

FRANCESCA BLASI



CURRICULUM VITAE ET STUDIORUM

EDUCATION

October 2001 - Five year-degree (vote 110/110) in Pharmaceutical Chemistry and Technology at the University of Perugia, discussing the experimental thesis: "Caratterizzazione di un integratore dietetico ricco in acidi eicosapentaenoico e docosaesaenoico"

November 2004 - Ph.D. degree in "Salubrità degli alimenti" (XVII-cycle) at the University of Perugia discussing the experimental thesis: "Sintesi di triacilgliceroli da lecitina naturale"

PROFESSIONAL EXPERIENCES

March/October 2005 - Research period at University of Perugia. Project: "Triacilgliceroli naturali e modificati: struttura chimica e proprietà funzionali"

December 2005-November 2007 - Research grant at University of Perugia. Project: "Sintesi biocatalizzata di strutture lipidiche di nuova generazione"

December 2007-November 2008 - Postdoctoral fellow at University of Perugia. Project: "Analisi chimico-strumentali e valutazione del polimorfismo genetico nella caratterizzazione di varietà colturali di olio da *Olea europea* L."

December 2008-actually - University researcher (SSD CHIM/10) and professor (art. 1, comma 11, Legge 230/2005) at University of Perugia

RESEARCH ACTIVITIES

Development of analytical methods for the analysis of occasional and natural constituents of foods

Investigations on fats and on lipid component of food matrices

Design, synthesis and structural analysis of lipids of the new generation, also containing conjugated linoleic acids (CLA)

Study of the oxidative stability of some fatty acids with an interest in nutrition

Determination of the antioxidant activity of food matrices

Design of functional foods and nutraceuticals

PROJECTS

PRIN 2003 - Triacilgliceroli naturali e modificati: struttura chimica e proprietà funzionali

PRIN 2004 - Procedure biocatalizzate per modificazioni strutturali di matrici lipidiche naturali, al fine di migliorarne le caratteristiche biologico/nutrizionali e quelle di conservabilità

FONDAZIONE CASSA DI RISPARMIO DI PERUGIA (2004) – Qualità fisiologico-nutrizionale della fauna ittica del lago trasimeno, con particolare riferimento alla valutazione della presenza degli acidi grassi delle serie ω -3 ed ω -6 ed al rilievo dei loro contenuti e della loro distribuzione nelle varie strutture lipidiche

FONDAZIONE CASSA DI RISPARMIO DI PERUGIA (2009) - I vini umbri: speciazione della frazione polifenolica per via HPLC-MS e/o HRGC-MS ed aspetti salutistici correlati

Mis. 1.2.4., PSR Umbria 2007-2013 – *In Crocus salus* (November 2009 - April 2012)

Mis. 1.2.4., PSR Umbria 2007-2013 - Drink energizzante naturale di origine umbra (November 2014 – September 2015)

OFFICIAL TEACHING ACTIVITY AT THE UNIVERSITY OF PERUGIA:

- Food Chemistry (Dietetics, Faculty of Medicine): AY 2008-2009 & 2010-2011,
- Dietary Products (ISF, Faculty of Pharmacy): AY 2009-2010,
- Chemical Analysis of Foods of Animal Origin (Veterinary Medicine, Faculty of Veterinary Medicine): AY 2011-2012,
- Food Chemistry (TPALL, Faculty of Medicine): AY 2011-2012,
- Food Chemistry and Dietary Products (SANU, Faculty of Pharmacy): AY 2013-2014,
- Food Chemistry (Pharmacy, Faculty of Pharmacy): AY 2010-2011, 2011-2012, 2012-2013 & 2014-2015.

