

# Curriculum Vitae of Dr. Francesco Secundo

January 2026

## Personal information

Surname: SECUNDO Name: Francesco.

Nationality

Italian

email:

[francesco.secundo\[at\]scitec.cnr.it](mailto:francesco.secundo[at]scitec.cnr.it)

Ph. office: ++39 0228500029

Gender

Male

## Education

Dates

13-10-1992

Title of qualification  
awarded

Laurea in Biological Science

Name and type of  
organisation providing  
education and training

University of the Studies of Milan

Level in national or  
international classification

107/110

Courses post-laurea  
attended as student

- NATO ASI, Course title: "Engineering of/with Lipases" at Povo de Varzim (Portugal), (22nd May- 2nd June 1995)
- National School of Science of Proteins at Urbino, (13-17th September 1993)

## Actual working position

Research Director at the National Research Council of Italy (CNR), in Milano, Italy. Permanent position.

## Work experience

**Since April 1986 to now.**

**Research scientist at the National Research Council of Italy (CNR)**

Dr. Secundo professional career, which began at the CNR in 1986 at the former Istituto di Chimica degli Ormoni and is currently ongoing at the Istituto di Scienze e Tecnologie Chimiche "Giulio Natta", has developed through coordinating or participating in scientific research projects in the field of Green Chemistry. He has interfaced this field with the preparation of biohybrid materials of interest in biocatalysis, biomedical, and energy sectors. Specifically, he has conducted research in the following areas:

- Biocatalysis: studying various classes of enzymes useful in organic chemistry synthesis, formulating biocatalysts and whole cells to optimize biocatalysis processes under non-conventional conditions (e.g., in organic solvents, ionic liquids) and biotransformations in the context of biorefinery.
- Modification of polymeric material surfaces and nanomaterials with enzymatic coatings to confer antibacterial properties or for applications in biosensors.
- Development of chemo-enzymatic systems combining photosensitizers and formate dehydrogenases for the photocatalytic fixation of carbon dioxide to formate.

- Cultivation of microalgal biomasses for the production of biohydrogen or obtaining extracts with antibacterial activity.

These activities were often associated with conformational analysis studies of proteins using spectroscopic methods. Additionally, Dr. Secundo is the author of several analytical chemistry studies utilizing immuno-fluorimetric and gas-chromatographic methods applied to the food sector.

These research activities were conducted as part of national and international collaborations, co-authoring more than 140 articles (see enclosed list) on international journals (H-Index 32, Wos).

**December 1993-November 1994.**

**Post-doc at the Department of Chemistry and Biochemistry of the University of Georgia, Athens, USA**

As post doc Dr. Secundo worked in the biocatalysis area employing dehydrogenases and lyases. He obtained the enzymes by fermentation and extraction and used them in synthetic applications.

**April 1986-November 1993.**

**Technician for the laboratory of chemistry and biochemistry at CNR**

In a contest of scientific research, Dr. Secundo was responsible for the use and maintenance of several scientific instruments. In particular GC, GC/MS, HPLC, circular dichroism, UV-Vis, fluorimeter, electrophoresis.

**Editorial Board  
Membership  
and editorial activity**

- November 2023-now. Section Editor-in-Chief for BioTech MDPI journal. Section of Industrial Biotechnology, Food and Agricultural.
- March 2011-now, he has accomplished the role of Associate Editor for Biocatalysis and Biotransformation journal
- May 2018-now Guest Editor for open access journal Catalyst MDPI; Special Issue "Biomacromolecules in Non-Conventional Media: Biotransformations and Beyond"
- July 2018- now Advisory Board of Sci — Open Access Journal of Scientific Research
- November 2018- now Editorial Board member Catalyst MDPI (section Bioatalsis)
- June 2014-February 2015 Guest Reviewer Editor for Biotechnology Journal, special issue "Protein Stability"
- November 2013 - 2015 Guest Editor for the open access journal Frontiers in Chemistry (Chemical Biology) for the research topic "Proteins and nanoscale materials"
- January 2011- now, he is member of the editorial board of the Journal of Bioscience and Bioengineering
- October 2011-2016, member of the editorial board of the Journal of Molecular Catalysis B: Enzymatic
- 2011, member of the editorial board of ISRN Chemical Engineering open access journal

**Conference Chair of  
Scientific Committee**

- **Co-chair of the Scientific Committee** of the 6th International Conference on Biocatalysis in Non-Conventional Media (BNCM 2021), 6-8 May 2021. On-line event.
- **Chair of the Scientific Committee** of the 10th International Conference on Protein Stabilisation, 7-9 May 2014, Stresa (Lake Maggiore, Italy)

**Conference Member  
of Scientific  
Committee**

- Member of the Scientific Committee of the 13th International Conference on Protein Stabilization (ProtStab2021) which will be held on 07 – 09 October 2021 in Plovdiv, Bulgaria
- Member of the scientific Committee of the 12th International Conference on Protein Stabilisation, Vilnius (Lithuania) 16-18 May 2018.
- Member of the of the Scientific Committee of the 11th International Conference on Protein Stabilisation, 9-11 May 2016, Istanbul (Turkey)

**Organization of  
scientific events**

- Co-organizer of the 6th International Conference on Biocatalysis in Non-Conventional Media (BNCM 2021), 6-8 May 2021. On-line event.
- Principal organizer of the Italian-Egyptian meeting on the ongoing research, development and industrial activities in the textile field. Biella, Milano, Busto Arsizio - 11th, 12th, 13th February 2015

## Member of Organization Committee

Member of of Organization Committee Committee of the 10th International Conference on Protein Stabilisation, 7-9 May 2014, Stresa (Lake Maggiore, Italy)  
- Member of Organization Committee, Giardini Naxos – Taormina, 2-6/10/2011 Biotrans2011, 10th International Symposium on Biocatalysis and Biotransformations”.

## Project Evaluator

- April 2024 Evaluator for EU. **Funding: Evaluation Service, for an ERC Project**  
- 2017-2020. **Evaluator of Industrial Research Projects in the Area of Biotechnology**, in the contest of the calls of Ministry of Economic Development (“Grandi Progetti R&S – PON IC 2014/2020”) as an expert of National research Council of Italy. Proposal N. F/090018/00/X36 for Industrial Research and experimental development. The role required the implementation of the project during the whole period. Involved company ZOETIS.  
- 2016-2020 **Evaluator of Industrial Research Projects in the Area of Biotechnology**, in the contest of the calls of Ministry of Economic Development (MiSE-FCS\_H2020-PON -2016) as an expert of National research Council of Italy. Prot. N. 0000911; Data: 11/01/2017. The role required the implementation of the project during the whole period. Involved company ZOETIS.  
- 2015, **Evaluator for Netherlands Organisation for Scientific Research (NWO)**, Division for Chemical Sciences (CW), TOP/ECHO 2015.  
- October 2014, **Evaluator of “FCT Investigator”** (2nd stage) for the Portuguese Fundação para a Ciência e a Tecnologia (Foundation for Science and Technology).  
- 2013 - Evaluator of research proposal for MIUR.

## Research Evaluator

- 2024-2025 - **Expert for the National Evaluation Agency of the University System And Research (ANVUR)** Member of the Experts Evaluators (GEV), for the evaluation of the Italian Research in Biological Science for the Italian research production 2020-2024.  
- 2021-2022 **Expert for the National Evaluation Agency of the University System And Research (ANVUR)**, Member of the Experts Evaluators (GEV), for the evaluation of the Italian Research in Biological Science for the Italian research production 2019-2014.  
- 2016, Evaluator of Italian research assess (VQR).

Dr. Secundo has accomplished the following roles:

## Main responsibilities- Participation and coordination of research projects

**2022-2023: Scientific coordinator of an international research project between Italy and Poland**  
**entitled:** “Valorization of the waste macroalgae biomass into bio-products useful for sustainable agriculture and environment”. CNR/Wroclaw University of Science and Technology, Faculty of Chemistry, Department of Advanced Material Technologies (MAE Canaletto)

**2022-now Principal investigator of research CNR project entitled:** “From lignocellulosic waste to products with high nutritional (Omega-3) and environmental value via microalgae” (CENOMA), in the area of “Natural capital resources for the future of Italy”

**2021-2023 Group Leader of research project** entitled "Citrus waste recycling for added value products - CIRCLE- " Rif. 2020-1070, in the contest of the call "Economia Circolare – 2020" Financed by Fondazione Cariplo, Milano, Italy.

**2021-2022 Scientific coordinator of international research project** between Italy SCITEC-CNR and Ocean University of CHINA), entitled “Construction of magnetic microbial platforms for sulfate removal from agar of red algae”. Research project financed by CNR and MOST (CHINA).

**2018-2021, Scientific coordinator of international research project between Italy and Egypt** (Prof. Nabil Abd El-Basset Ibrahim, Preparation and Finishing of Cellulosic Fibers, National Research Center, National Research Centre, Il Cairo) entitled: “Proteolytic Enzymes from Locally Isolated Microorganisms and Their Potential Applications in Textile, Detergent, and Degradation of Proteinaceous Waste Fields”. Research project financed by CNR and Academy of Scientific Research and Technology of

Egypt.

2015-2017 **Scientific coordinator of an international research project between Italy and Russia** (Prof. Vladimir Tishkov, Department of Chemical Enzymology, Faculty of Chemistry, M.V.Lomonosov Moscow State University) entitled "Ionic liquids as reaction media and enzymatic stabilizers of formate dehydrogenases catalyzed reactions for biocatalytic purposes and CO<sub>2</sub> fixation". The project is in the contest of the agreement between the Italian National Research Council (CNR) and the Russian Foundation for Basic Research

- 2013-2015 **scientific coordinator of an international research project between Italy and Poland** (Prof. Marcin Lukaszewicz, University of Wroclaw, Faculty of Biotechnology) entitled "Biocoatings for the development of materials with antifouling properties". Research project financed from the Ministry of Foreigner Affairs.

