

EUROPEAN  
CURRICULUM VITAE  
FORMAT



PERSONAL INFORMATION

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Name **Salvatore Pacifico**  
Telephone [REDACTED]  
E-mail [REDACTED]  
Nationality [REDACTED]  
Date of birth [REDACTED]

EDUCATION AND TRAINING

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• Dates **21/03/2013**  
• Name and type of organisation providing education and training University of Ferrara  
• Principal subjects/occupational skills covered Organic Synthesis and Reactivity  
• Title of qualification awarded PhD Degree in Organic Chemistry  
Thesis entitled: Synthesis of Glycopeptides by Thiol-ene/yne Couplings and Study on the Umpolung Reactivity of  $\alpha$ -diketones (Tutor: Prof. Olga Bortolini)

• Date **27/03/2009**  
• Name and type of organisation providing education and training University of Ferrara  
• Principal subjects/occupational skills covered Medicinal Chemistry  
• Title of qualification awarded Master Degree in Medicinal Chemistry  
Thesis entitled: Design and Synthesis of New 2-Heterocyclil-imidazo[2,1-i]purin-5-one Derivatives as Potent and Selective Human A<sub>3</sub> Adenosine Receptor Antagonists. (Tutor Prof. Pier Giovanni Baraldi)

RESEARCH ACTIVITY

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• Dates **1/04/2018 to present**  
• Name and address of employer Modena University, Department of Life Sciences  
• Type of business or sector Organic and Medicinal Chemistry-Synthesis  
• Occupation or position held Post-Doc Research Fellowship (Assegnista di ricerca)  
• Main activities and responsibilities Synthesis of Thymidylate Synthase inhibitors.

• Dates **01/11/2016 - 31/10/2017**  
• Name and address of employer Ferrara University, Department of Chemical and Pharmaceutical Sciences  
• Type of business or sector Organic and Medicinal Chemistry-Synthesis  
• Occupation or position held Post-Doc Research Fellowship  
• Main activities and responsibilities Design and synthesis of homo- and heterotetrameric molecules

- Dates **2016**
  - Name and address of employer University of Glasgow – University of Leicester
  - Type of business or sector Organic and Medicinal Chemistry-Synthesis
- Occupation or position held Post-Doc Research Fellowship
  - Main activities and responsibilities Design and synthesis of cyclic analogues of the Urotensin-II peptide
  - Dates **01/11/2015-to 31/10/2016**
  - Name and address of employer Ferrara University, Department of Chemical and Pharmaceutical Sciences
  - Type of business or sector Organic and Medicinal Chemistry-Synthesis
  - Occupation or position held Post-Doc Research Fellowship
  - Main activities and responsibilities Design and synthesis of homo- and heterotetrameric molecules
- Dates **01/07/2014-30/06/2015**
  - Name and address of employer Modena University, Department of Life Sciences
  - Type of business or sector Organic and Medicinal Chemistry-Synthesis
  - Occupation or position held Post-Doc Research Fellowship
  - Main activities and responsibilities Drug development for neglected parasitic diseases
- Dates **01/06/2013-31/05/2014**
  - Name and address of employer Ferrara University, Department of Chemical and Pharmaceutical Sciences
  - Type of business or sector Organic and Medicinal Chemistry-Synthesis
  - Occupation or position held Post-Doc Research Fellowship by the Laboratory Network - Tecnopolo Ferrara - LTTA
  - Main activities and responsibilities Synthesis of heterodimers MOP / NOP agonists with analgesic activity.
- Dates **01/12/2012-31/05/2013**
  - Name and address of employer Ferrara University, Department of Organic Chemistry
  - Type of business or sector Organic Chemistry-Synthesis
  - Occupation or position held Principal Investigator of a project founded by FasTech S.r.l.
  - Main activities and responsibilities Collaboration with FasTech S.r.l. for the evaluation of new heterogeneous catalysts in the ammoximation of cyclohexanone to ciclohexanoneoxime.
- Dates **05/02/2011 – 05/08/2011**
  - Name and address of employer Ronzoni Institute (Institute for Chemical and Biochemical research)/Politecnico di Milano
  - Type of business or sector Organic Chemistry-Synthesis
  - Occupation or position held PhD student holder of a Fellowship by NIH
  - Main activities and responsibilities Synthesis, characterization and biological evaluation of sulfate trimaltoseC-C-linked dimers with heparanase and selectin inhibitory activity (Tutors: Dott. Gian Giacomo Torri and Prof. Elena Vismara)
- Dates **28/09/2009 – 27/09/2010**
  - Name and address of employer Ferrara University, Department of Organic Chemistry
  - Type of business or sector Organic Chemistry-Synthesis
  - Occupation or position held Principal Investigator of a project founded by "Spinner 2013" (*business idea*)
  - Main activities and responsibilities Synthesis of ionic liquids from carbohydrates resulting from the recycling of biomass
- Dates **01/04/2009 – 01/09/2009**
  - Name and address of employer Ferrara University, Department of Pharmaceutical Sciences
  - Type of business or sector Medicinal Chemistry-Synthesis
  - Occupation or position held Graduate student
  - Main activities and responsibilities Synthesis of 7-Oxo-[1,4]oxazino[2,3,4-ij]quinoline-6-carboxamides as Selective CB2 Cannabinoid Full Agonists for the Potential Treatment of Neuropathic Pain (Tutor: Prof. Pier Giovanni Baraldi)

