) *Colloids and Surfaces A*, 532, 535–540. DOI: 10.1016/j.colsurfa.2017.04.003, (IF 3.99 cit 3); Chronopoulou, L., Toumia, Y., Cerroni, B., Pandolfi, D., Paradossi, G., **Palocci, C\***. Biofabrication of genipin-crosslinked peptide hydrogels and their use in the controlled delivery of naproxen, (2017) *New Biotechnology*, 37, 138-143 DOI: 10.1016/j.nbt.2016.04.006 ( IF 3.73 cit 8);
- Chronopoulou L., Margheritelli S., Paradossi G., Bordi F., Sennato S., **Palocci C\***. “Biosynthesis and characterization of cross-linked Fmoc peptide-based hydrogels for drug delivery applications”

(2015) *Gels*, 1(2), 179-193. doi.org/10.3390/gels1020179

-*Collaboration with Prof. Ilaria Cacciotti*, (Faculty of Industrial Engineering, University of Rome “Niccolo Cusano); **Cacciotti, I.**, Chronopoulou, L., **Palocci, C.**, Amalfitano, A., Cantiani, M., Cordaro, M., Lajolo, C., Calla, C., Boninsegna, A., Lucchetti, D., Gallenzi, P., Sgambato, A., Nocca, G., Arcovito, A. “18- $\beta$ -Glycyrrhetic Acid Citotoxicity On Oral Carcinoma Cell Line is Affected By Nanodelivery Systems”, (2018) *Nanotechnology*, 29, 285101 DOI: 10.1088/1361-6528/aabec, (IF 3.40 cit 1)

-*Collaboration with Prof. Mara Massimi* (Dip.Medicina Clinica, Sanità Pubblica e Scienze della vita e dell’Ambiente, University of L’Aquila) Chronopoulou L., **Massimi M.**, Giardi M. F., Cametti C., Conti De Virgiliis L., Dentini M. **Palocci C\***., Chitosan-coated PLGA nanoparticles: a sustained drug release strategy for cell cultures,(2013) *Colloids and Surfaces B: Biointerfaces*, 103, 310-317. DOI: 10.1016/j.colsurfb.2012.10.063, Cited 66 times, IF 4.23

-*Collaboration with Dr.Giuseppina Nocca, PhD, and Prof. Alessandro Arcovito* (Faculty of Medicine,Catholic University “ Sacro Cuore”)

a) Cacciotti, I., Chronopoulou, L., **Palocci, C.**, Amalfitano, A., Cantiani, M., Cordaro, M., Lajolo, C., Calla, C., Boninsegna, A., Lucchetti, D., Gallenzi, P., Sgambato, A., **Nocca, G.**, Arcovito, A. “18- $\beta$ -Glycyrrhetic Acid Citotoxicity On Oral Carcinoma Cell Line is Affected By Nanodelivery Systems”, (2018) *Nanotechnology*, 29, 285101; b) Chronopoulou L., Amalfitano A., **Palocci C.**, **Nocca G.**, Arcovito A.,“Dexamethasone-loaded biopolymeric nanoparticles promote gingival fibroblasts differentiation” (2015) *Biotechnology Progress*, 31(5), 1381–1387

--*Collaboration with Prof. Andrea Tafi*, Department of Biotechnology, Chemistry and Pharmacy, University of Siena

a) **Palocci C.**, Falconi M., Alcaro S., **Tafi A.**, Ortuso F., Alberghina L., Cernia E. “ An approach to address *Candida rugosa* lipase Regioselectivity in the acylation reactions of tritylated glucosides” (2007) *Journal of Biotechnology* 128 (4) , 908-918, DOI: 10.1016/j.jbiotec.2006.08.019(IF 2.20 cit 16); b) Botta B., Zappia G., **Tafi A.**, Botta M., Manetti F., Cernia E., Milana G., **Palocci C.**, Soro S., Delle Monache G., “Lipase-catalysed regioselective acylation of resorc[4]arenes” (2002) *J. Mol. Catal. B: Enzymatic*, 16, 241-247, DOI: 10.1016/S1381-1177(01)00068-6 (IF 1.32 cit 18)

