

**Bahar Aliakbarian, Ph. D.**

*(U.S. Permanent Resident)*

The Axia Institute – Michigan State University

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## **PROFESSIONAL PREPARATION**

### **Professional Statement**

Accomplished chemical engineer with expertise in food process and advanced biotechnology including extraction techniques, micro and nano scale encapsulation, purification and characterization of active molecules, biological waste treatment, advanced biological processes for fermentation and photosynthetic microorganism cultivation, smart food packaging, electrospinning process, data analysis and process optimization.

### **Current Position**

- 2017 – Present: **Research Associate Professor** (Fixed Term) – The Axia Institute – Department of Supply Chain Management – Broad College of Business – Michigan State University.
- **Adjunct Associate Professor** – School of Packaging – College of Agriculture and Natural Resources – Michigan State University.

### **Scientific Productivity Indicators**

H Index **24** (Google Scholar) with **1582** citations.

H Index **20** (Scopus) with **1136** citations.

ORCID ID: [orcid.org/0000-0002-9425-5949](https://orcid.org/0000-0002-9425-5949).

### **Degrees**

- 2006-2009: **Ph.D.**, Chemical, Process and Material Engineering, University of Genoa, Italy.
- 2003-2005: **M.S.**, Chemical Engineering, University of Genoa, Italy.
- 1997-2002: **B.S.**, Chemical Engineering-Food Sciences, Islamic Azad University-Research and Science Branch, Tehran, Iran.
- 1996-2000: **B.S.**, Public Administration, University of Allameh Tabatabaei, Tehran, Iran.

### **Previous Appointments**

- 2014 – 2017: **Adjunct Professor**, Department of Mechanical Engineering, University of Genoa, Italy.
- 2013 – 2014: **Postdoctoral Research Associate**, Harvard-MIT's Division of Health Science and Technology, Brigham and Women's Hospital, Cambridge, USA.
- 2011 – 2012: **Postdoctoral Research Associate**, School of Chemical and Biomolecular Engineering, University of Sydney, Australia.
- 2009 – 2017: **Postdoctoral Research Associate**, Department of Civil, Chemical and Environmental Engineering, University of Genoa, Italy.

## RESEARCH

### Awards

- 2017: **Fellowship Award of the Academy for Global Engagement**, Michigan State University, East Lansing, USA.
- 2017: **Italian Scientific Qualification Award** (Associate Professorship), Italian Ministry of Education, Universities and Research, Italy.
- 2013: **Postdoctoral Research Award** (DGR 1283/2011), European Social Fund Liguria Region 2007-2013, Italy.
- 2011: **Endeavour Research Award** (ERF PDR 2318 2011), Department of Education, Employment and Workplace Relations (DEEWR), Australia.

### Project Leadership

- 2017-2019: **Principal Investigator (PI)**, “Multi-Factor Intelligent Packaging Solution to Prevent Opioid Abuse and Misuse”, Funded by The Axia Institute, Midland, USA, \$255,000.
- 2017-2019: **Co-PI**, “Printed RFID Sensors for Intelligent Food Packaging”, Funded by The Axia Institute, Midland, USA, \$200,000.
- 2016-2017: **Co-PI**, “A Package Made of Wood in Contact with Food (MOCA): Mechanical and biochemical characterization”, Funded by Milan Center of Food law and Policy, €60,000, Milan, Italy.
- 2014-2015: **Co-PI**, “Longevity in a swallow of apple and Grapes for life”, Funded by Ente Institut Agricole Régional, €55,000, Val da Osta, Italy.
- 2014: **Co-PI**, “Valorization of olive leaves”, Azienda Agricola Castellari, €10,000, Funded by Cesano sul Neva, Italy.
- 2013: **Co-PI**, “Identification of the most significant fields of research and technological development for the sectors of the processing industry, renewable energy and biobased industry”, Funded by D’Appolonia, €30,000, Genoa, Italy.
- 2011-2013: **Co-PI**, “Analysis and Evaluation of Food & Beverage Process to define a methodology to transform the system-independent equipment descriptions into a set of SIMATIC IT objects (Equipment/Facets/Workflows)”, Funded by Siemens S.p.a., €15,000, Genoa, Italy.
- 2012-2013: **Co-PI**, “Use of innovative method(s) to improve antioxidant compounds in olive oil”, Funded by COOP Italia s.r.l., €15,000, Genoa, Italy.
- 2011-2012: **Co-PI**, “Catalytic production of biofuels from automobile shredder residue”, Funded by IRLE s.r.l., €30,000, Pavia, Italy.
- 2011: **Co-PI**, “Treatment of Oil sludge plants Tanks”, Funded by Idrabel Italia s.r.l., €65,000, Savona, Italy.
- 2009-2011: **Co-PI**, “Vegetable oil conversion into fuels”, Funded by Ansaldo Energia, €20,000, Genoa, Italy.

### Research Activity Abroad

- November 2013: **Postdoctoral Research Fellow**, Université de Lorraine, Laboratoire d’Ingénierie des Biomolécules, “Nanovectorization of a Natural Antioxidant”, Nancy, **France**.
- March 2013-September 2013: **Postdoctoral Research Fellow**, Harvard-MIT’s Division of Health Science and Technology, Brigham and Women’s Hospital, Khademhosseini Laboratory, “Fabrication of PGS-PCL Scaffolds Fortified with *t*-resveratrol for Tissue Engineered Vascular Implantation”, Cambridge, **USA**.

□ April 2011-September 2011: **Postdoctoral Research Fellow**, awarded by “Department of Education, Employment and Workplace Relations (DEEWR)”, University of Sydney, Bioengineering and Biophysics laboratory, School of Chemical and Biomolecular Engineering, “An Environmentally Friendly Extraction Technique to Recovery Valuable Compounds from Vitis Vinifera Wastes: Sub-Critical Water Extraction”, Sydney, **Australia**.

□ October 2008-January 2009: **Ph.D. Research Fellow**, University of Sydney, Bioengineering and Biophysics laboratory, School of Chemical and Biomolecular Engineering, “Dilute Acid Hydrolysis of Rice Husk for Ethanol Production”, Sydney, **Australia**.

## TEACHING

### Official Teaching

□ 2017: **Adjunct Professor** for the official course of **Ph.D. program** in Civil, Chemical and Environmental Engineering. Course title: “Technologies and Processes for Formulation of Innovative and High-Added Valued Products”, University of Genoa, Italy.

□ 2015-2017: **Adjunct Professor** for the official course of **M.S. program** in Environmental and Energy Engineering. Course title: “Chemical and Biochemical Processes and Plants for Energy”, ING-IND/25, Department of Mechanics, Energetics, Management and Transportation (DIME), Polytechnic School, University of Genoa, Italy.

□ 2014-2016: **Adjunct Professor** for the official course of **B.S. program** in Industrial, Environment and Energy Management Engineering. Course title: “Environmental Impact of Chemical Processes” ING-IND/24, Department of Mechanics, Energetics, Management and Transportation (DIME), Faculty of Engineering, University of Genoa, Italy.

□ 2012-2017: **Teaching activities and tutorials** to official course of **M.S. program** in Chemical Engineering. Course title: “Chemical Plants and Processes for Food Industry”, ING-IND/25, Department of Civil, Chemical and Environmental Engineering, Polytechnic School, University of Genoa, Italy.

□ 2014-2015: **Teaching assignment** in **M.S. program** of “Expert in Food Biotechnology” held by Liguria region, Department of Earth Sciences of the environment and life (DISTAV), University of Genoa, Italy.

□ 2009-2010: **Teaching assignment** in course of Senior technician for restaurants and valorization of local and typical products, "IFTS 2009", held by Professional Institute for Hospitality and Catering Marco Polo, Genoa, Italy.