- 2013-2014 **scientific coordinator of an international research project between Italy and Portugal** (Prof. Joana Azeredo, Dep. Biological Engineering, University of Minho) entitled "Immobilization of enzymes and phages on biomedical polymers for developing innovative materials with antimicrobial properties". The project was in the contest of the agreement between the Italian National Research Council (CNR) and Fundação para a Ciência e a Tecnologia (FCT).

- 2012-2014 **Group Leader of research project entitled** "Novel materials for medical devices based on biofunctionalized surfaces with antifouling properties" financed by Fondazione Cariplo, Milano, Italy.

- 2011-2012, **scientific coordinator of international research project between Italy and Egypt** (Prof. Ali M.Elshafei, Dept. of Microbial Chemistry, Genetic Eng.& Biotechnology, National Research Centre, Il Cairo) entitled: "Development of antimicrobial cotton fabrics by immobilized enzyme". Research project financed by CNR and Academy of Scientific Research and Technology of Egypt.

- 2010- 2011, **scientific coordinator of an international research project between Italy and Turkey** (Prof. Nevin Gul Karaguler, Istanbul Technique Universites Genetik, Istanbul) entitled: "Development of coating based on enzymes and/or Furanone derivatives for bacterial biofilm inhibition". Research project financed by CNR and TUBITAK.

- June 2006-2009, **participation in a research project entitled** "Integrated approach to the problem of allergens, included those from food: Development of new anti-allergenic vaccines and innovative diagnostic methods" in collaboration with Lofarma S.p.A. as expert in the conformational analysis of proteins and their chemical modification. The topic of research was the analysis and modification of proteins. Research project financed by Regione Lombardia.

- December 2005 - 2009, **participation in a research project as researcher scientist responsible for the characterization of the lipid fraction in milk**. Project financed by the Ministry of Agriculture and Forestry

- 2006 - 2008, **scientific coordinator of an international research project between Italy and Romania** (Prof. Emil Dumitriu, University of Iasi) entitled: "Hybrid enzyme-inorganic nanocomposites based on highly ordered nanoporous materials and their applications for fine chemicals". Research project financed from the Ministry of Foreigner Affairs.

- From December 2005 to December 2007, **scientific coordinator of an international research project between Italy and Turkey** (Prof. Altan Erarslan, TUBITAK) entitled: "Stability and biochemical characterization of alkaline protease from Bacillus strains". Research project financed by CNR.

- 2004-2006. **Consultant of research project conducted at the University of Puerto Rico** (Humacao, Puerto Rico, USA) by Prof. Gabriel Barletta. The research project concerned the study of the activity and stability of enzymes in organic solvents.

- 2003-2006. **Participation as scientist responsible for the research unit group in Milano**, in the working-group "Solving the problems enzymes encounter in organic solvents" within the COST action D25 entitled "Applied Biocatalysis: Stereoselective and Environmentally-friendly Reactions Catalysed by Enzymes" financed by the European Community.

**Working periods  
spent as visiting  
scientist in foreigner  
laboratories**

- 2005-2006. **Scientific coordinator of a research project of curiosity** on the biochemical characterization of Baeyer-Villiger monoxygenases FAD-dependent. Research project financed by CNR.
- Since 1994 to now, participation in several research projects related to biocatalysis and to conformational analyses of proteins (see annex list of publications).
- August 2024 Visiting Scientist at Key Laboratory of Modern Biomanufacturing, University of Anhui, Faculty of Life Science, Hefei, China
- November 2019 and 2021 Visiting Scientist under the Chinese Academy of Science President's International Initiative at Key State Laboratory of Virology in Wuhan (China).
- November 2017, March 2018, June 2018, November 2018, March 2019 Visiting Scientist at Ocean University of China, Food Science Department, Qingdao, PRC. He supervised in collaboration with Prof. Xiangzhao Mao, several Master students during research activity on enzyme characterization and application.
- From 2nd July 2017- to 12 July 2017, visiting scientist at Beijing University of Chemical Technology. Beijing, PRC. He supervised in collaboration with Prof. Pengcheng Fu research activity on microalgae and cyanobacteria (photobiocatalysis, pigment extraction).
- From June 18th to July 1st, 2017, visiting scientist at Key State Laboratory of Virology of the Chinese Academy of Science, WuHan, PRC. He supervised in collaboration with Prof. Li Feng the research activity on enzyme immobilization on gold nanoparticles.
- From 14th June 2015- to 11 July 2015, visiting scientist at Beijing University of Chemical Technology. Beijing, PRC. He supervised in collaboration with Prof. Pengcheng Fu research activity on microalgae and cyanobacteria (photobiocatalysis, pigment extraction).
- From April 15<sup>th</sup> to April 22<sup>nd</sup> 2010 he attended the laboratory of Prof. Itamar Willner, at the Institute of Chemistry and the Center for Nanoscience, The Hebrew University of Jerusalem (Israel) to learn about preparation of integrated oligoaniline-cross-linked composites of Au nanoparticles/enzymes electrodes.
- From September 30<sup>th</sup> to October 21<sup>st</sup> 2008 at the Nagoya Institute of Technology in the contest of a joint project entitled "Photosynthetic complexes from plants and bacteria. Development and optimization of methods for applications as photocurrent generators" (laboratory of Prof. Mamoru Nango).
- From July 5<sup>th</sup> to July 20<sup>th</sup> 2008 at the University of Bielefeld, Department of Biophysics. Bielefeld, Germany, in the contest of a joint project entitled "Monoxygenase Monolayer on a Gold Electrode Monitored by Surface Enhanced Infrared Absorption Spectroscopy" (laboratory of Prof. Joachim Heberle).
- From June 22<sup>nd</sup> to July 13<sup>th</sup> 2006 at University of Georgia, Department of Chemistry, Athens, GA, USA, in the contest of a joint project entitled "Conformational studies of enzymes as a function of the hydrostatic pressure" (laboratory of Dr. Robert Phillips).
- From 14<sup>th</sup> September to 4<sup>th</sup> October 2003 at University of Colorado, Health Sciences Center, School of Pharmacy in Denver, CO, USA in the contest of a joint project entitled "Study of catalytic activity and conformation of dehydrated hydrolases for applications in biocatalysis" (laboratory of Prof. John Carpenter).
- From 25<sup>th</sup> to 29<sup>th</sup> of November 2002 he attended the laboratory of Prof. Yves Marechal to learn about infrared spectroscopy of hydrogen bond in proteins, at the Department de Recherche Fondamentale sur la Matiere Condensee,.
- From 24<sup>th</sup> to 29<sup>th</sup> of May 1999 at the Department of Chemical Engineering at Rensselaer Polytechnic Institute in Troy, NY, U.S.A, in the contest of a research project on combinatorial biocatalysis techniques (laboratory of Prof. Jonathan Dordick).

## Teaching activity

-2014, June. Dr. Secundo received from the Italian Ministry of Education, Universities and Research the habilitation as full professor in Biochemistry and Medical Biochemistry.

- In November 2017 (4 weeks), March 2018 (4 weeks) June/July 2018 (4 weeks) visiting scientist at Ocean University of China, Food Science Department, Qingdao, PRC. He supervised in collaboration with Prof. Xiangzhao Mao, several Master students during research activity on enzyme characterization and application.

-2017, June 28th. In the contest of GE-Hong Colloquium held at the Key State laboratory of Virology at the Chinese Academy of Science, held a lecture entitled: "Enzymes as tools for biocatalysis. An Overview"

-2014, June. In the contest of "The KRICT Lecture of Outstanding Scientist" held a lecture entitled: "Enzymes, organic solvents and supports for biocatalytic purposes", at Korea Research Institute of Chemical Technology (KRICT)

- 2013, July. Held a group of lectures (15 hours) on the subjects: Biocatalysis, Biosensors, Protein stability. Beijing University of Chemical Technology. Beijing, PRC.

-2011, May. Held a course (eight hours) on Biosensors at the University of Milano-Bicocca, Laurea (Master) in Industrial Biotechnology.

-2010, 18<sup>th</sup> November, on invitation held a Seminar entitled: "Role of additives and organic solvents on the activity and conformation of hydrolases and Baeyer-Villiger monooxygenases" at Materials & Surface Science Institute, University of Limerick, Ireland. Research Forum 2010.

-2010, on invitation held lecture at the summer school "Biocatalysis in Using Non-Conventional Media" 15-17 September, RWTH Aachen University, Germany.

-2002, 13<sup>th</sup> May, lecture entitled "FT-IR and fluorescence for the study of protein chemistry" School of Biotechnological Applications at Department of Biotechnology and Bioscience, University of Milano-Bicocca.

-2002, 6<sup>th</sup> May, lecture entitled "Circular Dichroism: principles and applications". School of Biotechnological Applications at Department of Biotechnology and Bioscience, University of Milano-Bicocca.

-2002, January 25<sup>th</sup>. Invited by Prof. Patrick Adlercreutz (Dept. of Biotechnology, Center of Chemistry and Chemical Engineering, Lund University), as opponent to the Ph.D. thesis of entitled "Lipases as Biocatalyst in Organic Media".

1995, 13-17 March, lecture entitled "Enantioselective reduction of prochiral carbonylic compounds" at the school of "Biocatalysis in Organic Synthesis" at Politecnico di Milano.

