

Decreto Rettore Università di Roma “La Sapienza. n. 192/2019 del 16.01.2019

Codice concorso **2018PAR053**

CLEOFE PALOCCI

Curriculum Vitae- ai fini della pubblicazione

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CLEOFE PALOCCI

Curriculum Vitae – ai fini della pubblicazione

Place ROMA

Date .15/02/2019

Part I – General Information

Full Name	Cleofe Palocci
Date of Birth	
Place of Birth	
Citizenship	
Permanent Address	
Mobile Phone Number	
E-mail	
Spoken Languages	Italiano, inglese

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

III A – 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 modificazione 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, 2017/ ongoing	2016/17, 2018/19-
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Academic years: 2014/15, 2016/17, 2018/19-ongoing	2015/16, 2017/18,
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University of Rome “La Sapienza”

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

University of Rome La Sapienza

“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-

University of Rome La Sapienza Department of Chemistry

Nanotecnologie e Nanomateriali per applicazioni industriali (6CFU) for the students of the PhD School in Chemical Sciences
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Academic years: 2016/17

University of Rome La Sapienza

“Biomaterials and their applications in drug and gene delivery” Lectures for the 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

IV D – Supervisor of PhD Thesis works in Chemical Sciences, Material Sciences, Physics and Chemical Engineering carried out at University of Rome La Sapienza

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

Cycle XXXIII

Academic years:	Currently ongoing	Student
2016/17-		Antonio Di Nitto, Phd student in Chemical Engineering, University of Rome La Sapienza
2016/17	“Investigation of gel behavior in Fmoc-Fn polypeptides” External national revisor of PhD thesis work in Physics	Maddalena Daniele, PhD in Physics University of L’Aquila

IV E – Supervisor of Master Thesis Works in Chemistry and Industrial chemistry carried out at Università di Roma La Sapienza

Acad. Year	Title	Student
2017/18	Sintesi e caratterizzazione di sistemi nanopolimerici per il rilascio controllato di acido 18 β -glicirretico	Gabriele Seminara
2016/17	Nuovi materiali compositi a base di ZVI/PHB per il risanamento di falde acquifere contaminate	Cristian Zappalà
2015/16	Nanomateriali a base biopolimerica per l’immobilizzazione di Lipasi microbiche	Angela Cirulli
2015/16	Sviluppo di sistemi nanopolimerici per il rilascio controllato di farmaci antitumorali	Chiara D’Errico
2015/16	Idrogeli peptidici compositi per la rigenerazione tissutale	Veronica D’ariento
2015/16	Fmoc peptidi gelogenici per applicazioni biotecnologiche	Alessia Gozzi
2014/15	Biosintesi e caratterizzazione di Idrogeli peptidici per il rilascio controllato di farmaci steroidei	Davide Pandolfi
2013/14	Sintesi e caratterizzazione di idrogeli peptidici per il rilascio controllato di molecole bioattive	Antonio di Nitto

2013/14	Impiego di sistemi microfluidici per la sintesi di nanoparticelle polimeriche	Carolina Sparago
2013/14	Idrogeli poliacrilamidici "Molecularly Imprinted" per l'analisi colorimetrica di proteine (in collaboration with University of Surrey)	Antonio Simonetti
2012/13	Sintesi di sistemi polimerici core-shell per il rilascio di sostanze antiossidanti	Sara Bergamasco
2013/14	Approcci nano-biotecnologici per il delivery di fitormoni in cellule vegetali	Marco Bramosanti
2011/12	Preparazione e funzionalizzazione di nanoparticelle polimeriche con derivati peptidomimetici per il rilascio di molecole bioattive	Melania Bevilacqua
2011/12	Biosintesi di idrogelatori a base di peptidi non convenzionali per applicazioni in drug delivery	Domenico Giannella
2010/11	Sintesi e caratterizzazione di nanocomplessi Chitosano /DNA per applicazione in terapia genica	Antonio Di Martino
2005/06	Immobilizzazione e rilascio in vitro del 5-Fluoro uracile su PMMA nanostrutturato	Massimo Medda
2004/05	Biomateriali porosi attraverso l'impiego di fluidi supercritici	Angelo La Grotta
2001/02	Studio dell'attività biocatalitica di lipasi fungine nell'idrolisi di isomeri della trilaurina attraverso la tecnica dei film monomolecolari	Elisa Ricchiuto
2000/01	Attività e stabilità di lipasi fungine immobilizzate su diversi supporti	Fabrizio Panzavolta
2000/01	Reazioni di transesterificazione	Tiziana Turchet

biocatalizzate da lipasi da *Pseudomonas cepacea* in fluidi supercritici: aspetti cinetici e termodinamici