### Teaching support

□ 2012-2015: Teaching support activities and tutorials to official courses of “Environmental and Biotechnological Processes,” and “Industrial Microbiology and Biotechnology of Fermentation” held by prof. A. Converti. M.S. in Chemical Engineering, University of Genoa, Italy.

□ 2013-15: Teaching support activities and tutorials to official course of “Technologies and Processes for the Formulation of Innovative Products with High-Added Value Compounds” held by prof. P. Perego. Ph.D. in Civil, Chemical and Environmental Engineering, University of Genoa, Italy.

□ 2012-2016: Member of the examination boards of the following official courses: “Chemical Plants and Food Industry Processes” (prof. P. Perego), “Environmental and Biotechnological Processes” (prof. A. Converti).

## **Mentoring**

- 2016: Francesca Lovaglio, “Study of Process Variables for Microencapsulation of Phenolic from Olive Pomace using Response Surface Methodology and Artificial Neural Network”, M.S. in Chemical Engineering, University of Genoa.
- 2016: Laura Morando, “Fabrication of Biodegradable Vascular Prosthesis using Electrospinning”, B.S. in Biotechnology, University of Genoa.
- 2016: Elena Zattera, “Synthesis of Calcium Carbonate Nanoparticles for Biomaterials Functionalization”, M.S. in Bioengineering, University of Genoa.
- 2016: Vittorio Bassano, “Fabrication of Biodegradable Vascular Prosthesis using Electrospinning”, M.S. in Chemical Engineering, University of Genoa.
- 2014: Valeria Kaia, “Using Spray-drying Technology to Improve the Solubility of a Cocoa- Based Drink”, M.S. in Chemical Engineering, University of Genoa.
- 2013: Tina Sameti, “High-Added Valued Compounds Recovery from Olive Oil Industry”, B.S. in Chemical Engineering, University of Genoa.
- 2012: Francesco Pugliano, “Production of Fermented Milk using Agri-Food Biomass”, B.S. in Prevention techniques in the environment and at the workplace, University of Genoa.
- 2012: Danilo Rosello, “Conversion of Oleic Acid using Acid Catalyst”, B.S. in Chemical Engineering, University of Genoa.
- 2011: Martina Pesce and Martina Vignolo, “Antioxidants Extraction using High Pressure and Temperature Reactor and their Application in Functional Food”, B.S. in Chemical Engineering, University of Genoa.
- 2011: Luca Vaianell and Francesco Busdraghi, “Medium Temperature Catalytic Conversion of Fatty Acids using Silica”, B.S. in Chemical Engineering, University of Genoa.
- 2011: Delaram Rahmani, “Formulation of a Fermented Milk Fortified by Antioxidants from Agri-food Wastes”, B.S. in Biotechnology, University of Genoa.
- 2010: Erika Pistarino, “Productive Process of Olive in Brine of Taggiasca Cultivar: Characterization by NIR Spectroscopy and the Study of the Influence of Operative Parameters”, Ph.D. in Chemical, Material and Process Engineering, University of Genoa.
- 2010: Eugenia Sannita, “Catalytic Conversion of Palm Oil into Biofuels”, M.S. in Chemical Engineering, University of Genoa.
- 2009: Fabio Lisi, “Olive Oil Waste Treatment and Antioxidant Recovery using High Pressure and Temperature Reactor”, B.S. in Prevention techniques in the environment and at the workplace, University of Genoa.
- 2009: Celeste Scaiola, “Recovery of Antioxidants from Agri-Food Wastes using High Pressure and Temperature Reactor”, B.S. in Chemical Engineering, University of Genoa.
- 2008: Alice De Gasapri, “Innovative Method to Increase Antioxidants in Olive Oil”, B.S. in Chemical Engineering, University of Genoa.

## **SYNERGISTIC ACTIVITIES**

### **Review**

- Journal of Food Engineering; Natural Product Research; Food Biochemistry; Industrial Crops and Products; Italian Journal of Food Science; Annals of Microbiology; Food Chemistry; Brazilian Journal of Microbiology.
- External Grant Reviewer, The University of Nottingham.

### **Editorial board**

- Guest Editor: Food Research International for Special Issue entitled: Next-generation technologies and approaches to improve food safety and quality along food supply chain: reduce food spoilage and prevent food fraud.
- Associate Editor: International Editorial Board, Journal of Cell and Molecular Research.

### **Chairing and Committee**

- 2017: Track Secretary of the "Drug Discovery and Therapy World Congress 2017", Boston, USA.
- 2016: Chair of "Green Extraction of Natural Products 2016", Turin, Italy.
- 2015-2017: Graduate Studies Committee, Polytechnic School, University of Genoa, Italy.

### **Research Organization Membership**

- Founder and member of Green Modelling Italia (GMI)-Spin off Company- University of Genoa (C.F./P.I. 02078640998).
- Member of inter-departmental RESEARCH CENTER of Biologically Inspired Engineering in Vascular Medicine and Longevity (BELONG).
- Member of American Society of Agricultural and Biological Engineers (ASABE).
- Member of Michigan Improvement Health Alliance (MiHIA).

### **National and International Scientific Collaborations**

- Massachusetts Institute of Technology, Harvard-MIT Health Sciences & Technology, Cambridge, MA, **USA**, "Tissue Engineering and Biomaterials", Prof. Ali Khademhosseini (alik@rics.bwh.harvard.edu).
- University of Sydney, School of Chemical and Biomolecular Engineering, Sydney, **Australia**, "Sub and Super Critical Fluids Extraction", Prof. Fariba Dehghani (fdehghani@usyd.edu.au).
- Université de Lorraine, Laboratoire d'Ingénierie des Biomolécules, Nancy Cedex, **France**, "Nanovectorization and Drug Delivery", Prof. Elmira Arab-Tehrany (elmira.arabtehrany@ensaia.inpl-nancy.fr).
- Universidade de São Paulo, Faculdade de Ciências Farmacêuticas, Sao Paulo, **Brasil**, "Functional Foods", Prof. Ricardo Pinheiro de Souza Oliveira (rpsolive@usp.br).
- Sousse University, Laboratory of Chemistry, Higher Institute of Agronomy, Chott Meriam, **Tunisia**, "Agricultural Biomass Valorization", Prof. Mongi Seffen (mongiseffen@yahoo.fr).
- University of Osijek, Faculty of Food Technology, Osijek, **Croatia**, "Extraction of Phenolic Compounds from Corn Silage", Prof. Bucić-Kojić (Ana.Bucic@ptfos.hr).
- University of Turin, Department of Drug Science and Technology, **Turin**, Italy, "High Added Value Compounds Extraction", Prof. Giancarlo Cravotto (giancarlo.cravotto@unito.it).
- University of Salerno, Department of Chemical and Food Engineering, **Salerno**, Italy, "Nanotechnology, Biomaterials", Prof. Ernersto Reverchon (ereverchon@unisa.it).
- University of Genoa, Department of surgical sciences and integrated diagnostic (DISC), **Genoa**, Italy, "Biological Evaluation of High Added Value Compounds", Prof. Domenico Palombo (Domenico.Palombo@unige.it).
- University of Genoa, Department of Chemistry and Industrial Chemistry, **Genoa**, Italy, "Synthesis and Environmental Depuration Technology", Prof. Maurizio Ferretti (ferretti@chimica.unige.it).
- University of Genoa, Department of Pharmacy, **Genoa**, Italy, "Near Infra-Red Spectroscopy", Prof. Silvia Lanteri (silvia@dictfa.unige.it).

## Certificates

- 2017: Mid-Michigan Value Chain Certificate Program, Executive Development Programs, The Eli Broad College of Business, Michigan State University, USA.
- 2007: Conversation Course, American Culture & Language Association, Italy.
- 2003: Uniform Customs & Practice for Documentary Credit (UCP500), Institute of Technical Researchers, Iran.