### **In the contest of his research activity Dr. Secundo had the role of tutor/supervisor for the following thesis of Laurea:**

- 2024 Laurea in Industrial Biotechnology "Lipid profile variation of *Chlorella sorokiniana* and *Nostoc commune* grown in autotrophy, heterotrophy and mixotrophy".
- 2022 Laurea in Industrial Biotechnology "Variation of the lipid profile of *Chlamydomonas reinhardtii* and *Nostoc commune* grown in autotrophy, heterotrophy and mixotrophy"
- 2021 Laurea in Industrial Biotechnology "Biochemical characterization of the chimeric enzyme consisting of Baeyer-Villiger monooxygenase from *Thermobifida fusca* and formate dehydrogenase from *Pseudomonas* sp. 101, NADP -dependent"
- 2021 Laurea in Pharmacy "Effect Of Compounds Of Pharmaceutical Interest On The Growth Of Microalgae *Chlorella Emersonii* And *Chlamydomonas Reinhardtii*"
- 2017 Laurea in Industrial Biotechnology. "Effect of ionic liquids on the activity of the wt and mutant SM4 NAD-dependent formate dehydrogenase from *Pseudomonas* sp. 101 lyophilized with lyoprotectants".
- 2017 Laurea in Industrial Biotechnology. "Effect of ionic liquids on the stability and activity of NAD-dependent formate dehydrogenases from *Pseudomonas* sp. 101".

- 2016 Laurea in Industrial Biotechnology. "Hydrolase formulations: preparation, test of activity, evaluation of enzyme release and applications".
- 2012 Laurea in Industrial Biotechnology. " Immobilization of glucose oxidase for the preparation of biosensors "
- 2011 Laurea in Chimica e Tecnologie Farmaceutiche. " Effect of alpha-chymotrypsin immobilized on surfaces in polyethylene on the development of biofilm of Escherichia coli ".
- 2011 Laurea in Industrial Biotechnology. "Immobilization of flavoenzymes on gold surfaces".
- 2010 Supervisor of a 3-months stage (from January 14<sup>th</sup> to April 16<sup>th</sup> 2010) of a Ph.D student from Istanbul Technique Universites Genetik, Istanbul (Turkey) awarded with an EMBO fellowship (ASTF 369-2009), for carrying out research on a project entitled "Structural characterization of D195S, N187E, N147R, H13E, Q105R mutants of Candida methylica FDH by using circular dichroism and Fourier Transform Infrared Spectroscopy".
- 2010 Laurea in Ingegneria dei Materiali. Deposition of gold for the development of hybrid materials in biosensors.
- 2009 Laurea in Industrial Biotechnology. Preparation of chemical modified FAD and employment in the reconstitution of holoenzyme of phenyl acetone monooxygenase from da *Thermobifida fusca*.
- 2008 Laurea in Industrial Biotechnology. Preparation and study of enzymes immobilized by formation of cross-linked enzyme aggregates
- 2007 Laurea in Industrial Biotechnology. Study of the activity and stability of Baeyer-Villiger monooxygenase in water-organic solvent mixtures.
- 2006 Laurea in Industrial Biotechnology. Study on the hydration of hydrolases for the optimization of the catalytic activity in organic solvents.
- 2002, Laurea in Industrial Biotechnology. Study on the activity and enantioselectivity of wild type and mutated lipases from *Candida rugosa*.
- 2000, Laurea in Chemical and Pharmaceutical Sciences. Use of biocatalytic methods for the preparation of a library of cholic acid derivatives.
- 1999, Laurea in Biology. Study of the activity of different preparations of lipase B from *Candida antarctica* in organic solvent.
- 1998, Laurea in Biology. Study on the enantioselectivity of several lipases in the kinetic resolution of 3-butene-1,2-diol in organic solvent.
- 1997, Laurea in Biology. Comparison of the activity of different formulations of lipase from *Pseudomonas cepacia* in organic solvents at different water activity values.

## Oral communications and lectures at conferences

**Invited speaker-** "Biorefinery of Agri-food Biowastes through Photosynthetic Microorganisms: Sustainable Production of Bioactive Compounds" Aquatic Product Processing and Comprehensive Utilization Qingdao, Shandong, (China), November 21-23/11/2024

**Invited speaker - Plenary Lecture:** "Correlating Enzyme Conformation to Catalytic Activity: a Possible Approach to Improve Enzyme Performances in/with Non-Aqueous Solvents". II. International Enzyme and Bioprocess Days. Congress will be held in Gebze Technical University Congress Center, Gebze - Kocaeli, Turkey on September 01-03, 2020".

**Keynote speaker:** "Enzyme formulations for biocatalysis in non-aqueous media" at the World Congress & Expo on Chemical Engineering & Catalysis Theme: Exploring the advancements in Chemical Engineering & Catalysis Scientific Federation held on July 23-25, 2018 at Osaka, Japan.

**Keynote speaker** "Lipids and lipases for lipids modification" at the 4th International Conference on Agricultural and Biological Sciences (ABS 2018) held from June 26<sup>th</sup> to 29<sup>th</sup>, 2018 in Hangzhou, Zhejiang Province, China.

*Oral communication* entitled held "Enzyme formulations for biocatalysis in non-aqueous media" at BNCM | Biocatalysis in Non-Conventional Media, 9<sup>th</sup> – 11<sup>th</sup> May, 2017, Rostock Germany

*Oral communication* entitled "Immobilized hydrolytic enzymes for antibiofilm applications" at the ESMB Meeting Combatting Biofilms, 30 September 2015. Gothenburg (Sweden)

25 March 2015. Egyptian-Italian Science day, National Research Centre, Dokki, Cairo. Egypt

*Invited to present an oral communication* Entitled: Enzyme Technologies and Innovative applications in

Textile.

12-13 July 2013. **Plenary lecture** entitled "Enzyme formulation as a tool for improving performances of biocatalysts in non-aqueous media", "BUCT International Forum", Beijing University of Chemical Technology, PRC.

*Oral communication* entitled "Nanostructured materials for enzyme immobilization" - Meeting on Nanoparticles "Nanoparticles: angels or demons". 30 January 2013, Varese, Italy : Centro di Ricerca "The Protein Factory".

16 April 2009. *Oral communication* entitled "Role of methoxypolyethylene glycol on the hydration, activity, conformation and dynamic properties of a lipase in a dry film" at the meeting Prostab2009, 14-17 April 2009 at the TU of Graz, Austria.

7-12 July 2002. **Plenary lecture** entitled "Optimization of enzyme efficiency in organic solvents" presented at the Gordon conferences in Biocatalysis, Meriden, NH, USA

6 September 2001. *Oral communication* entitled "Activity and conformational study of different forms of *Pseudomonas cepacia* lipase in organic solvents" at the meeting BioTrans 2001, September, 2-7 at the TU of Darmstadt, Germany.

30 April 1999. *Oral communication* entitled "Activity and conformational study of different forms of *Pseudomonas cepacia* lipase in organic solvents" at the meeting "From Biotechnology to Bioindustry" Como, 28-30 April 1999.

## Presentation of seminars

14 October 2008 seminar entitled "Importance of the enzyme formulation for the use of hydrolases in organic solvents" at the Nagoya Institute of Technology, Nagoya, Japan

3 December 2007, seminar entitled "Importance of the enzyme formulation for the use of hydrolases in organic solvents" at the Research Institute for Genetic Engineering and Biotechnology-TUBITAK, Kokaeli, Gebze, Turkey

27 October 2006, seminar entitled "Optimization of Hydrolases for catalysis in organic solvent" at the Department of Organic and Biochemical Engineering, Faculty of Chemical Engineering, Technical University of Iasi, Iasi, Romania

22 November 2005 seminar entitled "1. A Combinatorial Biocatalysis Approach to an Array of Cholic Acid Derivatives. 2. Optimization of Hydrolase Efficiency in Organic Solvents". At the University of Coimbra, Portugal.

8 April 2005 seminar entitled "Dry hydrolase preparation for catalysis in organic solvents" at the University of Puerto Rico, Humacao, Puerto Rico (USA).

10 February 2004 seminar entitled "Optimization of enzyme efficiency in organic solvents" at the University of Puerto Rico, Humacao, Puerto Rico (USA).

14 February 2001 seminar entitled "Biocatalisi: un valido strumento per la sintesi chimica" Department of Pharmaceutical Science, University of Verona, Verona, Italy

20 October 1999 seminar entitled "Activity and conformational study of different forms of *Pseudomonas cepacia* lipase and *Candida antarctica* lipase B in organic solvents" at the Department of Chemical Engineering at the Technical University of Istanbul, Istanbul, Turkey.

20 April 1999 seminar entitled "Purification and applications of a phospholipase D from a new strain of *Streptomyces*" at the institute Defence and valorisation of the animal germoplasm, in Milano, Italy

## Personal skills: coordination of people

Accomplishing the role of scientific coordinator of research projects Dr. Secundo had to act as supervisor of people hired to implement the financed research projects indicated above. In particular he had to lead and organize three post-docs for a period of one year (two of them in 2006 and one of them from the beginning of 2008 to now).