## TEACHING ACTIVITY

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- Dates **2017-2018**
  - Occupation or position held Professor of "Analisi Quantitativa del Farmaco" (30 h)
  - Course or Faculty Pharmaceutical Chemistry and Technology, University of Ferrara
  
- Dates **2017-2018**
  - Occupation or position held Professor of "Analisi Qualitativa del Farmaco" (30 h)
  - Course or Faculty Pharmaceutical Chemistry and Technology, University of Ferrara
  
- Dates **2016-2017**
  - Occupation or position held Professor of "Chimica Farmaceutica Generale con Laboratorio" (16 h)
  - Course or Faculty Pharmacy, University of Ferrara
  
- Dates **2015-2016**
  - Occupation or position held Professor of "Analisi Qualitativa del Farmaco" (120 h)
  - Course or Faculty Pharmaceutical Chemistry and Technology, University of Ferrara
  
- Dates **2015-2016**
  - Occupation or position held Professor of "Chimica Farmaceutica Generale con Laboratorio" (24 h)
  - Course or Faculty Pharmacy, University of Ferrara
  
- Dates **2014-2015**
  - Occupation or position held Professor of "Analisi Qualitativa del Farmaco" (120 h)
  - Course or Faculty Pharmaceutical Chemistry and Technology, University of Ferrara
  
- Dates **2014-2015**
  - Occupation or position held Professor of "Chimica Farmaceutica Generale con Laboratorio" (24 h)
  - Course or Faculty Pharmacy, University of Ferrara
  
- Dates **2013-2014**
  - Occupation or position held Professor of "Analisi Qualitativa del Farmaco" (96 h)
  - Course or Faculty Pharmaceutical Chemistry and Technology, University of Ferrara
  
- Dates **2013-2014**
  - Occupation or position held Professor of "Chimica Farmaceutica Generale con Laboratorio" (36 h)
  - Course or Faculty Pharmacy, University of Ferrara
  
- Dates **2012-2013**
  - Occupation or position held Assistant laboratory technician for the course of "Laboratorio di Chimica Farmaceutica Applicata" (Ex art. 26)
  - Course or Faculty Pharmacy, University of Ferrara
  
- Dates **2013 to present**
  - Occupation or position held Tutor of several Master Degree thesis in Medicinal Chemistry.
  - Course or Faculty Pharmaceutical Chemistry and Technology, University of Ferrara