#### At International level:

a) **Prof. Esteban Gudino**, National University of Quilmes, Buenos Aires, Argentina, for postdoc application (eight months) from Sept.2012 to April 2013 Erasmus Mundus, Eurotango2

b) **Prof. Subrayal Reddy**, University of Lancashire

Erasmus student thesis work in collaboration with prof. Reddy group (Antonio Simonetti, Master Degree in Chemistry)

c) **Prof. Cernik M.**, Institute for Nanomaterials, Advanced Technologies and Innovation, Technical University of Liberec, Studentská 1402/2, 461 17 Liberec 1, Czech Republic, Tel. +420 485 353 006; emails: stanislaw.waclawek@tul.cz (S. Wacławek), Wacławek, S., Chronopoulou, L., Petrangeli Papini, M., Vinod, V.T.P., **Palocci, C.**, Kupčík, J., **Černík, M.** "Enhancement of stability and reactivity of nanosized zero-valent iron with polyhydroxybutyrate" (2017) *Desalination and Water Treatment* 69, 302–307; Chronopoulou, L., **Palocci, C.**, Valentino, F., Pettiti, I., Waclawek, S., **Černík, M.**, Papini, M.P."Stabilization of iron (micro)particles with polyhydroxybutyrate for insitu remediation application" (2016) *Appl. Sci.* 6(12), 417- 426. DOI: 10.3390/app6120417, ( IF 1.41 cit 6)

d) **Drs.Gihan Kamel** Physics Department in the Faculty of Science at Helwan University, Egypt and an Infrared Microspectroscopy Beamline Scientist at SESAME: Chronopoulou L., **Kamel G.** Bordi F., Lupi S., **Palocci C.**, "Enzyme immobilization on polymeric nanoparticles as a tool to improve biocatalytic performance" ECCM15, Composites at Venice, Proceedings of the 15<sup>th</sup> European Conference on Composite Materials, Venice, Italy, 24-28 June 2012, 1-8.(Conference paper), **Kamel G.**, Bordi F., Chronopoulou L., Lupi S., **Palocci C.**, Sennato S., Verdes P. V., "Adsorption of *Candida rugosa* lipase at water polymer interfaces: the case of Poly(D,L)lactide" (2011) Surface Science, 605, 2017–2024. DOI: 10.1016/j.susc.2011.07.021 (IF 2.08 cit 7), Chronopoulou L, **Kamel G.**, Sparago C., Bordi F., Lupi S., Diociaiuti M., **Palocci C\***. , "Structure-activity relationships of *Candida rugosa* lipase immobilized on polylactic acid nanoparticles" (2011) Soft Matter , 7, 2653-2662, DOI: 10.1039/c0sm00712a (IF 4.39 cit 35)

e) **Antonio Di Martino**, PhD, Centre of Polymer Systems, Tomas Bata University in Zlín, Czech Republic.; Bordi F., Chronopoulou L., **Palocci C.**, Bomboi F., **Di Martino A.**, Ascenzioni F., Cifani N., Pompili N., Sennato S., "Chitosan-DNA complexes: effect of molecular parameters on the efficiency of delivery" (2014) Colloids and Surfaces A: Physicochemical and Engineering Aspects 460, 184-190. DOI:10.1016/j.colsurfa.2013.12.022, Cited 18 times, IF 2.75

#### **Part – XII Oral or Poster Communications held at National and International Congresses**

**The results of my research work have been presented by me with 10 oral presentations (OP) at national and international congresses from 1991 to 2018 (total number 65).**