Mother tongue      **Italian**

Other language      **English**

Self-assessment      Understanding: Good      Speaking: Good      Writing: Good

**French:** Basic level

## **Annexes**

### **CONSENT IN ACCORDANCE WITH ARTICLE 23, ITALIAN LAW 196/03**

**I give my consent to the treatment and communication of my personal data solely in relation to or instrumental to the activities within the aims and objectives indicated in the advertisement shown in Experteer web page.**

## List of publications of Dr Francesco SECUNDO

- 150) C. Esposito, E. Lio, S. Gandolfi, G. Ottolina, F. SECUNDO  
"Co-cultivation of *Nannochloropsis salina* and *Xanthophyllomyces dendrorhous* in mixed medium enhances lipid and antioxidant yields"  
*Algal Research* 92 (2025) 104357. <https://doi.org/10.1016/j.algal.2025.104357>
- 149) K. Zribi, M. Ciciani, A. S. A. Carreira, M. Paganin, S. Pozzo, L. Cina, B. Binay, F. SECUNDO, Nicola Segata, Alessandro Provenzani.  
"Characterization of a novel thermostable NAD<sup>+</sup>-dependent formate dehydrogenase from *Methylacidiphilum kamchatkense* Kam1 (MkaFDH)"  
*Current Research in Biotechnology*, 10, 2025, 100306. <https://doi.org/10.1016/j.crbiot.2025.100306>
- 148) F. Villafiorita-Monteleone, A. M. Ferretti, A. Giacometti Schieroni, F. SECUNDO, S. Zappia  
"Water-Processable Polymer Nanoparticles: a new Visible-Lightphoto sensitizer for Artificial Photosynthesis"  
*ChemSusChem* 2025, e202500626, <https://doi.org/10.1002/cssc.202500626>
- 147) E. Lio, C. Esposito, J. Pains, S. Gandolfi, F. SECUNDO, Gianluca Ottolina.  
"Valorizing Agro-Industrial By-Products for Sustainable Cultivation of *Chlorella sorokiniana*: Enhancing Biomass, Lipid Accumulation, Metabolites, and Antimicrobial Potential"  
*Metabolites*, 2025, 15, 212. <https://doi.org/10.3390/metabo15030212> MDPI
- 146) E. Lio, M. Dramis, G. Ottolina, F. SECUNDO  
"Identifying Antimicrobial Agents from *Chlorella sorokiniana* A Biotechnological Approach Utilizing Eco-Friendly Extraction and Characterization Methods"  
*BioTech* 2025, 14, 22 <https://doi.org/10.3390/biotech14010022>. MDPI
- 145) E. Lio, K. Łukowiak, M. Dramis, N. Niedzbała, G. Ottolina, F. SECUNDO, I. Michalak  
"Sustainable Applications of *Cladophora glomerata* Hydrolysates: *Nostoc commune* Cultivation and Utilizing Biowaste for Agricultural and Environmental Purposes".  
*Waste and Biomass Valorization*, Published 07 March 2025 <https://doi.org/10.1007/s12649-025-02970-5>
- 144) Z. Cao, C. Li, H. Jiang, F. SECUNDO, X. Mao  
"Molecular modification of a GH84  $\beta$ -N-acetylglucosaminidase from *Streptomyces violascens* for synthesis of lacto-N-triose II using whey powder and chitin-derived N-acetyl chitobiose"  
*Food Chemistry* Available online 23 January 2025, 143046. DOI: 10.1016/j.foodchem.2025.143046
- 143) Y. Liu, J. Luo, H. Dong, F. SECUNDO, X. Mao, W.-C. Huang  
"Chitin Extraction at Room Temperature Using a Novel Temperature-Responsive Switchable Deep Eutectic System with Enhanced Recyclability"  
*Food and Bioprocess Technology*, (2025) <https://doi.org/10.1007/s11947-025-03746-4>
- 142) K. Gao, Q. Xin, H. Jiang, F. SECUNDO, X. Mao  
"Efficient expression of OUC-Sb-lip2 in *Yarrowia lipolytica* and its comprehensive utilization in the enrichment of DHA and EPA from fish oil".  
*Food Chem.* Dec 1;460 (Pt 2):140572.(2024) DOI: 10.1016/j.foodchem.2024.140572.
- 141) C. Li, Z. Cao, H. Jiang, F. SECUNDO, X. Mao  
"Characterization of a GH20  $\beta$ -N-Acetylhexosaminidase from *Flavobacterium algicola* suitable to synthesize lacto-N-triose II"  
*J. Agric. Food Chem.* 72, 9, 4849–4857 (2024), <https://doi.org/10.1021/acs.jafc.3c07919>
- 140) R. Chen, Y.N. Hao, F. SECUNDO, X.Z. Mao, W.C. Huang,  
"A chitosan-based antibacterial hydrogel with injectable and self-healing capabilities".  
*Mar Life Sci Technol* (2023). <https://doi.org/10.1007/s42995-023-00211-z>
- 139) A. Xing, F. SECUNDO, C. Xue, Y. Hu, and X. Mao.  
"Green and Efficient Preparation of Nano-chitin for Enzymatic Preparation of N-Acetylchitooligosaccharides"  
*ACS Sustainable Resour. Manage.* (2023), <https://doi.org/10.1021/acssusresmg.3c00044>
- 138) W. Wang, J. Liu, M.J. Khan, R. Wang, F. SECUNDO, J. Sun, X. Mao, H. Wen-Can  
"Magnetic macroporous chitin microsphere as a support for covalent enzyme immobilization"  
*Int J Biol Macromol* (2023), 128214, <https://doi.org/10.1016/j.ijbiomac.2023.128214>
- 137) H. Su, J. Sun, C. Guo, Y. Wang, F. SECUNDO, H. Dong, X. Mao  
"Structure-based mining of a chitosanase with distinctive degradation mode and product specificity"  
*Applied Microbiology and Biotechnology* Vol. 107, 6859-6871 (2023), <https://doi.org/10.1007/s00253-023-12741-8>

- 136) E. Lio, P. Parshin, E. D'Oronzo, S. Plebani, A.A. Pometun, S.Y. Kleymenov, V.I. Tishkov, F. SECUNDO  
 "Chimeric versus isolated proteins: Biochemical characterization of the NADP<sup>+</sup>-dependent formate dehydrogenase from *Pseudomonas* sp. 101 fused with the Baeyer-Villiger monooxygenase from *Thermobifida fusca*"  
*Int J Biol Macromol* (2023), 126637. <https://doi.org/10.1016/j.ijbiomac.2023.126637>
- 135) Y. Song, M. Wu, Z. Liu, M. Yu, F. SECUNDO, X. Mao  
 "Quality Improvement of Agar through Desulfation with Microorganisms"  
*Green Chem.*, (2023), 25, 6739-6747, <https://doi.org/10.1039/D3GC00577A>
- 134) A. Xing, Y. Hu, W. Wang, F. SECUNDO, C. Xue, X. Mao  
 A novel microbial-derived family 19 endochitinase with exochitinase activity and its immobilization  
*Applied Microbiology and Biotechnology*, (2023), 107, 3565–3578. <https://doi.org/10.1007/s00253-023-12523-2>
- 133) C. Jiang, F. SECUNDO, X. Mao  
 "Expanding the application range of the  $\kappa$ -carrageenase OUC-FaKC16A when preparing oligosaccharides from  $\kappa$ -carrageenan and furcellaran"  
*Marine Life Science & Technology* (2023) <https://doi.org/10.1007/s42995-023-00181-2>
- 132) M. Yu, M. Wu, F. SECUNDO, Z. Liu  
 "Detection, production, modification, and application of arylsulfatases"  
*Biotechnology Advances*, (2023), 67, 108207. <https://doi.org/10.1016/j.biotechadv.2023.108207>
- 131) J. Cheng, M. Xiao, X. Ren, F. SECUNDO, Y. Yu, S. Nan, W. Chen, C. Zhu, Q. Kong, Y. Huang, X. Fu, H. Mou  
 "Response of *Salmonella enterica* serovar Typhimurium to alginate oligosaccharides fermented with fecal inoculum: integrated transcriptomic and metabolomic analyses"  
*Marine Life Science & Technology* (2023) 5:242–256, <https://doi.org/10.1007/s42995-023-00176-z>
- 130) G.D. Barone, T. Cernava, J. Ullmann, J. Liu, E. Lio, A.T. Germann, A. Nakielski, D.A. Russo, T. Chavkin, K. Knufmann, F. Tripodi, P. Coccetti, F. SECUNDO, P. Fu, B. Pflieger, I. M. Axmann, P. Lindblad.  
 "Recent developments in the production and utilization of photosynthetic microorganisms for food applications".  
*Heliyon*, 9 (2023) e14708. <https://doi.org/10.1016/j.heliyon.2023.e14708>
- 129) A.M. Caramiello, M.C. Bellucci, G. Cristina, C. Castellano, F. Meneghetti, M. Mori, F. SECUNDO, F. Viani, A. Sacchetti, A. Volonterio  
 "Synthesis and Conformational Analysis of Hydantoin-Based Universal Peptidomimetics"  
*J. Org. Chem.*, (2023), 88,15, 10381–10402, <https://doi.org/10.1021/acs.joc.2c01903>
- 128) H. Wu, H. Zhang, X. Li, F. SECUNDO, X. Mao  
 "Preparation and Characterization of Phosphatidyl-Agar Oligosaccharide Liposomes for Astaxanthin Encapsulation"  
*Food Chemistry*, (2022) 134601. <https://doi.org/10.1016/j.foodchem.2022.134601>
- 127) H. Zhang, F. SECUNDO, J. Sun, X. Mao,  
 "Advances in enzyme biocatalysis for the preparation of functional lipids"  
*Biotechnology Advances* 61 (2022) 108036. <https://doi.org/10.1016/j.biotechadv.2022.108036>
- 126) H. Sun, C. Zhu, X. Fu, S. Khattak, J. Wang, Z. Liu, Q. Kong, H. Mou and F. SECUNDO  
 "Effects of intestinal microbiota on physiological metabolism and pathogenicity of *Vibrio*"  
*Frontiers in Microbiology*, (2022), DOI 10.3389/fmicb.2022.947767
- 125) A. Romanelli, F. SECUNDO, L. Decola, D. Maggioni, et al.  
 "Chiral fibers formation upon assembly of tetraphenylalanine peptide conjugated to a PNA dimer"  
*Chemistry - A European Journal*, (2022), Chem. Eur. J. 2022, e202200693
- 124) M. Yuan, Q. Liang, L. Xu, E. Lio, H. Mou, F. SECUNDO  
 "Enzymes in fish feed formulations".  
*Marine Life Science and Technology*, Published 4, pages 208–221, (2022), [doi.org/10.1007/s42995-022-00128-z](https://doi.org/10.1007/s42995-022-00128-z)
- 123) H. Mou, F. SECUNDO, X. Hu, B. Zhu  
 Editorial: "Marine Microorganisms and Their Enzymes With Biotechnological Application".  
*Front. Microbiol.*, 18 April (2022), <https://doi.org/10.3389/fmicb.2022.90116>
- 122) S. Khan, P. Fu, A. Di Fonzo, I. Marasca, F. SECUNDO  
 "Enhanced whole-cell biotransformation of 3-chloropropiophenone into 1-phenyl-1-propanone by hydrogel entrapped *Chlorella emersonii* (211.8b)"

121) D. De Simeis, S. Serra, A. Di Fonzo, F. SECUNDO

“Oxidation of terpenoids to achieve high-value flavor and fragrances. The role of the microalgae and of their growth medium in the biotransformation of the sesquiterpene valencene and of selected apocarotenoids”  
Chemistry (MDPI) (2021). 3(3), 821-830; <https://doi.org/10.3390/chemistry3030059>

120) J. Li, K. Gao, F. SECUNDO, X. Mao

“Biochemical characterization of two  $\beta$ -N-acetylglucosaminidases from *Streptomyces violascens* for efficient production of N-acetyl-D-glucosamine”

Food Chemistry 364 (2021) 130393, [doi.org/10.1016/j.foodchem.2021.130393](https://doi.org/10.1016/j.foodchem.2021.130393)

119) H. Zhang, X. Li, Q. Liu, J. Sun, F. SECUNDO, X. Mao

“Construction of a Super-Folder Fluorescent Protein-Guided Secretory Expression System for the Production of Phospholipase D in *Bacillus subtilis*”.