## COMPLETE LIST OF PRODUCTS

### Patent

- 2018: Medication Bottle with Anti-Tampering Features. U.S. Provisional Patent Application Serial No: 62/731,263. Inventor: Bahar Aliakbarian.

### Book Chapters

- 1) R. Pinheiro de Souza Oliveira, **B. Aliakbarian**, A.A. Casazza, P. Perego, A. Converti, M.N. Oliveira, (2009). Effect of different prebiotics on the fermentation kinetics and probiotic survival in nonfat symbiotic fermented milk. Anais do XVII<sup>o</sup> Simpósio Nacional de Bioprocessos 2009, Sezione P5 – Biotecnologia na Indústria de Alimentos e Bebidas, n. 80, Natal-RN, Brasile, Universidade Federal do Rio Grande do Norte, Natal-RN, ISBN: 978-85-98130-02-8, EAN: 9788598130026.
- 2) E. Pistarino, **B. Aliakbarian**, A.A. Casazza, M.E. Cosulich, P. Perego, (2010). Influence of operating parameters on the process of debittering of olives of Taggiasca cultivar in brine: temperature and microbial starter. 83th National conference “Ambiente, Salute Nutrizione”, Page 90, Genoa, Italy, ISBN: 978-88-7544-210-1.
- 3) **B. Aliakbarian**, P. Perego, (2011). Innovative co-adjuvants to improve olive oil extraction outputs. In James D. Corrigan, (Ed.), Olive Oil and Health: Nutrition and Diet Research Progress, published by Nova Science Publishers Inc New York; pp.111-140. ISBN: 978-1-61728-653-7 hardcover.
- 4) **B. Aliakbarian**, D. De Faveri, P. Perego, A. Converti, (2012). An assessment on Xylitol Recovery Methods. In Silvêiro da Silva & A. Kumar Chandel (Eds), D-Xylitol: Fermentative Production, Application and Commercialization, published by Springer Heidelberg New York Dordrecht London; pp. 229-244. ISBN 978-3-642-31886-3. ISBN: 978-642-31887-0 eBook.

### Journal Articles (Appendix A)

More than 74 Peer Reviewed Articles (<https://scholar.google.com/citations?user=LXa63g0AAAAJ>)

### Conference Presentations/Posters (Appendix B)

More than 45 Congress Presentations and Posters

### Abstracts in International and National Journals (Appendix C)

More than 10 Peer Reviewed Abstracts published in International and National Journals

## Appendix A: Complete list of Peer Reviewed Articles (\* Corresponding Author)

- 1) D. De Faveri, P. Torre, **B. Aliakbarian**, J.M. Domínguez, P. Perego, A. Converti, (2007). Response surface modeling of vanillin production by *Escherichia coli* JM109pBB1. *Biochemical Engineering Journal*, 36(3), 268-275. DOI: 10.1016/j.bej.2007.02.029.
- 2) P. Torre, **B. Aliakbarian**, B. Rivas, J.M. Domínguez, A. Converti, (2008). Release of ferulic acid from corn cobs by alkaline hydrolysis. *Biochemical Engineering Journal*, 40(3), 500-506. DOI: 10.1016/j.bej.2008.02.005.
- 3) D. De Faveri, **B. Aliakbarian**, M. Avogadro, P. Perego, A. Converti, (2008). Improvement of olive oil phenolics content by means of Enzyme formulations: effect of different enzymatic activities and concentrations. *Biochemical Engineering Journal*, 41(2), 149-156. DOI:10.1016/j.bej.2008.04.007.
- 4) **B. Aliakbarian\***, D. De Faveri, A. Converti, P. Perego, (2008). Optimization of Olive Oil Extraction by means of Enzyme Processing Aids using Response Surface Methodology. *Biochemical Engineering Journal*, 42(1), 34-40. DOI: 10.1016/j.bej.2008.05.006.
- 5) B. Rivas Torres, **B. Aliakbarian**, P. Torre, P. Perego, J.M. Domínguez, A. Converti, (2009). Vanillin bioproduction from alkaline hydrolysate of corn cob by *Escherichia coli* JM 109/ pBB1. *Enzyme and Microbial Technology*, 44(3), 154-1585. DOI: 10.1016/j.enzmictec.2008.10.003.
- 6) **B. Aliakbarian\***, F. Dehghani, P. Perego, (2009). The effect of citric acid on the phenolic contents of olive oil. *Food Chemistry*, 116(3), 617-623. DOI: 10.1016/j.foodchem.2009.02.077.
- 7) A. Converti, **B. Aliakbarian**, J.M. Domínguez, G. Bustos Vázquez, P. Perego, (2010). Microbial production of biovanillin. *Brazilian Journal of Microbiology*, 41(3), 519-530. DOI: 10.1590/S151783822010000300001.
- 8) A.A. Casazza, **B. Aliakbarian**, S. Mantegna, G. Cravotto, P. Perego, (2010). Extraction of phenolics from *Vitis vinifera* wastes using non-conventional techniques. *Journal of Food Engineering*, 100(1), 50-55. DOI: 10.1016/j.jfoodeng.2010.03.026.
- 9) **B. Aliakbarian\***, A.A. Casazza, P. Perego, (2011). Valorization of olive oil solid waste using high pressure-high temperature reactor. *Food Chemistry*, 128(3), 704-710. DOI: 10.1016/j.jfoodchem.2011.03.092.
- 10) A.A. Casazza, **B. Aliakbarian**, P. Perego, (2011). Recovery of phenolic compounds from grape seeds: effect of extraction time and solid-liquid ratio. *Natural Product Research*, 25(18), 1751-1761. DOI: 10.1080/14786419.2010.524889.
- 11) A.A. Casazza, **B. Aliakbarian**, D. De Faveri, L. Fiori, P. Perego, (2012). Antioxidants from winemaking wastes: a study on extraction parameters using Response Surface Methodology. *Journal of Food Biochemistry*, 36(1), 28-37. DOI: 10.101111/j.1745-4514.2010.00511.x.
- 12) A.M. Ben Hamissa, M. Seffen, **B. Aliakbarian**, A.A. Casazza, P. Perego, A. Converti, (2012). Phenolics extraction from *Agave americana* (L.) leaves using high-temperature, high-pressure reactor. *Food and Bioprocess Technology*, 90(1), 17-21. DOI: 10.1016/j.jfbp.2010.11.008.
- 13) A.A. Casazza, **B. Aliakbarian**, E. Sannita, P. Perego, (2012). High-pressure high-temperature extraction of phenolic compounds from grape skins. *International Journal of Food Science and Technology*, 47(2), 399-405. DOI: 10.1111/j.1365-2621.2011.02853.x.
- 14) **B. Aliakbarian\***, D. Palmieri, A.A. Casazza, D. Palombo, P. Perego, (2012). Antioxidant activity and biological evaluation of olive pomace extract. *Natural Product Research*, 26(24), 2280-2290. DOI: 10.1080/14786419.2012.660692.
- 15) M. Latoui, **B. Aliakbarian**, A.A. Casazza, M. Seffen, A. Converti, P. Perego, (2012). Extraction of Phenolic Compounds from *Vitex agnus-castus* L. *Food and Bioprocess Technology*, 90(4), 748- 754. DOI: 10.1016/j.fbp.2012.01.003.