1. E. Cernia, M. Delfini, A.D. Magri', **C. Palocci**, "Resolution of racemic mixtures via lipase catalysis: determination of optical purity by <sup>1</sup>H NMR", Proceedings of the Second International Symposium on Chiral Discrimination, Rome , 27-31/05/1991, (**PP**)
2. Borioni A., E.Cernia, A. D. Magri', **C. Palocci**, S. Soro, " Some influence of the chemical compositionon the biocatalyzed hydrolysis of organic esters", Proceedings of the Workshop : Lipases: structure, function and applications on biotransformations, Coventry, July 16-18/07/1991(**PP**)
3. Botta, E.Cernia, **C. Palocci**, "Supercritical fluid extraction and chromatography of flavonoids from *Maclura pomifera* fruits ", Proceedings of the Conference on: Bioseparation, Espinho, 24-28/05/ 1992 (**PP**)
4. E. Cernia, N. Fagnano, **C. Palocci**, "Pseudomonas lipase catalytic activity in supercritical carbon dioxide", Proceedings of the Workshop on : Lipase: Structure, mechanism and genetic engineering, Capri, 1-3/10/1992(**OP**)
5. E. Cernia, N.Fagnano, G. Gasparrini, D. Misiti, **C.Palocci**, "Esterificazione enantioselettiva di alcoli mediante biocatalisi in fluidi supercritici", Proceedings of the International Congress on : I fluidi supercritici e loro applicazioni, Ravello (Sa) 20-22/06/1993(**OP**)
6. E. Cernia, N.Fagnano, F.Gasparrini, D.Misiti, **C.Palocci**, "Synthesis of optically active compounds by immobilized biocatalytic system in supercritical carbon dioxide", Proceedings of the : Fourth International Symposium on Chiral Discrimination, Montreal, 19-22/09/1993 (**PP**)
7. E. Cernia, N. Fagnano, F. Gasparrini, D. Misiti, **C. Palocci**, "Enantioselectivity and reactivity of immobilized lipase in supercritical carbon dioxide", Proceedings of the Workshop : Lipase: Structure, function and protein engineering, Elsinore (Denmark), 10-13/10/1993(**OP**)
8. D. Misiti, N.Fagnano, F.Gasparrini, E.Cernia, **C. Palocci**, " Enantioselective biocatalysis in supercritical fluids" International Symposium on Molecular Chirality, Kyoto, Japan ,24-27/05/ 1994 (**PP**)
9. E. Cernia, A.D'Andrea, D.Ferri, O.Maccioni, **C.Palocci**, S.van der Esch, F.Vitali, "

Supercritical fluids separation media for natural products with biological activity " Bioseparation , Dourdan (F) 28/05- 2/06 /1994(**OP**)

10. E. Cernia, N. Fagnano, F. Gasparrini, D. Misiti, **C. Palocci**, L. Battinelli, S. Soro, "Kinetics of lipase-catalyzed esterifications in SCCO<sub>2</sub>" Convegno CIB, Brescia 20-21/06/1994(**PP**)
11. E. Cernia, N. Fagnano, F. Gasparrini, D. Misiti, **C. Palocci**, " Kinetics and enantioselectivity of lipase-catalyzed reactions in SCCO<sub>2</sub>, IUMS '94, Praga 2-8/07/1994, (**PP**)
12. E. Cernia, N. Fagnano, F. Gasparrini, D. Misiti, **C. Palocci**, "Biocatalyzed reactions in SCCO<sub>2</sub>", Third International Symposium on supercritical fluids, Strasburgo 17-19/10/1994(**PP**)
13. E. Cernia, N. Fagnano, F. Gasparrini, D. Misiti, **C. Palocci**, "Biocatalyzed reactions in supercritical fluids", Quinto Simposio Biotecnologie Biochimiche, Capri, 9-11/10/1994(**OP**)
14. E. Cernia, **C. Palocci**, A. D'Andrea, D. Ferri, O. Maccioni, S.Van Der Esch, F. Vitali "Fractionation by SFE of active substances from Azadirachta indica seeds", Strasburgo 17-19/10/1994(**PP**)
15. E. Catoni, E. Cernia, **C. Palocci**, " Control of the reaction media characteristics on the biocatalytic activity of microbial lipases" I° Congresso Biotecnologia, CIB, Bologna 6-9/09/1995 (**PP**)
16. E. Cernia, **C. Palocci**, "La "solvent engineering " nelle reazioni catalizzate da lipasi microbiche", Convegno Nazionale Biocatalisi e Sintesi organica, Acquafrredda di Maratea 3-5/05/1996(**PP**)
17. E. Cernia, **C. Palocci**, C. Di Santo, "Macrolide antibiotic intermediate preparation through *Pseudomonas cepacia* lipase biocatalyzed reactions"VII Congress on University and Biotechnology Innovation, Genova 15- 16/07/1996(**PP**)
18. E. Cernia, **C. Palocci**, "The solvent engineering in biocatalyzed reactions"Annual Symposium on Biotechnology, Capri 26-28/05/1997 (**PP**)
19. B. Botta, E. Cernia, G. Milana, **C. Palocci**" Selective acylation of calixarenes by *Mucor miehei* lipase in different organi solvents" Lipases and lipids:structure, specificity and applications in biotechnology, Como 17-20/09/1997
20. E. Cernia, **C. Palocci**, S.Soro " The role of the medium on lipase catalysed esterification and transesterification" Lipases and lipids:structure, specificity and applications in biotechnology, Como 17-20/09/1997(**OP**)
21. E. Cernia, **C. Palocci**, S.Soro " The role of the medium on lipase catalysed esterification and transesterification" Lipases and lipids:structure, specificity and applications in biotechnology, Como 17-20/09/1997(**PP**)
22. E. Cernia, G. Manganaro, **C. Palocci**, S.Soro" Chromatographic separation of different lipases in human pre- and post heparin plasma" Lipases and lipids:structure, specificity and applications in biotechnology, Como 17-20/09/1997(**PP**)
23. E. Cernia, G. Milana, **C. Palocci**, S.Soro" An approach to the interpretation of lipase mechanism in transesterification reaction employing an ordered Bi-Bi mechanism" Lipases and lipids:structure, specificity and applications in biotechnology, Como 17-20/09/1997(**PP**)
24. E. Cernia, G.Milana, G.Ortaggi, **C.Palocci**, S.Soro, "Functionalized cross-linked PVA as new matrices for lipase immobilization "Stability and Stabilization of biocatalysts" 19-21 International Symposium on the Stability and Stabilization of Biocatalysts, 19-22/04/1998 Cordova, Spagna(**PP**)
25. E. Cernia, C. Palocci, E. C. Celia, S. Soro, "Effect of Pressure on enzymatic Reactions in Supercritical Fluids" Fifth conference on Supercritical Fluids and their Applications, Garda (Verona), 13-1/06 /1999 (OP)
26. H. Rahimi, A. Rughetti, S. Soro, **C. Palocci**, P. Ferrer, F. Valero, E Cernia, M. Nuti , "Generation and characterisation of monoclonal antibodies against lipases from *Candida rugosa*" Lipases and Lipids: Structure, Function and Biotechnological Applications,