**TUTOR (SECONDO RELATORE) OF  
MASTER THESIS**

- 1. Analoghi Dimerici Dell'Agonista NOP Ro65-6570**  
Laureando: Lorenzo Tognon; Anno Accademico: 2013/2014
- 2. Approccio Alla sintesi di Eterotetrameri peptidici**  
Laureando: Andrea Ammartano; Anno Accademico: 2013/2014
- 3. Sintesi di scaffolds tetrafunzionalizzati**  
Laureanda: Giulia Oss; Anno Accademico: 2014/2015
- 4. Molecole tetrafunzionalizzate con il NOP agonista Ro65-6570**  
Laureanda: Francesca Manzione; Anno Accademico: 2014/2015
- 5. Analoghi della Nocicettina modificati in posizione C-terminale: sintesi e attività biologica**  
Laureanda: Valentina Girotti; Anno Accademico: 2016/2017
- 6. Inibitori dipeptidici del proteasoma  $\alpha$ -chetoamidici**  
Laureanda: Sara Roverati; Anno Accademico: 2016/2017

**REFEREE (CONTRORELATORE) OF  
MASTER THESIS**

- 1. Sintesi e valutazione biologica di derivati spiranici come inibitori dell'mPTP**  
Laureanda: Giulia Turrin; Anno Accademico: 2017/2018
- 2. Design, synthesis and biological evaluation of new bioisosteric compounds as potential inhibitors of human choline kinase**  
Laureando: Alberto Fasiolo; Anno Accademico: 2017/2018
- 3. Studio di oligopeptidi arilamidici quali inibitori del Proteasoma**  
Laureando: Sebastiano Minardi; Anno Accademico: 2017/2018

**PERSONAL SKILLS  
AND COMPETENCES**

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Mother tongue	<b>Italian</b>
Other languages	<b>English</b> reading: good Writing: good Speaking: good
Technical skills and competences	Organic Synthesis methodologies, Liquid and Solid phase synthesis, Purification techniques, Analytical characterization (IR, NMR, UV, Electrospray mass, MALDI-QTOF MS, HPLC); Design and synthesis of pharmacologically active compounds; Lead compound optimization; Theoretical knowledge of the main pharmacological assays
Other	Certificate for the free profession of pharmacist

**RESEARCH AWARDS**

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Dates	2014
Description	Award for the best Chemical Sciences PhD thesis

**GRANTED PROJECTS**

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Dates	2018
Founding Institution	AIRC
Description	AIRC (AIRC IG 2015-16977) 2015-2018
Project Title	Protein-protein interaction inhibitors of Thymidylate synthase against colorectal cancer.
Role	Assegnista di ricerca
Dates	2018
Founding Institution	MAYCOS ITALIANA srl (Castiglione Delle Stiviere (MN))

Description	Private research contract
Project Title	Sintesi e caratterizzazione di tensioattivi cationici, anionici e non ionici di origine natural.
Role	Partecipant
Dates	2017
Founding Institution	Somentek, Switzerland
Description	Private research contract
Project Title	Derivatization of Astaxanthine molecule
Role	Partecipant
Dates	2016
Founding Institution	Università degli Studi di Ferrara
Description	BANDO "GIOVANI RICERCATORI"
Project Title	Synthetic Urotensin Analogues for Cardiovascular Drug Discovery
Role	Principal Investigator
Dates	2014
Founding Institution	Università degli Studi di Ferrara
Description	BANDO 'PRIA' ANNO 2014
Project Title	Chemical Library of UniFe (CheLiFe) generation, management and high throughput screening for the discovery of lead compounds for biomedical applications
Role	Assegnista di ricerca
Dates	2013
Founding Institution	European Project
Description	NMTrypI FP7-HEALTH-2013-INNOVATION-I
Project Title	Drug development for neglected parasitic disease
Role	Assegnista di ricerca
Dates	2009
Founding Institution	Regione Emilia Romagna
Description	"Spinner 2013" ( <i>business idea</i> )
Project Title	Synthesis of ionic liquids from carbohydrates resulting from the recycling of biomass
Role	Principal Investigator

## PUBLICATIONS AND CONGRESSES

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### ORAL COMMUNICATIONS

1. **Synthesis of S-glycosyl amino acids via photoinduced thiol-ene coupling.** XII meeting-school of carbohydrate chemistry, Pontignano (Si), 20-23 June 2010. (Presentation in English)
2. **Reactivity of dialkyl and diaryl  $\alpha$ -diketones with N-heterocyclic carbenes.** XII Giornata di Chimica dell' Emilia Romagna, Congresso Società Chimica Italiana, Ferrara, 17 December 2012 (Presentation in Italian)