J. Agric. Food Chem. (2021) 69 (24), 6842-6849, DOI: 10.1021/acs.jafc.1c02089

118) F. Villa, F. SECUNDO, F. Forlani, C. Catto, F. Cappitelli

“Biochemical and molecular changes of the zosteric acid-treated *Escherichia coli* biofilm on a mineral surface”

Annals of Microbiology, Vol. 71 Issue: 1. (2021), DOI: 10.1186/s13213-020-01617-1.

117) F. SECUNDO, Y. Amao

“Visible-light-driven CO<sub>2</sub> reduction to formate with a system of water-soluble zinc porphyrin and formate dehydrogenase in ionic liquid/aqueous media”

RSC Advances 10, 42354–42362. (2020) DOI: 10.1039/d0ra08594d

116) J. Liao, S. Han, X. Li, J. He, F. SECUNDO, H. Liang

“Co-immobilization of two-component hydroxylase monooxygenase by functionalized magnetic nanoparticles for preserving high catalytic activity and enhancing enzyme stability”

International Journal of Biological Macromolecules, (2020) Vol. 164, 3163–3170, [doi.org/10.1016/j.ijbiomac.2020.08.182](https://doi.org/10.1016/j.ijbiomac.2020.08.182)

115) L. Xu, F. Yu, F. SECUNDO

“Ultrastructural changes in oil bodies accumulation and fatty acids composition during seed development of *Styrax tonkinensis*”

International Journal of Agriculture and Biological Sciences(IJOABS) ISSN 2522-6584, (2020) Vol. 24, Pages 927-934. DOI: 10.17957/IJAB/15.1517

114) S. Zhang, X. Li, Q. Yuan, F. SECUNDO, Y. Li, H. Liang

“Step-wise immobilization of multi-enzymes by zirconium-based coordination polymer in situ self-assembly and specific absorption”

Journal of Inorganic Biochemistry, Volume 208, 111093, <https://doi.org/10.1016/j.jinorgbio.2020.111093>

113) M. Dei Cas, G. Roda, F. Li, F. SECUNDO

“Functional lipids in autoimmune inflammatory diseases”

International Journal of Molecular Science, MDPI, Int J Mol Sci. (2020) Apr 27;21(9). pii: E3074. doi: 10.3390/ijms21093074.

112) X. Fu, X. Wei, M. Xiao, Z. Han, F. SECUNDO, H. Mou

“Properties of hydrolyzed guar gum fermented in vitro with pig fecal inocula and its favorable impacts on microbiota”

Carbohydrate Polymers, Available online 4 March (2020), 237: 116116. <https://doi.org/10.1016/j.carbpol.2020.116116>

111) I. Bayout, N. Bouzemi, N. Guo, X. Mao, S. Serra, S. Riva, F. SECUNDO

“Natural flavor esters synthesis catalyzed by lipases”.

Flavour and Fragrance Journal. (2020); 35:209–218. <https://doi.org/10.1002/ffj.3554>

110) X. Gao, X. Mao, P. Lu, F. SECUNDO, C. Xue, J. Sun

“Cloning, Expression, and Characterization of a Novel Thermostable and Alkaline-stable Esterase from *Stenotrophomonas maltophilia* OUC\_Est10 Catalytically Active in Organic Solvents”

Catalysts (2019), 9, 401; doi:10.3390/catal9050401

109) L. Li, C. Xu, W. Zhang, F. SECUNDO, C. Li, Z.-P. Zhang, X.-E. Zhang, F. Li

“Cargo-Compatible Encapsulation in Virus-Based Nanoparticles”

Nano Lett. (2019), 19, 2700–2706, DOI: 10.1021/acs.nanolett.9b00679

108) X. Gao, J. Sun, Z. Liu, W.-C. Huang, F. SECUNDO, Y. Zhao, C. Xue, X. Mao

“Highly efficient preparation of free all-trans-astaxanthin from *Haematococcus pluvialis* extract by a rapid biocatalytic method based on crude extracellular enzyme extract”.

- 107) C. Cattò, F. SECUNDO, G. James, F. Villa, F. Cappitelli  
α-Chymotrypsin immobilised on a low density polyethylene surface successfully weakens *Escherichia coli* biofilm formation  
International Journal of Molecular Sciences. (Int. J. Mol. Sci. 2018, 19, 4003); doi:10.3390/ijms19124003
- 106) Win TT, Barone GD, SECUNDO F, Fu P. Algal Biofertilizers and Plant Growth Stimulants for Sustainable Agriculture (2018), Industrial Biotechnology VOL. 14, NO. 4, Industrial Biotechnology | Mary Ann Liebert, Inc. publishers.
- 105) E. D'Oronzo, F. SECUNDO, B. Minofar, N. Kulik, A. A. Pometun, V. I. Tishkov  
"Activation/inactivation role of ionic liquids on formate dehydrogenase from *Pseudomonas* sp. 101 and its mutated thermostable form"  
ChemCatChem, (2018),10, 3247–3259, 10.1002/cctc.201800145
- 104) L. Gao, J. Sun, F. SECUNDO, X. Gao, C. Xue, X. Mao  
"Cloning, characterization and substrate degradation mode of a novel chitinase from *Streptomyces albolongus* ATCC 27414"  
Food Chemistry (2018), 261, 329–336. doi.org/10.1016/j.foodchem.2018.04.068
- 103) P. Lu, X. Gao, H. Dong, Z. Liu, F. SECUNDO, C. Xue, and X. Mao  
"Identification of a novel esterase from marine environmental genomic DNA libraries and its application in production of free all-trans-astaxanthin"  
J. Agric. Food Chem. (2018), 66, 2812-2821, DOI: 10.1021/acs.jafc.7b06062
- 102) Tishkov V.I., Pometun A.A., Stepashkina A.V., Fedorchuk V.V., Zarubina S.A., Kargov I.S., Atroshenko D.L., Parshin P.D., Kovalevski R.P., Boiko K.M., Eldarov M.A., D'Oronzo E., Facheris S., SECUNDO F., Savin S.S.  
"Rational design of practically important enzymes".  
Moscow University Chemistry Bulletin, 2018, Vol. 73, No. 2.
- 101) H. A. Amin, F. SECUNDO, H. Amara, F. A. Mostafa, W. A. Helmya.  
"Improvement of *Aspergillus flavus* saponin hydrolase thermal stability and productivity via immobilization on a novel carrier based on sugarcane bagasse"  
Biotechnology Reports. 2018, 17, 55-62. <https://doi.org/10.1016/j.btre.2017.12.007>
- 100) O. L. Tavano, A. Berenguer-Murcia, F. SECUNDO, R. Fernandez-Lafuente,  
"Biotechnological Applications of Proteases in Food Technology"  
Comprehensive Reviews in Food Science and Food Safety, 2018, 17, 412–436. doi: 10.1111/1541-4337.12326
- 99) F. Ghisleri, P. Fu, F. SECUNDO.  
Water-Retaining Polymers in Organic Solvent Increase Lipase Activity for Biodiesel Synthesis,  
Insights Enzyme Res 2017, 1:8 (8)
- 98) H. Dong, F. SECUNDO, C. Xue, and X. Mao  
"Whole-cell biocatalytic synthesis of cinnamyl acetate with a novel esterase from the DNA library of *Acinetobacter haemolyticus*".  
J. Agric. Food Chem., (2017), 65, 2120–2128. DOI: 10.1021/acs.jafc.6b05799.
- 97) A. Belafriekh, F. SECUNDO, S. Serra, Z. Djeghaba.  
"Enantioselective enzymatic resolution of racemic alcohols by lipases in green organic solvents"  
Tetrahedron: Asymmetry (2017), 28, 473–478 dx.doi.org/10.1016/j.tetasy.2017.02.004
- 96) E. Spadoni Andreani, F. Villa, F. Cappitelli, A. Krasowska, P. Biniarz, M. Łukaszewicz, F. SECUNDO  
"Coating polypropylene surfaces with protease weakens the adhesion and increases the dispersion of *Candida albicans* cells"  
Biotechnol Lett (2017) 39, 423–428, DOI 10.1007/s10529-016-2262-5
- 95) Fu P., SECUNDO F., "Algae and their bacterial consortia for soil bioremediation", Chemical Engineering Transactions, (2016) 49, 427-432. DOI: 10.3303/CET1649072
- 94) E. Spadoni Andreani, L. Magagnin, F. SECUNDO  
"Preparation and Comparison of Hydrolase-Coated Plastics"  
ChemistrySelect (2016), 1, 1490 – 1495. DOI: 10.1002/slct.201600377
- 93) H.Oliveira, D.Vilas Boas, S. Mesnage, L.D.Kluskens, R.Lavigne, S.Sillankorva, F.SECUNDO and J. Azeredo  
Structural and enzymatic characterization of ABgp46, a novel phage endolysin with broad anti-Gram-negative bacterial activity.  
Front. Microbiol. (2016). 7:208. doi: 10.3389/fmicb.2016.00208