- Santorini, Greece 6-8/05/ 1999
27. F. Manetti, F. Corelli, S. Soro, **C. Palocci**, E Cernia, M. Lotti, M. Botta," Probing the substrate specificity for lipases. Designing a tailor-made enzyme to increase the molecular recognition of 2-arylpropionic esters by *Candida rugosa* lipase", Lipases and Lipids: Structure, Function and Biotechnological Applications, Santorini, Greece 6-8/05/ 1999
  28. E. Cernia, **C. Palocci**, S. Soro, "Stereoselective and environmentally friendly reactions catalysed by enzymes" Connvegno SIB-BIB, Como, Villa Olmo, 10-12/05/2002 (**PP**)
  29. E. Cernia, **C. Palocci**, S. Soro "Modulazione dell'attività catalitica di lipasi: uso di solventi ad anticorpi monoclonali" Bionova 2003 Padova, 4-6/06/2003
  30. S. Barachini, L. Bartoli, M. Biffoni, E. Cernia, L. Frati, V. Morea, M. Nuti, **C. Palocci**, H. Rahimi, A. Rughetti, S. Soro, F. Taurino, A. Tramontano "Enhancement of candida rugosa lipase activity by immunoglobulin light chain" Milano, Università Bicocca, Convegno SIB-BIB, 17/07/2003
  31. E. Cernia, R. D'Amato, I. Fratoddi, **C. Palocci**, F. Panzavolta, M.V. Russo, S. Soro "Immobilised lipases on nanostructured functional polymers" IV Convegno Nazionale sulla Scienza e Tecnologia dei materiali, Porto d'Ischia (Na) dal 29/06 al 2-07/2003(**PP**)
  32. Fiorillo F., **Palocci C.**, Soro S., Belsito C., Monacelli B., Pasqua G. "Isoenzimi lipolitici nel lattice di alcune specie del genere *Euphorbia*" – Comunicazione a Convegno del gruppo di lavoro di Biologia Cellulare e Molecolare organizzato dalla Società Botanica italiana – Falerna Lido (CZ) - Luglio 2003
  33. F. Fiorillo, **C. Palocci**, S. Soro, C. Belsito, B. Monacelli, G. Pasqua, "Isoenzimi lipolitici nel lattice del genere *Euphorbia*, XIV Congresso Nazionale di Catalisi GIC 2004, Villa Marigola, Lerici, 6- 8/06/ 2004(**OP**)
  34. E. Cernia, **C. Palocci**, M. Falconi, F. Panzavolta, C. Belsito, "Tuning Candida rugosa lipase acylation of polyfunctional templates in SCCO<sub>2</sub>" XIV Convegno Nazionale di catalisi, 6-8/06/2004 Lerici
  35. 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, XVI Congresso nazionale di Chimica Industriale: Scienze e Tecnologie Chimiche per uno Sviluppo Sostenibile, Verbania Pallanza (I) 14-17/06/2005(**OP**)
  36. 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. Workshop Functional & Nanostructured Materials from Chemistry + Nanostructured Polymers from Processing, Dresden (D) 23 and 28/04/2005
  37. **Cleofe Palocci**, Ilaria Fratoddi, Iole Venditti, Maria Vittoria Russo, "Materiali nanostrutturati, research to Business 2006 Bologna 11-12/05/2006
  38. **Cleofe Palocci**, Angelo La Grotta, Andrea Barbetta, Mariella Dentini and Enrico Cernia "Porous biomaterials by using supercritical fluids emulsions" 8th Conference on Supercritical Fluids and their Applications, 28-31/05/2006, Ischia, Italy
  39. **Cleofe Palocci**, Laura Chronopoulou, Ilaria Fratoddi, Iole Venditti, Maria Vittoria Russo "Immobilization of lipolytic enzymes onto polymeric nanoparticles" IX Congresso Nazionale CIB, Modelli Traslazionali nelle Biotecnologie, Torino, 7-9/09/2006
  40. Iole Venditti, Rosa Vitaliano, Floriana Vitale, **Cleofe Palocci**, Ilaria Fratoddi, Chiara Battocchio, Laura Cronopoulou, Leander Tapfer, Maria Vittoria Russo "Nanostructured Polymers for Optoelectronics and Biotechnological applications" VI Convegno INSTM Perugia 12-15/04 2007
  41. **Cleofe Palocci**, Laura Chronopoulou, Federico Bordi, Andrea Masotti "A novel patented method to prepare polymeric micro and nanoparticles for biomedical application " CNBX ,