### CITATION IN ABSTRACTS

1. **Potential metal chelation of unsubstituted hydroxamic acids.**  
Valentina Albanese, Salvatore Pacifico, Remo Guerrini. Giornata Della Chimica dell' Emilia Romagna. Bologna 01/12/2017

### POSTERS

1. **Synthesis of p-substituted dimethyl tyrosine derivatives through Pd catalysed C-Halkylation.** Davide Illuminati, Anna Fantinati, Salvatore Pacifico, Delia Preti, Remo Guerrini, Claudio Trapella. Giornata Della Chimica dell' Emilia Romagna. Parma 17/12/2018
2. **Synthesis and study of peptide-based chelators for zirconium-89.**  
Valentina Albanese, Salvatore Pacifico, Maurizio Remelli, Emiliano Cazzola, Remo Guerrini. Giornata Della Chimica dell' Emilia Romagna. Parma 17/12/2018
3. **Reactivity of dialkyl and diaryl  $\alpha$ -diketones with N-heterocyclic carbenes.**  
Salvatore Pacifico, Gloria Guidetti, Daniele Ragno, Alessandro Massi, and Olga Bortolini. XXV Congresso Nazionale della Società Chimica Italiana, Pavia, 10-14 Settembre 2012.
4. **Synthesis, structure and biological activity of sulfate trimaltose C-C-linked dimers.** Vismara E.; Valerio A.; Borsig L.; Vlodaysky I.; Naggi A.; Pacifico S.; Torri G. XXIV Congresso Nazionale della Società Chimica Italiana, Lecce, 11-16 Settembre 2011
5. **Synthesis of S-glycosyl amino acids via photoinduced thiol-ene coupling.**  
Pacifico, S.; Lo Conte, M.; Chambery, A.; Marra, A.; Dondoni, A. XII meeting-school of carbohydrate chemistry, Pontignano (Si), 20-23 June 2010.