- 16) D. Palmieri, **B. Aliakbarian**, A.A. Casazza, N. Ferrari, G. Spinella, B. Pane, G. Cafueri, P. Perego, D. Palombo, (2012). Effects of polyphenol extract from olive pomace on anoxia-induced endothelial dysfunction. *Microvascular Research*, 83(3), 281-289. DOI: 10.1016/j.mvr.2012.02.010.
- 17) **B. Aliakbarian\***, A. Fathi, P. Perego, F. Dehghani, (2012). Extraction of Antioxidants from Winery Wastes using Subcritical Water. *Journal of Supercritical Fluids*, 65, 18-24. DOI: 10.1016/j.supflu.2012.02.022.
- 18) E. Sannita, **B. Aliakbarian**, A.A. Casazza, P. Perego, G. Busca, (2012). Medium-temperature conversion of biomass and wastes into liquid products, A review. *Renewable & Sustainable Energy Reviews*. 16(8), 6455-6475. DOI: 10.1016/j.rser.2012.06.017.
- 19) E. Pistarino, **B. Aliakbarian\***, A.A. Casazza, M. Paini, M.E. Cosulich, P. Perego, (2013). Combined effect of starter culture and temperature on phenolic compounds during fermentation of Taggiasca black olives. *Food Chemistry*, 138(2-3), 2043-2049. DOI: 10.1016/j.foodchem.2012.11.021.
- 20) T.K. Phung, A.A. Casazza, **B. Aliakbarian**, E. Finocchio, P. Perego, G. Busca, (2013). Catalytic conversion of ethyl acetate on alumina as a model of catalytic conversion of vegetable oils to biofuels. *Chemical Engineering Journal*, 215-216, 838-848. DOI: 10.1016/j.cej.2012.11.057.
- 21) R.P.S. Oliveira, A.Y. Casazza, **B. Aliakbarian**, P. Perego, A. Converti, M.N. Oliveira, (2013). Influence of fructooligosaccharides on the fermentation profile and viable counts in a synbiotic low fat milk. *Brazilian Journal of Microbiology*, 44(2), 431-434. DOI: 10.1590/S1517-8382013000200014.
- 22) V. Caratto, **B. Aliakbarian**, A.A. Casazza, L. Setti, C. Bernini, P. Perego, M. Ferretti, (2013). Inactivation of *Escherichia coli* on anatase and rutile nanoparticles using UV and fluorescent light. *Materials Research Bulletin*, 48(6), 2095-2101. DOI: 10.1016/j.materresbull.2013.02.024.
- 23) D. Frumento, A.P. do Espirito Santo, **B. Aliakbarian**, A.A. Casazza, M. Gallo, A. Converti, P. Perego, (2013). Development of Milk Fermented with *Lactobacillus acidophilus* Fortified with *Vitis vinifera* Marc Flour. *Food Technology and Biotechnology*, 51(3), 370-375. ISSN 1330-9862.
- 24) G. Pigatto, A. Lodi, **B. Aliakbarian**, A. Converti, R.M. Gonçalves da Silva, M.S. Alves Palma, (2013). Phenol oxidation by mushroom waste extracts. A kinetic and thermodynamic study. *Bioresource Technology*, 143, 678-681. DOI: 10.1016/j.biortech.2013.06.069.
- 25) M. Lataoui, M. Seffen, A.A. Casazza, **B. Aliakbarian**, A. Converti, P. Perego, (2014). Optimization of phenolics recovery from *Vitex agnus-castus* Linn. Leaves by high-pressure and temperature extraction. *Natural Product Research*, 28(1), 67-69. DOI: 10.1080/14786419.2013.832678.
- 26) L. Bouarab, B. Maherani, A. Kheirulomoom, M. Hasan, **B. Aliakbarian**, M. Linder, E. Arab Tehrany, (2014). Influence of lecithin-lipid composition on physico-chemical properties of nanoliposomes loaded with a hydrophobic molecule. *Colloids and Surfaces B: Biointerfaces*, 115, 197-204. DOI: 10.1016/j.colsurfb.2013.11.034.
- 27) E.Y. Ortiz Montoya, A.A. Casazza, **B. Aliakbarian**, P. Perego, A. Converti, J.C. Monteiro de Carvalho, (2014). Production of *Chlorella vulgaris* as a source of essential fatty acids in a tubular photobioreactor continuously fed with air enriched with CO<sub>2</sub> at different concentrations. *Biotechnology Progress*, 30(4), 916-922. DOI: 10.1002/btpr.1885.
- 28) P.F. Ferrari, D. Palmieri, A.A. Casazza, **B. Aliakbarian**, P. Perego, D. Palombo, (2014). TNF $\alpha$ -induced endothelial activation is counteracted by polyphenol extract from UV-stressed cyanobacterium *Arthrospira platensis*. *Medicinal Chemistry Research*, 24(1), 275-282. DOI: 10.1007/s00044-014-1126-6.
- 29) C.G. Lopresto, F. Petrillo, A.A. Casazza, **B. Aliakbarian**, P. Perego, V. Calabrò, (2014). A Nonconventional method to extract D-limonene from waste lemon peels and comparison with traditional soxhlet extraction. *Separation and Purification Technology*, 137, 13-20. DOI: 10.1016/j.seppur.2014.09.015.