- 92) S. Wang, X. Meng, H. Zhou, Y. Liu, F. SECUNDO, Y. Liu  
 "Enzyme stability and activity in non-aqueous reaction systems: a mini review"  
*Catalysts* 6, 32, (2016); doi:10.3390/catal6020032
- 91) F. Sasso, T. Kulschewski, F. SECUNDO, M. Lotti, J. Pleiss  
 "The effect of thermodynamic properties of solvent mixtures explains the difference between methanol and ethanol in *C. antarctica* lipase B catalyzed alcoholysis"  
*Journal of Biotechnology* 214, 1–8 (2015).
- 90) P. Biniarz, E. Spadoni Andreani, A. Krasowska, M. Łukaszewicz, F. SECUNDO  
 "Effect of Immobilized Proteases on Bacterial Growth and Cell Adhesion on Polypropylene Surfaces"  
*J Clin Microbiol Biochem Technol* 1(1): 007-009 (2015). <http://www.peertechz.com/Clinical-Microbiology-Biochemical-Technology/>
- 89) G. Roda, S. Fialà, M. Vittorini, F. SECUNDO.  
 "Fatty acid composition and fat content in milk from cows grazing in the Alpine region"  
*Eur. Food. Res. Technol.* 241:413–418 (2015). DOI 10.1007/s00217-015-2473-3
- 88) F. Villa, F. SECUNDO, A. Polo, F. Cappitelli  
 "Immobilized hydrolytic enzymes exhibit antibiofilm activity against *Escherichia coli* at sub-lethal concentrations"  
*Current Microbiology* 71(1):106-14 (2015). DOI 10.1007/s00284-015-0834-6
- 87) M. Lotti and F. SECUNDO.  
 Editorial: Protein stabilization – crossroad for protein-based processes and products.  
*Biotechnol. J.* 10, 341–342 (2015), DOI 10.1002/biot.201500064
- 86) Dr. S. Borrelli, Dr. D. Cartelli, Dr. F. SECUNDO, Dr. G.a Fumagalli, Dr. M. S. Christodoulou, Dr. A. Borroni, Dr. D. Perdicchia, Prof. Dr. F. Dosio, Dr. P. Milla, Prof. Dr. G. Cappelletti, Prof. Dr. D. Passarella.  
 "Self-Assembled Squalene-based Fluorescent Heteronanoparticles".  
*ChemPlusChem*, 80, 47–49, (2015), DOI: 10.1002/cplu.201402239
- 85) M. Clerici, G. Colombo, F. SECUNDO, N. Gagliano, R. Colombo, N. Portinaro, D. Giustarini, A. Milzani, R. Rossi, I. Dalle-Donne.  
 "Cigarette smoke induces alterations in the drug binding properties of human serum albumin".  
*Blood Cells, Molecules and Diseases.* 52, 166–174 (2014), DOI: dx.doi.org/10.1016/j.bcmd.2013.12.001
- 84) T. Kulschewski, F. Sasso, F. SECUNDO, M. Lotti, J. Pleiss.  
 "Molecular mechanism of deactivation of *C. antarctica* lipase B by methanol".  
*Journal of Biotechnology*, 168, 462–469, (2013), DOI: dx.doi.org/10.1016/j.jbiotec.2013.10.012 .
- 83) F. SECUNDO.  
 " Conformational changes of enzymes upon immobilisation"  
*Chem. Soc. Rev.*, 42, 6250-6261, (2013) DOI: 10.1039/c3cs35495d.
- 82) L. Magagnin, P. Cojocar, F. SECUNDO.  
 "Electroless Synthesis of Metallic Nanostructures for Biomedical Technologies"  
 in *Biomedical Applications, Modern Aspects of Electrochemistry.* S. S. Djokić, Springer, Volume 55, pp 73-99 (2012), DOI: 10.1007/978-1-4614-3125-1\_2.
- 81) E. Spadoni Andreani, F. SECUNDO, A. Raygani, L. Magagnin.  
 "Nanostructured Gold for Immobilization of Thioaniline Functionalized Glucose Oxidase and Au Nanoparticles by Electropolymerization"  
 "ECS Transactions - Seattle, Washington" Volume 45, "Surface Treatments for Biomedical Applications 3" (2012)
- 80) A. Natalello, F. Sasso, F. SECUNDO  
 "Enzymatic transesterification monitored by an easy-to-use Fourier transform infrared spectroscopy method". *Biotechnology Journal*, 8, 133–138, (2013). DOI: 10.1002/biot.201200173.
- 79) E. B. Ordu, E. Yelboğa, F. SECUNDO, R. B. Sessions, N. G. Karagüler.  
 "The effect of methionine to cysteine substitution on the stability of formate dehydrogenase from *Candida methylca*".  
*Journal of Molecular Catalysis B: Enzymatic*, 82, 109–114, (2012), DOI: 10.1016/j.molcatb.2012.05.024
- 78) F. SECUNDO, G.L. Barletta, G. Parini, G. Roda.  
 "Effects of stabilizing additives on the activity of alpha-chymotrypsin in organic solvent".  
*Journal of Molecular Catalysis B: Enzymatic*, 84, 128-131, (2012), DOI: 10.1016/j.molcatb.2012.04.008

- 77) M. Nagata, M. Amano, T. Joke, K. Fujii, A. Okuda, M. Kondo, S. Ishigure, T. Dewa, K. Iida, F. SECUNDO, Y. Amao, H. Hashimoto, M. Nango  
 "Immobilization and Photocurrent Activity of a Light-Harvesting Antenna Complex II, LHCII, Isolated from a Plant on Electrodes"  
 ACS Macro Lett. 1, 296-299 (2012)
- 76) F. SECUNDO, M. A. Bacigalupo, C. Scalera, S. Quici  
 "Rapid time-resolved fluoroimmunoassay for diethylstilbestrol in cow milk samples with a highly luminescent Tb<sup>3+</sup> 3 chelate". Journal of Food Composition and Analysis. (2011) <http://dx.doi.org/10.1016/j.jfca.2011.09.003>
- 75) L. Magagnin, P. Cojocar, A. Raygani, D. Brivio, F. SECUNDO, A. Turolla, G. Ottolina  
 "Galvanic displacement of nanostructured gold for flavoenzyme adsorption in biotechnology" ECS Transactions, 33 (18) 59-66 (2011).
- 74) F. SECUNDO, G. Roda, M. Vittorini, A. Ungureanu, B. Dragoi, E. Dumitriu.  
 "Effect of chemical composition of SBA-15 on the adsorption and catalytic activity of alpha-chymotrypsin". Journal of Material Chemistry, 21, 15619-15628 (2011). DOI: 10.1039/C1JM11475A
- 73) M. Vittorini · E. Dumitriu · G. Barletta · F. SECUNDO.  
 "Immobilization of Thermoanaerobium brockii alcohol dehydrogenase on SBA-15". Bioprocess and Biosystems Engineering. 34,247–251 (2011).
- 72) F. SECUNDO, S. Fialà, M.W. Fraaije, G. de Gonzalo, M. Meli, F. Zambianchi, G. Ottolina.  
 "Effects of water miscible organic solvents on the activity and conformation of the Baeyer-Villiger monooxygenases from Thermobifida fusca and Acinetobacter calcoaceticus: a comparative study". Biotechnology Bioengineering. 108, 491–499 (2011). DOI 10.1002/bit.22963
- 71) D. C. Öztürk, D. Kazan, A. A. Denizci, D. Grimoldi, F. SECUNDO, A. Erarslan  
 "Water miscible mono alcohols effect on the structural conformation of *Bacillus clausii* GMBAE 42 serine alkaline protease"  
 Journal of Molecular Catalysis B: Enzymatic 64, 184-188 (2010) doi:10.1016/j.molcatb.2009.02.017
- 70) V. Bansala, Y. Delgado, E. Fasoli, A. Ferrera, K. Griebenow, F. SECUNDO, G.L. Barletta  
 "Effect of prolonged exposure to organic solvents on the active site environment of subtilisin Carlsberg"  
 Journal of Molecular Catalysis B: Enzymatic 64, 38–44 (2010) doi: 10.1016/j.molcatb.2010.01.021
- 69) M. A. Bacigalupo, G. Meroni, F. SECUNDO, C. Scalera, S. Quici  
 "Antibodies conjugated with new highly luminescent Eu<sup>3+</sup> and Tb<sup>3+</sup> chelates as markers for time resolved immunoassays. Application to simultaneous determination of clenbuterol and free cortisol in horse urine"  
 TALANTA 80, 954-958 (2009) doi:10.1016/j.talanta.2009.08.019
- 68) F. SECUNDO  
 "Importance of enzyme formulation for the activity and enantioselectivity of lipases in organic solvents"  
 Modern Biocatalysis: Stereoselective and Environmentally Friendly Reactions. Book; Edited by W.-F. Fessner, T. Anthonsen. WILEY-VCH Verlag-GmbH & Co. KgaA. Weiheim, (2009).
- 67) M.A. Bacigalupo, G. Meroni, F. SECUNDO, R. Lelli.  
 "Time-resolved fluoroimmunoassay for quantitative determination of ampicillin in cow milk samples with different fat contents"  
 TALANTA, 77, 126-130, (2008)
- 66) F. SECUNDO, G.L. Barletta, G. Mazzola.  
 "Role of methoxypolyethylene glycol on the hydration, activity, conformation and dynamic properties of a lipase in a dry film".  
 Biotechnology and Bioengineering 101, 255-262, (2008).
- 65) A. Pennacchio, B. Pucci, F. SECUNDO, F. La Cara, M. Rossi, C. A. Raia.  
 "Purification and characterization of a novel recombinant highly enantioselective short-chain NAD(H)-dependent alcohol dehydrogenase from *Thermus thermophilus*"  
 Applied and Environmental Microbiology, 74, 3949-3958 (2008).
- 64) F. Perri, F. Romitelli, F. Rufini, F. SECUNDO, E. Di Stasio, B. Giardina, A. Vitali.  
 "Different structural behaviors evidenced in thaumatin-like proteins: a spectroscopic study"  
 Protein Journal, 27, 13-20, (2008)
- 63) T. Cabras, R. Longhi, F. SECUNDO, G. Nocca, S. Conti, L. Polonelli, C. Fanali, R. Inzitari, R. Petruzzelli, I. Messana, M. Castagnola and A. Vitali.  
 "Structural and functional characterization of the porcine proline-rich antifungal peptide SP-B isolated from salivary gland granules"  
 J. Pept. Sci., 14, 251-260, (2008).