## PUBLICATIONS

1. **Photoinduced Addition of Glycosyl Thiols to Alkynyl Peptides: Use of Free-Radical Thiol-Yne Coupling for Post-translational Bis-glycosylation of Peptides.** Lo Conte, M.; Pacifico, S.; Chambery, A.; Marra, A.; Dondoni, A. *J. Org. Chem.* **75**, **2010**, 4644.
2. **Synthesis of S-glycosyl amino acids and S-glycopeptides via photoinduced click thiol-ene coupling.** Fiore, M.; Lo Conte, M.; Pacifico, S.; Marra, A.; Dondoni, A. *Tetrahedron Letters* **52**, **2011**, 444.
3. **Thiazolium-Catalyzed Intermolecular Stetter Reaction of linear and cyclic alkyl alpha-diketones.** Olga Bortolini, Giancarlo Fantin, Marco Fogagnolo, Pier Paolo Giovannini, Alessandro Massi, and Salvatore Pacifico. *Organic & Biomolecular Chemistry* **9**, **2011**, 8437.
4.  **$\alpha$ -Diketones as acyl anion equivalents: a non-enzymatic thiamine-promoted route to aldehyde-ketone coupling in PEG400 as recyclable medium.** Giancarlo Fantin, Marco Fogagnolo, Pier Paolo Giovannini, Salvatore Pacifico, Valentina Venturi, Alessandro Massi, and Olga Bortolini. *Tetrahedron* **67**, **2011**, 8110.
5. **Unexpected reactivity of diaryl  $\alpha$ -diketones with thiazolium carbenes: discovery of a novel multicomponent reaction for the facile synthesis of 1,4-thiazin-3-ones.** Valerio Bertolasi, Olga Bortolini, Adelaide Donvito, Giancarlo Fantin, Marco Fogagnolo, Pier Paolo Giovannini, Alessandro Massi, and Salvatore Pacifico. *Org. Biomol. Chem.* **10**, **2012**, 6579.
6. **Thiazolium-Functionalized Polystyrene Monolithic Microreactors for Continuous-Flow Umpolung Catalysis.** Olga Bortolini, Alberto Cavazzini, Paolo Dambruoso, Pier Paolo Giovannini, Lorenzo Caciolli, Alessandro Massi, Salvatore Pacifico and Daniele Ragno. *Green Chem.* **15**, **2013**, 2981.
7. **Methylsulfinyl (Dimsyl) Anion as Umpolung Catalyst for the Chemoselective Cross Benzoin Reaction of  $\alpha$ -Diketones with Aldehydes.** Olga Bortolini, Giancarlo Fantin, Valeria Ferretti, Marco Fogagnolo, Pier Paolo Giovannini, Alessandro Massi, Salvatore Pacifico and Daniele Ragno *Adv. Synth. Catal.* **355**, **2013**, 3244
8. **One-Pot, Two-Step Desymmetrization of Benzils Catalyzed by the Methylsulfinyl (Dimsyl) Anion.** Olga Bortolini, Pier Paolo Giovannini, Alessandro Massi, Salvatore Pacifico, Daniele Ragno and Anna Zaghi *Org. Biomol. Chem.* **12**, **2014**, 5733
9. **In vitro and in vivo pharmacological characterization of a neuropeptide S tetrabranch derivative.** Chiara Ruzza, Anna Rizzi, Davide Malfacini, Alice Pulga, Salvatore Pacifico, Severo Salvadori, Claudio Trapella, Rainer K. Reinsheido, Girolamo Calò & Remo Guerrini. *Pharma Res Per.* **3**, **2015**, doi:10.1002/prp2.108
10. **Structure activity studies of nociceptin/orphanin FQ(1-13)-NH<sub>2</sub> derivatives modified in position 5.** Remo Guerrini, Erika Marzola, Claudio Trapella, Salvatore Pacifico, Maria Camilla Cerlesi, Davide Malfacini, Federica Ferrari, Mark Francis Bird, David George Lambert, Severo Salvadori, Girolamo Calò. *Bioorganic & Medicinal Chemistry*. **23**, **2015**, 1515-1520.
11. **Design, Synthesis and Evaluation of Antiproliferative Activity of New Benzimidazolehydrazones.** Valentina Onnis, Monica Demurtas, Alessandro Deplano, Gianfranco Balboni, Anna Baldisserotto, Stefano Manfredini, Salvatore Pacifico, Sandra Liekens and Jan Balzarini. *Molecules*, **21**, **2016**, 579
12. **Intracellular quantitative detection of human thymidylate synthase engagement with an unconventional inhibitor using tetracysteine-diarsenical-probe technology.** Glauco Ponterini, Andrea Martello, Giorgia Pavesi, Angela Lauriola, Rosaria Luciani, Matteo Santucci, Michela Pelà, Gaia Gozzi, Salvatore Pacifico, Remo Guerrini, Gaetano Marverti, Maria Paola Costi, and Domenico D'Arca. *Scientific Reports* **2016**, **6**, 27198
13. **Neuropeptide S receptor ligands: a patent review (2005-2016)** Chiara Ruzza, Girolamo Calò, Salvatore Di Maro, Salvatore Pacifico, Claudio Trapella, Severo Salvadori, Delia Preti, Remo Guerrini. *Expert Opinion on Therapeutic Patents*, **27**, **2017**, 347-362