Perugia, 7-19 /09/2008

42. Laura Chronopoulou, Silvia Lorenzoni, Giancarlo Masci, Mariella Dentini, Annarita Togna Giuseppina Togna, Federico Bordi and **Cleofe Palocci** “Lipase-catalysed synthesis of peptides for biomedical applications”, 2<sup>nd</sup> International Congress on Biohydrogels, Viareggio 10-15 /11/2009(**OP**)
43. I.Venditti, L. Chronopoulou, **C. Palocci**, I. Fratoddi, M.V. Russo. Polymeric nanobeads for bioactive molecules encapsulation XXIII Congresso Nazionale della Società Chimica Italiana, Sorrento (I) 5-10/07/200 (**PP**)
44. Daniele Senigallia, Laura Chronopoulou, Andrea Barbetta, Mara Massimi, Marianna De Colli, Laura Conti De Virgiliis, Mariella Dentini, and **Cleofe Palocci** “Encapsulation ofdexamethasone into biodegradable polymeric nanoparticles for in vitro cell uptake” International conference on nanostructured Materials, NANO2010 13-17/09/2010, Università la Sapienza, Roma (**PP**)
45. L.Chronopoulou, G.Kamel, F.Bordi, M.Diociaiuti, S.Lupi, **C.Palocci**, “Structure-performance relationships of lipolytic enzymes immobilized on polymer nanoparticles” Convegno: From Solid State to Biophysics: from Physics to Life Sciences, Caftat, Dubrovnik, 12-19/06/2010
46. Di Martino, L. Chronopoulou, F. Ascenzioni, F. Bordi, **C. Palocci**, “Synthesis and physico-chemical characterization of nanocomplexes chitosan/DNA for gene delivery applications”, X Convegno Materiali Nanofasici, Bologna 6-8/09/2011(**OP**)
47. L. Chronopoulou, G. Kamel, F. Bordi, M. Diociaiuti, S. Lupi, **C. Palocci**. Structure-performance relationships of lipolytic enzymes immobilized on polymeric nanoparticles,10<sup>th</sup> International Symposium on Biocatalysis Biotrans 2011, Giardini Naxos (IT) 2-6/10/2011
48. F. Giammaruco, L. Chronopoulou, G. Masci, M. P. Bossa, A. R. Togna, **C. Palocci**. Biosynthesis of F-moc peptides for mammalian microglial cells proliferation and activation.3<sup>rd</sup> International Congress on Biohydrogels, Florence (IT) 8-12/11/2011(**PP**)
49. 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. 3<sup>rd</sup> International Congress on Biohydrogels, Florence (IT) 8-12/11/2011(**PP**)
50. L. Chronopoulou, **C. Palocci**, A. R. Togna. Lipase-supported synthesis of peptidic hydrogels V Convegno Giovani, Roma (IT) 12-13/06/2012
51. L. Chronopoulou, G. Kamel, F. Bordi, S. Lupi, **C. Palocci**. Enzyme immobilization on polymeric nanoparticles as a tool to improve biocatalytic performance, 15th European Conference on Composite Materials, Venice (IT) 24-28/06/2012 ISBN: 978-88-88785-33-2
52. L. Chronopoulou, E. di Domenico, N. Cifani, P. del Porto, F. Ascenzioni, **C. Palocci**. Tobramycin-loaded biopolymeric nanoparticles for bacterial biofilms management ESGB meeting Biofilm-based healthcare-associated infections: from microbiology to clinics, Rome (I) 9-10/10/2014
53. **C. Palocci**, G. Nocca, G. Spagnuolo, S. Rengo, C. Callà, L. Chronopoulou. PLGA nanoparticles: A sustained drug release strategy for cell cultures.IADR/PER Congress 2014, Dubrovnik (HR) 10-13/09/2014,
54. 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 8th European Symposium on Biopolymers, Rome (I) 15-18/09/2015.,
55. M. Bramosanti, L. Chronopoulou, **C. Palocci**. A modular microfluidic platform for the synthesis of biopolymeric nanoparticles entrapping organic actives8th European Symposium on Biopolymers, Rome (I) 15-18/09/2015.(**PP**)
56. L. Chronopoulou, S. Sennato, F. Bordi, G. Nocca, **C. Palocci**. Biosynthesis, characterization and biomedical applications of peptide-based hydrogels.8th European Symposium on