- 30) E. Daneshvar, M.S. Sohrabi, M. Kousha, A. Bhatnagar, **B. Aliakbarian**, A. Converti, A.C. Norrström, (2014). Shrimp shell as an efficient bioadsorbent for Acid Blue 25 dye removal from aqueous solution. *Journal of the Taiwan Institute of Chemical Engineers*, 45(6), 2926-2934. DOI: 10.1016/j.jtice.2014.09.019.
- 31) M. Comotto, A.A. Casazza, **B. Aliakbarian**, V. Caratto, M. Ferretti, P. Perego, (2014). Influence of TiO<sub>2</sub> nanoparticles on growth and phenolic compounds production in photosynthetic microorganisms. *The Scientific World Journal*, 2014, 1-9. DOI:10.1155/2014/961437.
- 32) A. Tamayol, A.H. Najafabadi, **B. Aliakbarian**, E. Arab-Tehrany, M. Akbari, N. Annabi, D. Juncker, A. Khademhosseini, (2014). Alginate as a template forming material for creating IPN hydrogel fibers. *Journal of Tissue Engineering and Regenerative Medicine*, 8(1), 341-342. DOI: 10.1002/term.1932.
- 33) E. Arab-Tehrany, **B. Aliakbarian**, A. Tamayol, A.H. Najafabadi, N. Annabi, A. Khademhosseini, (2014). Nanofunctionalization of alginate and alginate/GelMA crosslinked hydrogels and 3D construct. *Journal of Tissue Engineering and Regenerative Medicine*, 8(1), 385. DOI: 10.1002/term.1932.
- 34) **B. Aliakbarian**, E. Arab-Tehrany, A.H. Najafabadi, A. Tamayol, D. Palmieri, N. Annabi, A.A. Casazza, P. Perego, D. Palombo, A. Khademhosseini, (2014). Functionalizing electrospun scaffolds with anti-inflammatory effects using t-resveratrol. *Journal of Tissue Engineering and Regenerative Medicine*, 8(1), 96-97. DOI: 10.1002/term.1931.
- 35) **B. Aliakbarian\***, M. Casale, M. Paini, A.A. Casazza, S. Lanteri, P. Prego, (2015). Production of a novel fermented milk fortified with natural antioxidants and its analysis by NIR spectroscopy. *LWT Food Science and Technology*, 62(1), 376-383. DOI: 10.1016/j.lwt.2014.07.037.
- 36) M. Paini, **B. Aliakbarian**, A.A. Casazza, P. Perego, C. Ruggiero, L. Pastorino, (2015). Chitosan/dextran multilayer microcapsules for polyphenols co-delivery. *Materials Science and Engineering C*, 46, 374-380. DOI: 10.1016/j.msec.2014.10.047.
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- 41) P. Monteiro Souza, **B. Aliakbarian**, E.X. Ferreira Filho, P. Oliveira Magalhães, A. Pessoa Junior, A. Converti, P. Perego, (2015). Kinetic and thermodynamic studies of a novel acid protease from *Aspergillus foetidus*. *International Journal of Biological Macromolecules*, 81, 17-21. DOI: 10.1016/j.ijbiomac.2015.07.043.
- 42) A. Enrico, **B. Aliakbarian**, P. Perego, P. Costamagna, (2015). Micro-Modelling of IT-SOFC Electrodes Manufactured through Electrospinning. *ECS Transactions*, 68(1), 857-865. DOI: 10.1149/06801.0857ecst.
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- 44) A.A. Casazza, P.F Ferrari, **B. Aliakbarian**, A. Converti, P. Perego, (2015). Effect of UV radiation or titanium dioxide on polyphenol and lipid contents of *Arthospira (Spirulina) platensis*. *Algal Research*, 12, 308-315. DOI: 10.1016/j.algal.2015.09.012.
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- 49) F. Coelho Sampaio, T.L. da Conceição Saraiva, G. Dumont de Lima e Silva, J. Teles de Fariac, C. Grijó Pitangui, **B. Aliakbarian**, P. Perego, A. Converti, (2016). Batch growth of *Kluyveromyces lactis* cells from deproteinized whey: Response surface methodology versus Artificial neural network—Genetic algorithm approach. *Biochemical Engineering Journal*, 109, 305-311. DOI: 10.1016/j.bej.2016.01.026.
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- 51) D. Frumento, **B. Aliakbarian**, A.A. Casazza, A. Converti, (2016). *Chlorella vulgaris* as a Lipid Source: Cultivation on Air and Seawater-Simulating Medium in a Helicoidal Photobioreactor. *Biotechnology Progress*, 32(2), 279-284. DOI: 10.1002/btpr.2218.
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- 54) A.A. Casazza, **B. Aliakbarian**, A. Lagazzo, G. Garbarino, M.M. Carnasciali, P. Perego, G. Busca, (2016). Pyrolysis of grape marc before and after the recovery of polyphenol fraction. *Fuel Processing Technology*, 153, 121-128. DOI: 10.1016/j.fuproc.2016.07.014.
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- 56) **B. Aliakbarian**, M. Pains, R. Adami, P. Perego, E. Reverchon, (2017). Use of Supercritical Assisted Atomization to produce nanoparticles from olive pomace extract. *Innovative Food Science and Emerging Technologies*, 40, 2-9. DOI: 10.1016/j.ifset.2016.09.016.
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- 59) P. Monteiro Souza, G. Werneck, **B. Aliakbarian**, F. Siqueira, E. Ximenes Ferreira Filho, P. Perego, A. Converti, P. Oliveira Magalhães, A. Pessoa Junior, (2017). Production, purification and characterization of an aspartic protease from *Aspergillus foetidus*. *Food and Chemical Toxicology*, 109, 1103-1110. DOI: 10.1016/j.fct.2017.03.055.
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- 61) P.F. Ferrari, **B. Aliakbarian\***, A. Lagazzo, A. Tamayol, D. Palombo, P. Perego, (2017). Tailored electrospun small-diameter graft for vascular prosthesis. *International Journal of Polymeric Materials and Polymeric Biomaterials*, 66, 12, 635-643. DOI: 10.1080/00914037.2016.1252361.
- 62) M. Fernandes da Silvaa, A.A. Casazza, P.F. Ferrari, **B. Aliakbarian**, A. Converti, R. Pedrosa Bezerra, A.L Figueiredo Porto, P. Perego, (2017). Recovery of phenolic compounds of food concern from *Arthrospira platensis* by green extraction techniques. *Algal Research*, 25, 391-401. DOI: 10.1016/j.algal.2017.05.027.
- 63) P.F. Ferrari, **B. Aliakbarian**, E. Zattera, D. Palombo, P. Perego, (2017). Engineered CaCO<sub>3</sub> nanoparticles with targeting activity: A simple approach for a vascular intended drug delivery system. *Canadian Journal of Chemical Engineering*, 95(9), 1683-1689. DOI: 10.1002/cjce.22871.
- 64) **B. Aliakbarian\***, A.A. Casazza, A. Nani, P. Perego, (2017). Production of chocolate powdered beverage with enhanced instant properties. *Chemical Engineering Transactions*, 57, 877-882. DOI: 10.3303/CET1757147.
- 65) A.A. Casazza, **B. Aliakbarian**, M. Comotto, P.M. Souza, P. Perego, (2017). Olive leaves infuse and decoct production: Influence of leaves drying conditions and particle size. *Chemical Engineering Transactions*, 57, 1807-1812. DOI: 10.3303/CET1757302.
- 66) P.F. Ferrari, **B. Aliakbarian**, D. Palombo, P. Perego, (2017). Small diameter vascular grafts coated with gelatin. *Chemical Engineering Transactions*, 57, 1441-1446. DOI: 10.3303/CET1757241.
- 67) M. Pettinato, **B. Aliakbarian**, A.A. Casazza, P. Perego, (2017). Encapsulation of antioxidants from Spent coffee ground extracts by spray drying. *Chemical Engineering Transactions*, 57, 12191224. DOI: 10.3303/CET1757204.
- 69) T.V. Gabbay Alves, R. Silva da Costa, **B. Aliakbarian**, A.A. Casazza, P. Perego, M.S. Pinheiro Arruda, J.O. Carréra Silva Júnior, A. Converti, R.M. Ribeiro Costa, (2017). Bioactive compounds and antioxidant potential for polyphenol-rich cocoa extract obtained by agroindustrial residue. *Natural Product Research*, 1-4. DOI: 10.1080/14786419.2017.1399381.
- 70) L. Vergani, G. Vecchione, F. Baldini, E. Grasselli, A. Voci, P. Portincasa, P.F. Ferrari, B. Aliakbarian, A.A. Casazza, P. Perego, (2018). Polyphenolic extract attenuates fatty acid-induced steatosis and oxidative stress in hepatic and endothelial cells. *European Journal of Nutrition*, 1-13. DOI: 10.1007/s00394-017-1464-5.
- 71) P. Oliveira de Souza de Azevedo, **B. Aliakbarian**, A.A. Casazza, J.G. LeBlanc, P. Perego, R.P. de Souza Oliveira, (2018). Production of fermented skim milk supplemented with different grape pomace extracts: Effect on viability and acidification performance of probiotic cultures. *Pharma Nutrition*, 6(2), 64-68. DOI: 10.1016/j.phanu.2018.03.001.
- 72) P. Trucillo, R. Campardelli, **B. Aliakbarian**, P. Perego, E. Reverchon, (2018). Supercritical assisted process for the encapsulation of olive pomace extract into liposomes. *Journal of Supercritical Fluids* Volume, 135(1), 152-159. DOI: 10.1016/j.supflu.2018.01.018.

- 73) **B. Aliakbarian**, F.C. Sampaio, J.T. de Faria, C.G. Pitangui, F. Lovaglio, A.A. Casazza, A. Converti, P. Perego, (2018). Optimization of spray drying microencapsulation of olive pomace polyphenols using Response Surface Methodology and Artificial Neural Network. *LWT-Food Science and Technology*, 93, 220-228. DOI: 10.1016/j.lwt.2018.03.048.
- 74) R.S. da Costa, C.B. Teixeira, T.V. Gabbay Alves, R.M. Ribeiro-Costa, A.A. Casazza, **B. Aliakbarian**, A. Converti, J.O.C. Silva Júnior, P. Perego, (2018). Optimization of spray drying conditions to microencapsulate cupuassu (*Theobroma grandiflorum*) seed by-product extract. *Natural Product Research*, 1-9. DOI: 10.1080/14786419.2018.1462178.
- 75) M. Demartini, C. Pinna, **B. Aliakbarian**, F. Tonelli, S. Terzi, (2018). Soft Drink Supply Chain Sustainability: A Case Based Approach to Identify and Explain Best Practices and Key Performance Indicators. *Sustainability*, 10, 3540. DOI: 10.3390/su10103540.
- 76) D. Xavier dos Santos, A.A. Casazza, **B. Aliakbarian**, R. Bedani, S. Marta Isay Saad, P. Perego, (2019). Improved probiotic survival to in vitro gastrointestinal stress in a mousse containing *Lactobacillus acidophilus* La-5 microencapsulated with inulin by spray drying. *LWT - Food Science and Technology*, 99, 404-410. DOI: 10.1016/j.lwt.2018.10.010.