1999/2000	Attività catalitica di lipasi wt e ingegnerizzate in reazioni di idrolisi e sintesi di derivati di acidi arilpropionici	Raffaella Ruggeri
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IV F – Supervisor of Bachelor Thesis Works in Chemistry and Industrial chemistry carried out at Università di Roma La Sapienza

Acad. Year	Title	Student
2017/18	Metodologie Microfluidiche per la sintesi di nanoparticelle polimeriche	Camilla Giacinti
2015/16	Sintesi e caratterizzazione di nanoparticelle polimeriche per la immobilizzazione di lipasi microbiche	Loris Minori
2015/16	Sintesi di nanoparticelle biopolimeriche per il rilascio di molecole ad attività antiossidante	Angela Ricucci
2015/16	Studio dell'estrazione in fluidi supercritici della luteina da alghe fotosintetiche	Giulia Spinosa
2013/14	Sintesi di nanoparticelle magnetiche per applicazioni biotecnologiche	Simone Sozzi
2014/15	Estrazione in CO ₂ supercritica di carotenoidi da cellule di <i>Scenedesmus sp</i>	Maria Valeria Spalletta
2013/14	Metodologie Microfluidiche per la sintesi di nanoparticelle polimeriche	Angela Cirulli
2012/13	Preparazione e caratterizzazione di nanoparticelle polimeriche per il rilascio controllato di antibiotici su biofilm batterici	Giuseppina Scaligeri

2011/12	Nanoparticelle biopolimeriche core-shell per la veicolazione di molecole bioattive in linee cellulari umane	Arianna Cutonilli
2014/15	Attività e stabilità di lipasi microbiche in mezzi non convenzionali	Cosimo Ricci
2010/11	Estrazione in CO ₂ supercritica di ac. Oleanolico da vinacce di Vitis vinifera	Cristian Agatone
2009/10	Relazione struttura-attività di lipasi microbiche immobilizzate su supporti nanostrutturati	Carolina Sparago
2008/09	Preparazione e caratterizzazione di nanoparticelle polimeriche per il rilascio controllato di fattori di differenziazione cellulare	Daniele Senigallia
2007/08	Immobilizzazione di molecole bioattive in geli a base di microfibre di alginato	Domenico Giannella
2005/06	Preparazione e rilascio in vitro di chitosano nanostrutturato contenente DNA modello	Federica Marino

IVG – Supervisor of Master and Bachelor Thesis in Medical and Agro-Industrial Biotechnology carried out at Università di Roma La Sapienza

Year	Title	Student
2015/16	Sintesi di nanoparticelle di PLGA contenenti ribavirina mediante reattore microfluidico	Fabiana Grillo
2015/16	Sintesi e caratterizzazione di nanoparticelle di Chitosano per il delivery di sRNA HV-1 specifici in cellule linfocitarie umane	Irene Coccoluto
2014/15	Applicazioni vascolari per uno scaffold iniettabile a base di elastin-like polymer	Giuseppe Luca
2013/14	Idrogeli peptidici biomimetici e nanoparticelle polimeriche per applicazioni in tissue engineering e nel rilascio controllato di molecole bioattive	Adriana Amalfitano