Biopolymers, Rome (I) 15-18/09/2015

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62. M. Bramosanti, L. Chronopoulou, L. Donati, A. Valletta, G. Pasqua, **C. Palocci**. Microfluidic synthesis of drug-loaded PLGA NPs for plant therapy 31st Conference of the European Colloid and Interface Society, ECIS, Madrid (E) 3-8/09/2017(**PP**)
63. L. Chronopoulou, A. Amalfitano, G. Nocca, M. Valente, **C. Palocci**. Biosynthesis of injectable peptide hydrogels for biotechnological applications VII workshop nazionale AICIng, Milan (I) 12-13/06/2017
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65. Cleofe Palocci\*, Laura Chronopoulou, Antonio Di NittoDepartment of Chemistry, University of Rome "La Sapienza" P.le A.Moro 5 00185 Rome Italy , Nanomedicine International Conference, Venice 23-25/10/2018(**OP**)

#### Part – XIII Complete list of Publications.

1. Laura Chronopoulou, Chiara Dal Bosco, Fabrizio Di Caprio, Letizia Prosini, Alessandra Gentili, Francesca Pagnanelli, **Cleofe Palocci** \* "Extraction of carotenoids and fat-soluble vitamins from *Tetradesmus obliquus* microalgae: an optimized approach by using supercritical CO<sub>2</sub>" *Molecules* 2019 16;24(14) doi: 10.3390/molecules24142581.
2. Giovanna Simonetti , Cleofe Palocci, Alessio Valletta , Olga Kolesova, Laura Chronopoulou 2 , Livia Donati 3 , Antonio Di Nitto , Elisa Brasili , Pierpaolo Tomai, Alessandra Gentili 2 , Gabriella Pasqua \*,"Anti-Candida Biofilm Activity of Pterostilbene and Extract from Non-Fermented Grape Pomace Entrapped in Biopolymeric Nanoparticles", *Molecules*. 2019; 24(11): 2070. doi: 10.3390/molecules24112070
3. Laura Chronopoulou, PhD; Fabio Domenici, Ph.D.; Sabrina Giantulli, PhD; Francesco Brasili, Chiara D'Errico; Georgia Tsouli, Elisabetta Tortorella; Federico Bordi; Stefania Morrone; **Cleofe Palocci\***; Ida Silvestri "PLGA based particles as "drug reservoir" for antitumor drug delivery: characterization and cytotoxicity studies" *Colloids and surfaces B: biointerfaces* 2019 Volume 180, 495-502

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### **Book chapters (four indexed on Scopus)**

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### **National and International Patents**

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