14. **Structure- and conformation-activity studies of nociceptin/orphanin FQ receptor dimeric ligands.** Salvatore Pacifico, Alfonso Carotenuto, Diego Brancaccio, Ettore Novellino, Erika Marzola, Federica Ferrari, Maria Camilla Cerlesi, Claudio Trapella, Delia Preti, Severo Salvadori, Girolamo Calò and Remo Guerrini. *Scientific Reports*, 7, 2017, 45817
15. **A diastereoselective synthesis of Cebranopadol, a novel analgesic showing NOP/mu mixed agonism.** Claudio Trapella, Sara Bianco, Anna Fantinati, Remo Guerrini, Severo Salvadori, Salvatore Pacifico, Maria Camilla Cerlesi, Girolamo Calò. *Scientific Reports*, 7, 2017, 2416
16. **Activation of nociceptin/orphanin FQ receptors inhibits contextual fear memory reconsolidation.** Rekik, K., Faria Da Silva, R., Colom, M., Pacifico, S., Zaveri, N.T., Calo, G., Rampon, C., Frances, B., Mouldous, L. *Neuropharmacology*, 125, 2017, 39-49
17. **Urotensin-II peptidomimetic incorporating a non-reducible 1,5-triazole disulfide bond reveals a pseudo-irreversible covalent binding mechanism to the urotensin G-protein coupled receptor.** Pacifico, S., Kerckhoffs, A., Fallow, A.J., Foreman, R.E., Guerrini, R., McDonald, J., Lambert, D.G., Jamieson, A.G. *Organic and Biomolecular Chemistry*, 15, 2017, 4704-4710.
18. **Conveying a newly designed hydrophilic anti-human thymidylate synthase peptide to cisplatin resistant cancer cells: are pH-sensitive liposomes more effective than conventional ones?** Sacchetti, F., D'Arca, D., Genovese, F., Pacifico, S., Maretti, E., Hanuskova, M., Iannuccelli, V., Costi, M.P., Leo, E. *Drug Development and Industrial Pharmacy*, 43, 2017, 465-473.
19. **Peptide welding technology – A simple strategy for generating innovative ligands for G protein coupled receptors** Calo, G., Rizzi, A., Ruzza, C., Ferrari, F., Pacifico, S., Gavioli, E.C., Salvadori, S., Guerrini, R. *Peptides*, 99, 2018, 195-204.
20. **Fluorometric detection of protein-ligand engagement: The case of phosphodiesterase5** Di Rocco, G., Martinelli, I., Pacifico, S., Guerrini, R., Chichero, E., Fossa, P., Franchini, S., Cardarelli, S., Giorgi, M., Sola, M., Ponterini, G. *Journal of Pharmaceutical and Biomedical Analysis*, 149, 2018, 335-342.
21. **Discovery of Novel 1,3,8-Triazaspiro[4.5]decane Derivatives That Target the c Subunit of F1/FO -Adenosine Triphosphate (ATP) Synthase for the Treatment of Reperfusion Damage in Myocardial Infarction.** Dr. Giampaolo Morciano , Delia Preti , Gaia Pedriali , Giorgio Aquila , Sonia Missiroli , Dr. Anna Fantinati , Dr. Salvatore Pacifico , Dr. Massimo Bonora , Dr. Natascia Carocchia , Dr. Claudia Morganti , Dr. Paola Rizzo , Roberto Ferrari , Prof. Mariusz Wieckowski , Gianluca Campo , Dr. Carlotta Giorgi , Prof. Claudio Trapella *J. Med. Chem.*, 61, 2018, 7131–7143.
22. **Conformational propensity and biological studies of proline mutated LR peptides inhibiting human thymidylate synthase and ovarian cancer cell growth.** Saxena, Puneet; Severi, Leda; Santucci, Matteo; Taddia, Laura; Ferrari, Stefania; Luciani, Rosaria; Marverti, Gaetano; Marraccini, Chiara; Tondi, Donatella; Vitiello, Simone; Losi, Lorena; Fonda, Sergio; Pacifico, Salvatore; Guerrini, Remo; D'Arca, Domenico; Ponterini, Glauco; Costi, Maria Paola. *J. Med. Chem* 2018 61, 7374-7380
23. **pH-Promoted Release of a Novel Anti-Tumour Peptide by “Stealth” Liposomes: Effect of Nanocarriers on the Drug Activity in Cis-Platinum Resistant Cancer Cells.** Francesca Sacchetti; Gaetano Marverti; Domenico D'Arca; Leda Severi; Eleonora Maretti; Valentina Iannuccelli; Salvatore Pacifico; Glauco Ponterini; Maria Paola Costi; Eliana Leo *Pharm Res.* 2018 ,35, 206.