- 62) F. SECUNDO, E. Dumitriu, J. Miehé-Brendlé and C. Chelaru.  
 “Adsorption and activities of lipases on synthetic beidellite clays with variable composition”  
*Microporous and Mesoporous Materials*, 109, 350–361, (2008)
- 61) F. SECUNDO, G.L. Barletta, E. Dumitriu, G. Carrea.  
 “Can an inactivating agent increase enzyme activity in organic solvent? Effects of 18-crown-6 on lipase activity, enantioselectivity, and conformation”.  
*Biotechnology and Bioengineering*, 97, 12-18, (2007).
- 60) B. Castillo, V. Bansal, A. Ganesan, P. Halling, F. SECUNDO, A. Ferrer, K. Griebenow and G. Barletta.  
 “On the activity loss of hydrolases in organic solvents: II. A mechanistic study of subtilisin Carlsberg”  
*BMC Biotechnology*, 6, 51-, (2006).
- 59) P.L. Mauri, M. Riva, D. Ambu, A. De Palma, F. SECUNDO, L. Benazzi, M. Valtorta, P. Tortora, P. Fusi.  
 “Ataxin-3 is subject to autolytic cleavage”  
*FEBS Journal* 273, 4277–4286, (2006).
- 58) E. Fasoli, B. Castillo, A. Santos, E. Silva, A. Ferrer, E. Rosario, K. Griebenow, F. SECUNDO and G. L. Barletta.  
 “Activation of subtilisin Carlsberg in organic solvents by methyl- $\beta$ -cyclodextrin: lyoprotection vs substrate and product-complex effect”  
*Journal of Molecular Catalysis B: Enzymatic* 42, 20-26, (2006)
- 57) M. Nardini, D. Svergun, P. V. Konarev, S. Spanò, M. Fasano, C. Bracco, A. Pesce, A. Donadini, C. Cericola, F. SECUNDO, A. Luini, D. Corda and M. Bolognesi.  
 “The C-terminal domain of the transcriptional corepressor tBP is intrinsically unstructured”  
*Protein Science*, 15,1–9, (2006)
- 56) F. SECUNDO, G. Carrea, C. Tarabiono, P. Gatti-Lafranconi, S. Brocca, M. Lotti, K.-E. Jaeger, M. Puls, T. Eggert.  
 “The lid is a structural and functional determinant of lipase activity and selectivity”  
*Journal of Molecular Catalysis B: Enzymatic* 39, 166-170, (2006).
- 55) F. van Rantwijk, F. SECUNDO and R. A. Sheldon.  
 “Structure and activity of *Candida antarctica* lipase B in ionic liquids”  
*Green Chemistry*, 8, 283–286, (2006).
- 54) F. SECUNDO, C. Russo, A. Giordano, G. Carrea, M. Rossi, C.A. Raia.  
 “Temperature-induced conformational change at the catalytic site of *Sulfolobus solfataricus* alcohol dehydrogenase highlighted by Asn249Tyr substitution. A hydrogen/deuterium exchange, kinetic, and fluorescence quenching study”  
*Biochemistry*, 44, 11040–11048, (2005).
- 53) F. SECUNDO, G. Carrea.  
 “Mono- and disaccharides enhance the activity and enantioselectivity of *Burkholderia cepacia* lipase in organic solvent but do not significantly affect its conformation”  
*Biotechnology and Bioengineering*, 92, 438–446, (2005).
- 52) F. SECUNDO, F. Zambianchi, G. Crippa, G. Carrea, G. Tedeschi.  
 “Comparative Study of the Properties of Wild type and Recombinant Cyclohexanone Monooxygenase, an Enzyme of Synthetic Interest”  
*Journal of Molecular Catalysis B: Enzymatic* 34, 1-6, (2005)
- 51) F. SECUNDO, N. Guerrieri.  
 “ATR-FT/IR study on the interactions between gliadins and dextrin and their effects on the protein secondary structure”  
*Journal of Agricultural and Food Chemistry* 53, 1757-1764, (2005)
- 50) N. D'Antona, D. Lambusta, R. Morrone, G. Nicolosi, F. SECUNDO.  
 “Biocatalytic procedure for obtaining all four diastereoisomers of 1-(1-hydroxyethyl)-3-ethylferrocene, synthons for chiral 1,3-disubstituted ferrocenes”  
*Tetrahedron: Asymmetry*, 15, 3835-3840, (2004)
- 49) R. M. Lau, M. J. Sorgedraeger, G. Carrea, F. van Rantwijk, F. SECUNDO, R.A. Sheldon.  
 “Dissolution of *Candida antarctica* lipase B in ionic liquids: effects on structure and activity”  
*Green Chemistry*, 6, 483-487, (2004)
- 48) N. Guerrieri, P. Cerletti, F. SECUNDO.  
 “Gliadins and polysaccharides interaction”  
 The proceedings of the 8th Gluten Workshop held on 8-10 September 2003 in Viterbo, Italy.

in Book Title: The Gluten Proteins, The Royal Society of Chemistry 2004, Special Publication No. 295, Edited by D. Lafiandra, S. Masci, , D'Ovidio

- 47) F. SECUNDO, G. Carrea, C. Tarabonio, S. Brocca, M. Lotti.  
Activity and enantioselectivity of wild type and lid mutated *Candida rugosa* lipase isoform 1 in organic solvents.  
*Biotechnology and Bioengineering*, 86, 236-240, (2004)
- 46) E. Shehi, P. Fusi, F. SECUNDO, S. Pozzuolo, A. Bairati and P. Tortora.  
"Temperature-dependent, irreversible formation of amyloid fibrils by a soluble human ataxin-3 carrying a moderately expanded polyglutamine stretch (Q36)"  
*Biochemistry*, 42, 14626-14632, (2003)
- 45) S. Brocca, F. SECUNDO, M. Ossola, L. Alberghina, G. Carrea, M. Lotti.  
"Sequence of the lid affects activity and specificity of *Candida rugosa* lipase isoenzymes"  
*Protein Science* 12, 2312-2319 (2003)
- 44) F. SECUNDO, G. Carrea.  
"Optimization of hydrolase efficiency in organic solvents"  
*Chemistry- A European Journal* 9, 3194-3199 (2003)
- 43) E. Dumitriu, F. SECUNDO, J. Patarin, I. Fechete.  
"Preparation and Properties of Lipase Immobilized on MCM-36 support"  
*Journal of Molecular Catalysis B: Enzymatic*, 22, 119-133, (2003)
- 42) M. Tuter, H.A. Aksoy, G. Ustun, S.Riva, F. SECUNDO, S. Iperker.  
"Partial purification of *Nigella sativa* L. seed lipase and its application in hydrolytic reactions. Part 2. Enrichment of  $\gamma$ -linoleic acid from borrege oil"  
*Journal of the American Oil Chemists' Society (JAOCS)* 80, 237-241, (2003)
- 41) M. Tuter, F. SECUNDO, S.Riva, H.A. Aksoy, G. Ustun.  
"Partial purification of *Nigella sativa* L. seed lipase and its application in hydrolytic reactions. Part 1"  
*Journal of the American Oil Chemists' Society (JAOCS)* 80, 40-48, (2003)
- 40) P. L. A. Overbeeke, P. Schenkels, F. SECUNDO and J. A. Jongejan.  
"Biocatalytic synthesis of cyclopropanol from cyclopropyl methyl ketone using whole cells of *Rhodococcus erythropolis*"  
*Journal of Molecular Catalysis B: Enzymatic*, 21, 51-53, (2003)
- 39) F. SECUNDO, G. Carrea, M. De Amici, S. Joppolo di Ventimiglia and J. S. Dordick.  
"A combinatorial biocatalysis approach to a library of cholic acid derivatives"  
*Biotechnology and Bioengineering* 81, 391-396, (2003)
- 38) F. SECUNDO, G. Carrea.  
"Lipase activity and conformation in neat organic solvents"  
*Journal of Molecular Catalysis B: Enzymatic*, 19-20, 93-102, (2002)
- 37) F. SECUNDO, G. Carrea, F. M. Veronese.  
"Discriminating between dispersion and lyoprotection effects in biocatalysis in organic media"  
*Canadian Journal of Chemistry*, 80, 551-554, (2002).
- 36) F. M. Veronese, C. Mammuncari, F. Schiavon, O. Schiavon, S. Lora, F. SECUNDO, A. Chilin, A. Guiotto.  
"Pegylated enzyme entrapped in poly(vinyl alcohol) hydrogel for biocatalytic application"  
*Il Farmaco* 56, 541-547, (2001).
- 35) F. SECUNDO, G. Carrea, C. Soregaroli, D. Varinelli, R. Morrone.  
"Activity of different *Candida antarctica* lipase b formulations in organic solvents"  
*Biotechnology and Bioengineering* 73, 157-63, (2001)
- 34) G. Ottolina, F. SECUNDO, G. Colombo, G. Carrea.  
"Optimization of enzymatic enantiomeric resolutions through solvent selection"  
*Methods in Biotechnology, Enzymes in Nonaqueous Solvents: Methods and Protocols* Vol. 15 Chapter 26. Pub. Date: 1/15/2001
- 33) F. SECUNDO, G. Ottolina, G. Carrea.  
"Preparation and properties in organic solvents of noncovalent peg-enzyme complexes"  
*Methods in Biotechnology, Enzymes in Nonaqueous Solvents: Methods and Protocols* Vol. 15 Chapter 8. Pub. Date: 1/15/2001