2009/10	Approcci biotecnologici alla sintesi di idrogeli peptidici:	Francesca Giammaruco
2003/04	Attività e stabilità della lipasi da <i>Candida rugosa</i> (CRL) in presenza di anticorpi monoclonali anti CRL e loro frammenti	Laura Bartoli
2002/03	Attività e stabilità dell'acetilcolinesterasi espressa sulla membrana di cellule di <i>Kluyveromyces lactis</i> ricombinanti. Possibilità di impiego in dispositivi per il monitoraggio ambientale	Chiara Grillo
2001/02	Estrazione e caratterizzazione di enzimi ad attività lipolitica da lattice di Euforbiacee	Carmela Maria Angela Belsito
2000/01	Attività lipolitica nel lattice di alcune specie del genere <i>Euphorbia</i>	Fulvio Fiorillo

IVH – Supervisor of of Master Thesis in Chemistry and Pharmaceutic Technology carried out at Università di Roma La Sapienza

Year	Title	Student
2017/18	Estrazione in CO ₂ supercritica di composti bioattivi da microalghe del genere <i>Scenedesmus sp</i>	Letizia Prosinì
2009/2010	Biosintesi di peptidi autoassemblanti mediante lipasi	Silvia Lorenzoni
2007/2008	Biopolimeri micro e nanostrutturati per il trasporto di farmaci antitumorali: studio del meccanismo di rilascio in vitro del 5 Fluoro uracile	Vittoria Vincenzi

IVI – Tutoring activities for foreign students (Internship abroad)

Year	Internship duration and object	Student
2015/16	May 2015-July 2016, 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

immobilized on polymeric nanoparticles activated by using monoclonal antibody	Polytech, Grenoble, France
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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
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), University of Rome La Sapienza
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
2012	Biotecnologie 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	166.650 euro
			45.429 euro (scientific research unit)

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

2012	Ruolo dello stress ossidativo nell'alterazione dell'omeostasi muscolare e approccio terapeutico medinate 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 243.000 euro (scientific research unit Sapienza)
2008	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)	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	<p>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 biopolymeric 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.</p>
Nanostructured materials	
Flow-focusing	
Nanofabrication	
Drug delivery	
Gene delivery	
Controlled release	
Kinetic studies	

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

Supercritical fluids
Solvent physico-chemical properties
Green solvents
Bioactive compounds
PHA extraction from microbial cells
Emulsion templating in SCCO ₂

Brief Description

<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 CO₂ 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 (-1340 cm³/mol) approaching critical values [37,38,47]. Studies on the enzyme kinetics and stereoselectivity in SCCO₂ 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>
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This topic is represented by a total of 8 publications and supported by 7 grants



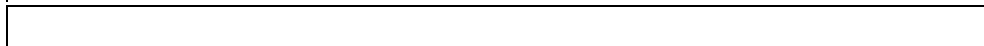
Keywords

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 nanofibrillary 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
Nanocarriers
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 a 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	53 (51 international papers +2 conference papers)	Scopus
Total number of papers in the last five years	21	Scopus
Total number of publications	57 (53 papers + 4 book chapters)	Scopus
Total numbers of patents	3	Scopus
Hirsch (H) index*	18	Scopus
Total Citations	1001	Scopus
Average Citations per Product	18,88 or 17,56	Scopus
		Obtained as 1001/53 or as 1001/57
Total Impact factor	113,57	JCR
Average Impact Factor per publications‡	2,14	JCR

* 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).

‡ Obtained by (Total Impact Factor) / 53

Part XI– Selected Publications

Here follows a list of the 12 publications selected for the evaluation (corresponding author is asterisked). The IF is related to the year of publication and the number of citations from Scopus database

1. 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, DOI: 10.1016/j.procbio.2018.04.005, IF 2.70
2. **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. DOI: 10.1007/s00299-017-2206-0 (IF=2.98, Scopus cit 2)
3. Bramosanti, M., Chronopoulou, L., Grillo, F., Valletta, A., **Palocci C.*** “Microfluidic-assisted nanoprecipitation of antiviral-loaded polymeric nanoparticles” (2017) *Colloids and Surfaces A* 532, 369–376. DOI: 10.1016/j.colsurfa.2017.04.062 (IF=2.82 Scopus cit 6)
4. Chronopoulou, L., Toumia, Y., Cerroni, B., Gentili, A., Paradossi, G., **Palocci* C.**, “Biosynthesis and characterization of a novel Fmoc-tetrapeptide for biotechnological