## **Appendix B: Complete list of Conference Presentations/Posters**

- 1) D. De Faveri, P. Torre, B. Aliakbarian, J.M. Domínguez, P. Perego, G. Bustos, A. Converti. Microbial conversion of ferulic acid to vanillin. Segundo Encuentro Académico “Avances en el aprovechamiento biotecnológico de productos agropecuarios”, Ciudad Mante, Tamaulipas, Mexico, 15-16 June 2006.
- 2) P. Torre, B. Rivas, D. De Faveri, B. Aliakbarian, E. Mendez, J.M. Domínguez, A. Converti. Alkaline corncob hydrolysis to give hydroxycinnamic acid solutions for vanillin bioproduction. IUFOST 13th World Congress of Food Science & Technology, 000835, Pages 547-548, Nantes, France, 17-21 September 2006.
- 3) D. De Faveri, P. Torre, B. Aliakbarian, P. Perego, J.M. Domínguez, B. Rivas Torres. Effect of different enzyme formulations on the improvement of phenolic compound content in olive oil. IUFOST 13th World Congress of Food Science & Technology, 000849, Pages 927-928, Nantes, France, 17-21 September 2006.
- 4) A.A. Casazza, E.Y. Ortiz, B. Aliakbarian, A. Converti, P. Perego. Utilizzo di microalghe in campo bioenergetico. In: Convegno 2008, Ingegneria Chimica: le nuove sfide. Le Castella - Crotona (Italy), September 14-17.
- 5) B. Aliakbarian, D. de Faveri, A.A. Casazza, A. Converti, M. Avogadro, P. Perego. Processo innovativo per l'estrazione dell'olio d'oliva. In: Convegno 2008, Ingegneria Chimica: le nuove sfide. Le Castella - Crotona (Italy), September 14-17.
- 6) B. Aliakbarian, D. De Faveri, A.A. Casazza, R.P.S. Oliveira, M.N. Oliveira, A. Converti, P. Perego. Bio-extraction of olive oil: improvement of quality and extraction output. Chemical Engineering Transaction, Vol XIV, IBIC2008 Proceeding, 1st Industrial Biotechnology International Conference, Naples, Italy, 8-11 June 2008.
- 7) R. Oliveira, B. Aliakbarian, A.A. Casazza, P. Perego, A. Converti, M. Oliveira. Effect of Different Prebiotics on the Fermentation Kinetics and Probiotic Survival in Nonfat Symbiotic Fermented Milk. In: Anais do XVII Simpósio Nacional de Bioprocessos 2009. Natal-RN, Brasile, 2-5 agosto, NatalRN: Universidade Federal do Rio Grande do Norte, p. 1-6, ISBN/ISSN: 9788598130026.
- 8) A. Ben Hamissa, M. Seffen, B. Aliakbarian, A.A. Casazza, P. Perego. Study of various methods of polyphenols extraction from Agave Americana (L.) Leaves. 14th European Congress on Biotechnology, Barcelona, Spain, New Biotechnology, Volume 25, Supplement 1, page S292, 13-16 September 2009.
- 9) E. Pistarino, B. Aliakbarian, A.A. Casazza, M.E. Cosulich, P. Perego. Influenza dei parametri operativi sul processo di deamarizzazione dell'oliva Taggiasca in salamoia: temperatura e starter microbici. In: Ambiente, salute, nutrizione. Genoa, 21-23 ottobre 2010, ISBN/ISSN: 978-88-7544210-1.
- 10) R. Pinheiro de Souza Oliveira, A.A. Casazza, B. Aliakbarian, P. Perego, M. Nogueira de Oliveira, A. Converti. Co-metabolic models of Streptococcus thermophilus in co-culture with Lactobacillus acidophilus. 14th International Biotechnology Symposium and Exhibition, Biotechnology for the Sustainability of Human Society, Rimini, Italy, 14-18 September 2010.
- 11) A.A. Casazza, B. Aliakbarian, E.Y. Ortiz Montoya, P. Perego. *t*-resveratrol recovery from grape skins using high pressure and temperature extraction. 14th International Biotechnology Symposium and Exhibition, Biotechnology for the Sustainability of Human Society, Rimini, Italy, 14-18 September 2010.
- 12) B. Aliakbarian, A.A. Casazza, E.J. Ortiz Montoya, A. Converti, P. Perego. Valorisation of Olive Oil Solid Wastes: Valuable Compounds Recovery Using High Pressure- High Temperature. 14th International Biotechnology Symposium and Exhibition, Biotechnology for the Sustainability of Human Society, Rimini, Italy, 14-18 September 2010.
- 13) E.Y. Ortiz Montoya, A.A. Casazza, B. Aliakbarian, P. Perego, A. Converti, J.C.M. Carvalho.

Growth and lipid composition of *Chlorella vulgaris* cultivated in a tubular photobioreactor fed with CO<sub>2</sub>-enriched air. 14th International Biotechnology Symposium and Exhibition, Biotechnology for the Sustainability of Human Society, Rimini, Italy, 14-18 September 2010.

14) A.A. Casazza, B. Aliakbarian, P. Perego, G. Busca. Conversion of Organic Waste to Liquid Fuel by Pyrolysis Over Alumina Catalyst. The AIChE 2012 Annual Meeting, Pittsburgh, USA, 28/1002/11, 2012.

15) A.A. Casazza, B. Aliakbarian, P. Perego, A. Converti. *Chlorella vulgaris* growth on digested urban sludge. Environmental Engineering and Management Journal, Vol. 11, (Suppl. 3), Page 87, ISSN: 1843-3707, Environmental Microbiology and Biotechnology in the frame of the knowledge- Based Bio and Green Economy, Bologna, Italy, 10-12 April 2012.

16) B. Aliakbarian, A.A. Casazza, E. J. Ortiz Montoya, P. Perego, A. Converti. *Chlorella vulgaris* growth in photobioreactor under different light intensities and dilution rates. Environmental Engineering and Management Journal, Vol. 11, (Suppl. 3), Page 71, ISSN: 1843-3707, Environmental Microbiology and Biotechnology in the frame of the knowledge- Based Bio and Green Economy, Bologna, Italy, 10-12 April 2012.

17) M. Paini, B. Aliakbarian, A.A. Casazza, P. Perego. Microincapsulazione di estratto di sansa mediante spray drying. Convegno GR.I.C.U. Ingegneria Chimica: dalla nanoscala alla maroscala, pages 125-128, Montesilvano (PE), Italy, 16-19 Settembre 2012.

18) D. Frumento, A.A. Casazza, B. Aliakbarian, P. Perego, A. Converti. Studio sulla crescita autotrofa di *Chlorella vulgaris* impiegando bicarbonato come fonte di carbonio. Convegno GR.I.C.U. Ingegneria Chimica: dalla nanoscala alla maroscala, pages 187-190, Montesilvano (PE), Italy, 16-19 Settembre 2012.

19) A.A. Casazza, B. Aliakbarian, P. Perego, G. Busca. Conversione catalitica di acidi grassi liberi su silice allumina. Convegno GR.I.C.U. Ingegneria Chimica: dalla nanoscala alla maroscala, pages 317-320, Montesilvano (PE), Italy, 16-19 Settembre 2012.