- 32) C. Dallanoce, M. De Amici, C. De Micheli, G. Carrea, F. SECUNDO, S. Castellano.  
 "A chemoenzymatic approach to the synthesis of the stereoisomers of a  $\beta$ -adrenergic receptor antagonist"  
 Tetrahedron: Asymmetry, 11,2741-2751 (2000)
- 31) I. Leiros, F. SECUNDO, C. Zambonelli, S. Servi, E. Hough.  
 "The first crystal structure of a phospholipase D"  
 Structure with Folding and Design 8, 655-667 (2000)
- 30) I. Leiros, E. Hough, P. D'Arrigo, G. Carrea, G. Pedrocchi-Fantoni, F. SECUNDO, S. Servi.  
 "Crystallization and preliminary x-ray diffraction studies of phospholipase D from *Streptomyces* sp."  
 Acta Crystallogr. D 56, 466-468, (2000)
- 29) F. SECUNDO, G. Carrea, C. Dallanoce, M. De Amici, M. L. Oppizzi.  
 "Enzymatic Resolution of 3,4-dihydroxy-1-butene in organic solvents and optimization of reaction conditions"  
 Biocatalysis and Biotransformation 17, 241-250, (1999)
- 28) F. SECUNDO, G. Carrea, G. Vecchio, F. Zambianchi.  
 "Spectroscopic investigation of lipase from *Pseudomonas cepacia* solubilized in 1,4-dioxane by non-covalent complexation with methoxypoly(ethylene glycol)"  
 Biotechnology and Bioengineering 64, 624-629, (1999)
- 27) G. Vecchio, F. Zambianchi, P. Zacchetti, F. SECUNDO, G. Carrea.  
 "FT-IR Study of dehydrated lipases from *Candida antarctica* B and *Pseudomonas cepacia*"  
 Biotechnology and Bioengineering 64, 545-551, (1999)
- 26) F. SECUNDO, S. Spadaro, G. Carrea, P. L. A. Overbeeke.  
 "Optimization of *Pseudomonas cepacia* lipase preparations for catalysis in organic solvents"  
 Biotechnology and Bioengineering 62, 554-561, (1999)
- 25) T. Anthonsen, P. D'Arrigo, G. Pedrocchi-Fantoni, F. SECUNDO, S. Servi, E. Sundby.  
 "Phospholipids Hydrolysis in Organic Solvents Catalysed by Immobilised Phospholipase C"  
 Journal of Molecular Catalysis B: Enzymatic 6, 125-132, (1999)
- 24) D. S. Burdette, F. SECUNDO, R. S. Phillips, J. Dong, R. A. Scott, J. G. Zeikus.  
 "Biophysical and mutagenic analysis of *Thermoanaerobacter ethanolicus* secondary alcohol dehydrogenase activity and specificity"  
 Biochemical Journal 326, 717-724, (1997)
- 23) G. Carrea, P. D'Arrigo, F. SECUNDO, S. Servi.  
 "Purification and applications of a phospholipase D from a new strain of *Streptomyces*"  
 Biotechnology Letters 19, 1083-1085, (1997)
- 22) R.S. Phillips, R.L. Von Tersch, F. SECUNDO.  
 "Effects of tyrosine ring fluorination on rates and equilibria of formation of intermediates in the reactions of carbon-carbon lyases"  
 European Journal of Biochemistry 244, 658-663, (1997)
- 21) A. M. Gioacchini, G. Carrea, F. SECUNDO, M. Baraldini and A. Roda.  
 "Electrospray mass spectrometric analysis of poly(ethylene glycol)-protein conjugates"  
 Rapid Communications in Mass Spectrometry 11, 1219-1222, (1997)
- 20) G. Carrea, P. D'Arrigo, M. Mazzotti, F. SECUNDO and S. Servi.  
 "On the kinetic mechanism of phospholipase D from *Streptomyces* sp. in an emulsion system"  
 Biocatalysis and Biotransformation 15, 251-264, (1997)
- 19) F. SECUNDO, G. Ottolina, S. Riva and G. Carrea.  
 "The enantioselectivity of lipase ps in chlorinated solvents increases as a function of substrate conversion"  
 Tetrahedron: Asymmetry 8, 1-7, (1997)
- 18) R. Bovara, G. Carrea, A. M. Gioacchini, S. Riva, F. SECUNDO.  
 "Activity, Stability, and conformation of methoxypoly (ethylene glycol)-subtilisin at different concentrations of water in dioxane"  
 Biotechnology and Bioengineering 54, 50-57, (1997)
- 17) F. SECUNDO and R. S. Phillips.  
 "Effects of pH on enantiospecificity of alcohol dehydrogenases from *Thermoanaerobacter ethanolicus* and horse liver"

Enzyme and Microbial Technology 19, 487-492, (1996)

16) R.L. VonTersch, F. SECUNDO, R.S. Phillips, and M.G. Newton.

"Preparation of fluorinated amino acids with tyrosine phenol lyase" (Effects of fluorination on reaction kinetics and mechanism of tyrosine phenol lyase and tyrosine protein kinase Csk)"

Biomedical Frontiers of Fluorine Chemistry Edit By Iwao Ojima, James R. McCarthy, and John T. Welch (1996)

15) F. SECUNDO, Giacomo Carrea, Paola D'Arrigo, Stefano Servi.

"Evidence of an essential lysine for the activity of a phospholipase from Streptomyces"

Biochemistry 35, 9631-9636, (1996)

14) R. Bovara, G. Carrea, S. Riva, F. SECUNDO.

"A new enzymatic route to the synthesis of 12-ketoursodeoxycholic acid"

Biotechnol. Lett., 18, 305-308, (1996)

13) G. Carrea, P. D'Arrigo, V. Piergianni, S. Roncaglio, F. SECUNDO, S. Servi.

"Purification and properties of two phospholipases D from Streptomyces sp."

Biochimica et Biofisica Acta 1255, 273-279, (1995)

12) F. SECUNDO, G. Carrea, S. Riva, E. Battistel, D. Bianchi.

"Cyclohexanone monooxygenase catalyzed oxidation of methyl phenyl sulfide and cyclohexanone with macromolecular NADP in a membrane reactor"

Biotechnology Letters 15, 865-870, (1993)

11) F. SECUNDO, G. Carrea, S. Dallavalle, G. Franzosi.

"Asymmetric oxidation of sulfides by cyclohexanone monooxygenase"

Tetrahedron: Asymmetry 4, 1981-1982, (1993)

10) B. Danieli, A. Bertario, G. Carrea, B. Redigolo, F. SECUNDO and S. Riva.

"Chemo-enzymatic synthesis of 6"-o-(3-arylprop-2-enoyl) derivatives of the flavonol glucoside isoquercitrin"

Separatum Helvetica Chimica Acta 76, 2981-2991, (1993)

9) G. Carrea, G. Ottolina, S. Riva, F. SECUNDO.

"Effect of reaction conditions on the activity and enantioselectivity of lipases in organic solvents"

biocatalysis in non-conventional media" ( in J. Tramper, M.H. Vermue, H.H. Beftink, U.

von Stockar eds.) Elsevier, Amsterdam, 111-119, (1992)

8) F. SECUNDO, S. Riva, G. Carrea.

"Effects of medium and of reaction conditions on the enantioselectivity of lipases in organic solvents and possible rationales"

Tetrahedron: Asymmetry 3, 267-280, (1992)

7) S. Riva and F. SECUNDO.

"Selective enzymatic acylations and deacylations of carbohydrates and related compounds"

Chimicaoggi 9-16, (June 1990)

6) S. Riva, G. Carrea, G. Ottolina, F. SECUNDO, B. Danieli, P. De Bellis.

"Enzymatic regioselective acylation of polyhydroxylated natural compounds in organic solvents"

Ann. N.Y. Acad. Sci. 613, 712-716, (1990)

5) F. Nicotra, S. Riva, F. SECUNDO, Luca Zucchelli.

" $\omega$ -Functionalyzed esters by enzymatic acylation"

Synthetic Commun. 20, 679-685, (1990)

4) S. Riva, R. Bovara, G. Ottolina, F. SECUNDO, G. Carrea.

"Regioselective acylation of bile acid derivatives with candida cylindracea lipase in anhydrous benzene"

J. Org. Chem. 54, 3161-3164, (1989)

3) F. Nicotra, S. Riva, F. SECUNDO, L. Zucchelli.

"An interesting example of complementary regioselective acylation of secondary hydroxyl groups by different lipases"

Tetrahedron Lett. 30, 1703-1704, (1989)

2) G. Carrea, S. Riva, F. SECUNDO, B. Danieli.

"Enzymatic synthesis of various 1'-o-sucrose and 1-o-fructose esters"

J. Chem. Soc. Perkin Trans. I 1057-1061, (1989)

1) M. Canetti, A. Seves, F. SECUNDO, G. Vecchio.  
"CD and small-angle x-ray scattering of silk fibroin in solution"  
Biopolymers 28, 1623-1624, (1989).