- applications” (2017) *Colloids and Surfaces A*, 532, 535–540. DOI: 10.1016/j.colsurfa.2017.04.003 (IF=3.99, Scopus cit 3)
5. 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, Scopus cit 8)
 6. Chronopoulou, L., Di Domenico, E.G., Ascenzioni, F., **Palocci, C***. Positively charged biopolymeric nanoparticles for the inhibition of *Pseudomonas aeruginosa* biofilms (2016) *Journal of Nanoparticle Research*, 18 (10), 308-318. DOI: 10.1007/s11051-016-3611-y,(IF=2.02, Scopus cit 1)
 7. Chronopoulou, L., Nocca, G., Castagnola, M., Paludetti, G., Ortaggi, G., Sciubba, F., Bevilacqua, M., Lupi, A., Gambarini, G., **Palocci, C***. “Chitosan based nanoparticles functionalized with peptido mimetic derivatives for oral drug Delivery” (2016) *New Biotechnol.* 33(1), 23-31. DOI: 10.1016/j.nbt.2015.07.005 (IF=3.81, Scopus cit 14)
 8. Venditti I., **Palocci C.***, Chronopoulou L., Fratoddi I., Fontana L., Diociaiuti M., Russo MV., “*Candida rugosa* lipase immobilization on hydrophilic charged gold nanoparticles as promising biocatalysts: activity and stability investigations” (2015) *Colloids Surf B Biointerfaces.*, 131, 93-101. DOI: 10.1016/j.colsurfb.2015.04.046 (IF=3.05, Scopus cit 33)
 9. 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, DOI: 10.1007/s11051-014-2744-0 (IF=2.18, Scopus cit 8)
 10. Chronopoulou L., Sparago C., **Palocci C***. “A modular microfluidic platform for the synthesis of biopolymeric nanoparticles entrapping organic actives” (2014) *J. Nanop. research*, 16, 2703- 2709. DOI: 10.1007/s11051-014-2703-9 (IF=2.18, Scopus cit 13)
 11. Chronopoulou I., 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. DOI: 10.1039/c3sm52457d (IF=4.02, Scopus cit 14)
 12. Amaduzzi F., Bomboi F., Bonincontro A., Bordi F., Casciardi S., Chronopoulou L., Diociaiuti M., Mura F., **Palocci C.**, Sennato S. “Chitosan-DNA complexes: charge inversion and DNA condensation” (2014) *Colloids and Surfaces B: Biointerfaces*, 114, 1–10. DOI: 10.1016/j.colsurfb.2013.09.029 (IF=3.75, Scopus cit 16)

Part XII– 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., Waclawek, 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)Waclawek, 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 L., 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

Fiorillo F., **Palocci C.**, Soro S., Pasqua G., "Latex lipase of *Euphorbia characias* L.: an aspecific acylhydrolase with different isoforms. (2007) *Plant Science* 172 (4); 722-27

Palocci C., Soro S., Cernia E., Fiorillo F., Belsito C., Monacelli B., Delle Monache G., Pasqua G., "Lipolytic isoenzymes from *Euphorbia latex*" (2003) *Plant Science*, 165(3), 577-582

-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 15th 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 resorc[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, University 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-β-Glycyrrhetic Acid Cytotoxicity 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-β-Glycyrrhetic Acid Cytotoxicity 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: stanislav.waclawek@tul.cz (S. Waclawek), Waclawek, S., Chronopoulou, L., Petrangeli Papini, M., Vinod, V.T.P., **Palocci, C.**, Kupčik, 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 15th 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 – XIII 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 ^1H 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 composition on 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_2 " Convegno CIB, Brescia 20-21/06/1994**(PP)**
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Department 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 – XIV Complete list of Publications.

The IF is related to the year of publication and the number of citations from Scopus.

Total number of publications as corresponding author (CA) 17 /55

Total number of publications as first (FA) or last author(LA) 7 /55

Total number of publications as (CA)*(FA)*(LA) 24 /55

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