20) B. Aliakbarian, M. Casale, M. Paini, A. A. Casazza, S. Lanteri, P. Perego. Utilizzo della spettroscopia NIR per la caratterizzazione di latte fermentato probiotico. Convegno GR.I.C.U. Ingegneria Chimica: dalla nanoscala alla maroscala, pages 549-552, Montesilvano (PE), Italy, 16-19 Settembre 2012.

21) A.A. Casazza, D. Palmieri, B. Aliakbarian, P. Perego, D. Palombo. Effects of polyphenol extract from the microalga *Arthrospira platensis* on TNF-induced endothelial dysfunction. 62nd International Congress of the European Society for Cardiovascular and Endovascular Surgery (ESCVS), Regensburg, Germany, 11-13 April 2013.

22) B. Aliakbarian, M. Comotto, A. A. Casazza, M. Ferretti, P. Perego. Influence of TiO<sub>2</sub> on phenolic compounds production in *Haematococcus pluvialis*. World Biotechnology Congress, Boston, USA, 30 June 2013.

23) A.A. Casazza, B. Aliakbarian, M. Paini, A. Converti, P. Perego. Influence of UV stress on lipid content and phenolic compounds concentration of *Arthrospira platensis*. World Biotechnology Congress, Boston, USA, 3-6 June 2013.

24) B. Aliakbarian\*, E. Arab-Tehrany, A. Hasani, A. Tamayol, D. Palmieri, N. Annabi, A.A. Casazza, P. Perego, A. Khademhosseini, D. Palombo. Synthetic scaffolds with anti-inflammatory effects for vascular prosthesis. 63th International Congress of the European Society for Cardiovascular Surgery, Nice, France, 24-27 April 2014 (\*Oral Presentation).

25) B. Aliakbarian, M. Hasan, M. Paini, A.A. Casazza, M. Comotto, P. Perego, E. Arab-Tehrany. Nanoliposome encapsulation of apigenin. International Congress on Natural Science and Engineering, Pages 1139-1142, Kyoto, Japan, 7-9 May 2014.

26) A.A. Casazza, B. Aliakbarian, P. Perego, G. Busca. Grape marc pyrolysis before and after recovery of polyphenols. International Congress on Natural Science and Engineering, Pages 11721177, Kyoto, Japan, 7-9 May 2014.

- 27) A. Tamayol, A. Hassani Najafabadi, B. Aliakbarian, E. Arab-Tehrany, M. Akbari, N. Annabi, D. Juncker, A. Khademhosseini. Alginate as a template forming material for creating IPN hydrogel fibers. Tissue Engineering and Regenerative Medicine International Society, TERMIS EU 2014, Genoa, Italy, 10-13 June 2014.
- 28) E. Arab-Tehrany, B. Aliakbarian, A. Tamayol, A. Hassani Najafabadi, N. Annabi, A. Khademhosseini. Nanofunctionalization of alginate and alginate/GelMA crosslinked hydrogel and 3D construct. Tissue Engineering and Regenerative Medicine International Society, TERMIS EU 2014, Genoa, Italy, 10-13 June 2014.
- 29) B. Aliakbarian\*, E. Arab-Tehrany, A. Hassani Najafabadi, A. Tamayol, D. Palmieri, N. Annabi, A.A. Casazza, P. Perego, D. Palombo, A. Khademhosseini. Functionalizing electrospun scaffolds with anti-inflammatory effects using *t*-resveratrol. Tissue Engineering and Regenerative Medicine International Society, TERMIS EU 2014, Genoa, Italy, 10-13 June 2014 (\*Oral Presentation).
- 30) M. Painsi, B. Aliakbarian\*, A.A. Casazza, M. Comotto, P. Perego. Production of microencapsulated phenolic compounds from olive oil industry wastes using spray drying technology. Multiphase Flow in Industrial Plants, 13th International Conferences, Sestri Levante, Italy, 17-19 September 2014 (\*Oral Presentation).
- 31) M. Casale, B. Aliakbarian, M. Painsi, A.A. Casazza, P. Perego, S. Lanteri. Characterization of a probiotic fermented milk. 4th edition of the Italian Forum on Industrial Biotechnology and Bioeconomy, Genoa, Italy, 25-26 September 2014.
- 32) B. Aliakbarian\*, P.F. Ferrari, P. Perego, D. Palombo. Effect of Electrospinning Parameters on Mechanical Properties of Engineered Small Diameter Vascular Grafts. The 64th International Congress of the European Society of Cardiovascular and Endovascular Surgery, Istanbul, Turkey, 26-29 March 2015 (\*Oral Presentation).
- 33) M. Kuzmanović, M. Tišma, A. Bucić-Kojić, A.A. Casazza, M. Painsi, B. Aliakbarian, P. Perego. High-Pressure and Temperature Extraction of Phenolic Compounds from Corn Silage. 12th International Conference on Chemical and Process Engineering, Milano, Italy, 19-22 May 2015.
- 34) B. Aliakbarian\*, M. Painsi, A.A. Casazza, P. Perego. Effect of Encapsulating Agent on Physical-Chemical Characteristics of Olive Pomace Polyphenols-Rich Extracts. 12th International Conference on Chemical and Process Engineering, Milano, Italy, 19-22 May 2015 (\*Oral Presentation).
- 35) A.A. Casazza, B. Aliakbarian, M. Painsi, M. Mura, D. Palmieri, S. Valentini, D. Palombo, P. Perego. Polyphenols from grape and apple wastes: a study on non-conventional extractions and biological activity. 9th Fruit, Nut and Vegetable Production Engineering Symposium, Milano, Italy, 19-22 May 2015.
- 36) A. Enrico, B. Aliakbarian, P. Perego, P. Costamagna. Micro-modelling of IT-SOFC Electrodes Manufactured through Electrospinning. The ECS Conference on Electrochemical Energy Conversion & Storage with SOFC-XIV, Glasgow, Scotland, 26-31 July 2015.
- 37) B. Aliakbarian\*, R. Adami, P. Perego, E. Reverchon. Polyphenol-rich nanoparticles from olive pomace extracted by high pressure and temperature reactor using supercritical assisted atomization. 29th EFFOST Conference, Food Science Research and Innovation: Delivering sustainable solutions to the global economy and society, Athens, Greece, 10-12 November, 2015 (\*Oral Presentation).
- 38) B. Aliakbarian\*, P.F. Ferrari, P. Perego, D. Palombo. Functionalizing Small Diameter Vascular Grafts with Gelatin. The 65th International Congress of the European Society of Cardiovascular and Endovascular Surgery, Belgrade, Serbia, 21-24 April 2016 (\*Oral Presentation).
- 39) L. Vergani, G. Vecchione, F. Baldini, A. Voci, P.F. Ferrari, B. Aliakbarian, A.A. Casazza, P. Perego. Antioxidant and hepatoprotective potentials of phenolic compounds from olive pomace. 5th International Congress on Industrial Biotechnology, Bologna, Italy, 10-13 April 2016.
- 40) A.A. Casazza, P.F. Ferrari, B. Aliakbarian, M. Comotto, P. Perego. Microalgae growth using winery wastewater for energetic and environmental purposes. 5th International Congress on Industrial Biotechnology, Bologna, Italy, 10-13 April 2016.

- 41) M. Pettinato, B. Aliakbarian\*, A.A. Casazza, P.F. Ferrari, P. Perego. Extraction of antioxidants from spent coffee grounds using microwave-assisted and high pressure and temperature extractions. The International Congress on Green Extraction of Natural Products, Turin, Italy, 31st May-01st June 2016 (\*Oral Presentation).
- 42) D.X. dos Santos, A.A. Casazza, B. Aliakbarian, R. Bedani, F. Coelho Sampaio, A. Converti, S.M. Isay Saad, P. Perego. Microencapsulation of *Lactobacillus Acidophilus* LA-5 using spray drying. The 24th International ICFMH Conference, Dublin, Ireland, 19-22 July 2016.
- 43) B. Aliakbarian\*, C. Solisio. Utilizzo di adsorbenti low-cost per la rimozione di coloranti da acque contaminate. Convegno GRICU 2016 "Gli orizzonti 2020 dell'Ingegneria Chimica", Anacapri, Italy, 12-14 September (2016) (\*Oral Presentation).
- 44) A.A. Casazza, B. Aliakbarian, P. Perego. Fabrication of nanoliposomes enriched with polyphenols from olive pomace: a green and efficient approach. 30th EFFoST International Conference: Targeted Technologies for Sustainable Food Systems, Vienna, Austria, 28-30 November 2016.
- 45) B. Aliakbarian; P.F. Ferrari; Patrizia Perego. An innovative methodology to fabricate antioxidant active packaging. International Conference on Food Innovation, FoodInnova2017, Cesena, Italy, 31st January-3rd February 2017.
- 46) B. Aliakbarian\*, P.F. Ferrari, P. Bagnato, D. Palombo, P. Perego. Engineered small diameter vascular grafts with anti-inflammatory properties. The 66th International Congress of the European Society of Cardiovascular and Endovascular Surgery, Thessaloniki, Greece, 11-14 May 2017. (\*Oral Presentation).
- 47) P.F. Ferrari, B. Aliakbarian, P. Bagnato, D. Palombo, P. Perego. An innovative drug delivery system for atherosclerosis. The 66th International Congress of the European Society of Cardiovascular and Endovascular Surgery, Thessaloniki, Greece, 11-14 May 2017.
- 48) B. Aliakbarian\*. Smart Pharmaceutical Solutions to Prevent Misuse And Abuse of Prescription Drug. Academy for Global Engagement, National Press Club Washington D.C., USA, 20 September 2018. (\*Oral Presentation).



## **Appendix C: Complete list of Peer Reviewed Abstracts in International and National Journals**

### **International Journals**

- 1) B. Aliakbarian, D. De Faveri, A.A. Casazza, R.P.S. Oliveira, M.N. Oliveira, A. Converti, P. Perego. Bio-extraction of olive oil: improvement of quality and extraction output. Chemical Engineering Transaction, Vol XIV, IBIC2008 Proceeding, 1st Industrial Biotechnology International Conference, Naples, Italy, 8-11 June 2008.
- 2) A. Ben Hamissa, M. Seffen, B. Aliakbarian, A.A. Casazza, P. Perego. Study of various methods of polyphenols extraction from Agave Americana (L.) Leaves. 14th European Congress on Biotechnology, Barcelona, Spain, New Biotechnology, Volume 25, Supplement 1, page S292, 13-16 September 2009.
- 3) R. Pinheiro de Souza Oliveira, A.A. Casazza, B. Aliakbarian, P. Perego, M. Nogueira de Oliveira, A. Converti. Co-metabolic models of Streptococcus thermophilus in co-culture with Lactobacillus acidophilus 14th International Biotechnology Symposium and Exhibition, Biotechnology for the Sustainability of Human Society, Rimini, Italy, 14-18 September 2010.
- 4) A.A. Casazza, B. Aliakbarian, E.Y. Ortiz Montoya, P. Perego. *t*-resveratrol recovery from grape skins using high pressure and temperature extraction. 14th International Biotechnology Symposium and Exhibition, Biotechnology for the Sustainability of Human Society, Rimini, Italy, 14-18 September 2010.
- 5) B. Aliakbarian, A.A. Casazza, E.J. Ortiz Montoya, A. Converti, P. Perego. Valorisation of Olive Oil Solid Wastes: Valuable Compounds Recovery Using High Pressure- High Temperature. 14th International Biotechnology Symposium and Exhibition, Biotechnology for the Sustainability of Human Society, Rimini, Italy, 14-18 September 2010.
- 6) E.Y. Ortiz Montoya, A.A. Casazza, B. Aliakbarian, P. Perego, A. Converti, J.C.M. Carvalho. Growth and lipid composition of Chlorella vulgaris cultivated in a tubular photobioreactor fed with CO<sub>2</sub>-enriched air. 14th International Biotechnology Symposium and Exhibition, Biotechnology for the Sustainability of Human Society, Rimini, Italy, 14-18 September 2010.
- 7) A.A. Casazza, B. Aliakbarian, P. Perego, G. Busca. Conversion of Organic Waste to Liquid Fuel by Pyrolysis Over Alumina Catalyst. The AIChE 2012 Annual Meeting, Pittsburgh, USA, 28/10-02/11, 2012.
- 8) B. Aliakbarian, P.F. Ferrari, P. Perego, D. Palombo. Effect of Electrospinning Parameters on Mechanical Properties of Engineered Small Diameter Vascular Grafts. The Journal of Cardiovascular Surgery, Volume 56, Supplement 1, Page 94.

### **National Journals**

- 1) A.A. Casazza, E.Y. Ortiz, B. Aliakbarian, A. Converti, P. Perego. Utilizzo di microalghe in campo bioenergetico. In: Convegno 2008, Ingegneria Chimica: le nuove sfide. Le Castella - Crotone (Italy), September 14-17.
- 2) B. Aliakbarian, D. de Faveri, A.A. Casazza, A. Converti, M. Avogadro, P. Perego. Processo innovativo per l'estrazione dell'olio d'oliva. In: Convegno 2008, Ingegneria Chimica: le nuove sfide. Le Castella - Crotone (Italy), September 14-17.
- 3) R. Oliveira, B. Aliakbarian, A.A. Casazza, P. Perego, A. Converti, M. Oliveira. Effect of Different Prebiotics on the Fermentation Kinetics and Probiotic Survival in Nonfat Symbiotic Fermented Milk. In: Anais do XVII Simpósio Nacional de Bioprocessos 2009. Natal-RN, Brasile, 2-5 agosto, NatalRN: Universidade Federal do Rio Grande do Norte, p. 1-6, ISBN/ISSN: 9788598130026.
- 4) E. Pistarino, B. Aliakbarian, A.A. Casazza, M.E. Cosulich, P. Perego. Influenza dei parametri operativi sul processo di deamarizzazione dell'oliva Taggiasca in salamoia: temperatura e starter

- microbici. In: Ambiente, salute, nutrizione. Genoa, 21-23 ottobre 2010, ISBN/ISSN: 978-88-7544210-1.
- 5) D. Frumento, A.A. Casazza, B. Aliakbarian, P. Perego, A. Converti. Studio sulla crescita autotrofa di *Chlorella vulgaris* impiegando bicarbonato come fonte di carbonio. In: Convegno GRICU 2012, Ingegneria Chimica: dalla nanoscala alla macroscale, Montesilvano (PE), Italy, 16-19 September 2012.
- 6) M. Painsi, B. Aliakbarian, A.A. Casazza, P. Perego. Microincapsulazione di estratto di sansa mediante spray drying. In: Convegno GRICU 2012, Ingegneria Chimica: dalla nanoscala alla macroscale, Montesilvano (PE), Italy, 16-19 September 2012.
- 7) A.A. Casazza, B. Aliakbarian, P. Perego, G. Busca. Conversione catalitica di acidi grassi liberi su silice allumina. In: Convegno GRICU 2012, Ingegneria Chimica: dalla nanoscala alla macroscale, Montesilvano (PE), Italy, 16-19 September 2012.
- 8) B. Aliakbarian, M. Casale, M. Painsi, A.A. Casazza, S. Lanteri, P. Perego. Utilizzo di spettroscopia NIR per la caratterizzazione di latte fermentato probiotico. In: Convegno GRICU 2012, Ingegneria Chimica: dalla nanoscala alla macroscale, Montesilvano (PE), Italy, 16-19 September 2012.