SCIENTIFIC PUBLICATIONS

1. HRGC-MS of free enantiomeric aminoacids in aged balsamic vinegars from Modena (F. Blasi, R. Ricciari, M. Brutti, A. Del Signore, M.S. Simonetti, L. Cossignani, P. Damiani), *Journal of Commodity Science* (ISSN 1593-2052) 41, IV, 333-346, **2002**
2. Synthesis of structured triacylglycerols from olive oil and medium chain fatty acids (M. Brutti, F. Blasi, R. Ricciari, F. Damiani, M.S. Simonetti, L. Cossignani, L. Gabrielli, P. Damiani), *Journal of Commodity Science* (ISSN 1593-2052) 41, III, 289-300, **2002**
3. Innovative procedures to value relationships among isomeric/enantiomeric natural triacylglycerols (R. Ricciari, M. Brutti, F. Blasi, F. Damiani, M.S. Simonetti, L. Cossignani, P. Damiani) *Journal of Commodity Science* (ISSN 1593-2052) 42, II, 97-114, **2003**
4. Identification of cocoa butter equivalents added to cocoa butter III Stereospecific analysis of triacylglycerol fraction and some its subfraction (P. Damiani, L. Cossignani, M.S. Simonetti, F. Blasi, T. Petrosino, A. Neri) *European Food Research and Technology* (ISSN 1438-2377) 223, 5, 645-648, **2006**
5. Enzymatic deacylation of 1,2-diacyl-*sn*-glycero-3-phosphocholines to *sn*-glycerol-3-phosphocholine (F. Blasi, L. Cossignani, M.S. Simonetti, M. Brutti, F. Ventura, P. Damiani) *Enzyme and Microbial Technology* (ISSN 0141-0229) 39, 7, 1405-1408, **2006**
6. Biocatalysed synthesis of *sn*-1,3-diacylglycerol oil from extra virgin olive oil (F. Blasi, L. Cossignani, M.S. Simonetti, P. Damiani) *Enzyme and Microbial Technology* (ISSN 0141-0229) 41, 727-732, **2007**
7. Original normal phase-high performance liquid chromatography separation of monoacylglycerol classes from extra virgin olive oil triacylglycerols for their stereospecific analysis (T. Petrosino, R. Ricciari, F. Blasi, M. Brutti, G. D'Arco, A. Bosi, S. Maurelli, L. Cossignani, M.S. Simonetti, P. Damiani) *Journal of AOAC International* (ISSN 1060-3271) 90, 6, 1647-1654, **2007**
8. Characterization of triacylglycerols in *Arbutus unedo* L. seeds (M.S. Simonetti, F. Damiani, L. Gabrielli, L. Cossignani, F. Blasi, F. Marini, D. Montesano, A. Maurizi, F. Ventura, A. Bosi, P. Damiani) *Italian Journal of Food Science* (ISSN 1120-1770) 20,1, 49-56, **2008**

9. Enzymatic synthesis of structured 1,2-diacyl-*sn*-glycero-3-phosphocholines from glycerol-*sn*-3-phosphocoline (F. Blasi, L. Cossignani, M.S. Simonetti, P. Damiani) *Italian Journal of Food Science* (ISSN 1120-1770) 20, 1, 39-48, **2008**
10. Results of stereospecific analysis of triacylglycerol fraction from donkey, cow, ewe, goat and buffalo milk (F. Blasi, D. Montesano, M. De Angelis, A. Maurizi, F. Ventura, L. Cossignani, M.S. Simonetti, P. Damiani) *Journal of Food Composition and Analysis* (ISSN 0889-1575) 21, 1-7, **2008**
11. Stereospecific analysis of triacylglycerol and phospholipid fractions of four freshwater fish species: *Salmo trutta*, *Ictalurus punctatus*, *Ictalurus melas* and *Micropterus salmoides* (M.S. Simonetti, F. Blasi, A. Bosi, A. Maurizi, L. Cossignani, P. Damiani) *Food Chemistry* (ISSN 0308-8146) 110, 199-206, **2008**
12. Synthesis and structural analysis of structured triacylglycerols with CLA isomers in *sn*-2- position (F. Blasi, L. Cossignani, A. Bosi, S. Maurelli, G. D'Arco, D. Fiorini, M.S. Simonetti, P. Damiani) *Journal of the American Oil Chemists' Society* (ISSN 1558-9331 - E094107) 85, 613-619, **2008**
13. Enzymatic synthesis of structured triacylglycerols containing CLA isomers starting from *sn*-1,3-diacylglycerols (S. Maurelli, F. Blasi, L. Cossignani, A. Bosi, M.S. Simonetti, P. Damiani), *Journal of the American Oil Chemists' Society* (ISSN 1558-9331- E094107), 86, 127-133, **2009**
14. Study of some experimental parameters in the synthesis of triacylglycerols with CLA isomers and structural analysis (F. Blasi, S. Maurelli, L. Cossignani, G. D'Arco, M.S. Simonetti, P. Damiani) *Journal of American Oil Chemists' Society* (ISSN 1558-9331- E094107), 86, 531-537, **2009**
15. Production and structural analysis of triacylglycerols containing capric acid and conjugated linoleic acid isomers obtained by enzymatic acidolysis (S. Maurelli, F. Blasi, L. Cossignani, A. Bosi, M.S. Simonetti, P. Damiani) *Journal of the Science of Food and Agriculture* (ISSN 0022-5142), 89, 2595-2600, **2009**
16. Improved HRGC separation of *cis,trans* CLA isomers as Diels-Alder adducts of alkyl esters (Blasi F., Giua L., Lombardi G., Codini M., Simonetti M.S., Damiani P., Cossignani L.) *Journal of Chromatographic Science* (ISSN 0021-9665), 49, 379-383, **2011**
17. Detection of cow milk in donkey milk by chemometric procedures on triacylglycerol stereospecific analysis results (Cossignani L., Blasi F., Bosi A., D'Arco G., Maurelli S., Simonetti M.S., Damiani P.) *The Journal of Dairy Research* (ISSN 0022-0299), 78, 335-342, **2011**
18. Composition of meat and offal from weaned and fattened rabbits and results of stereospecific analysis of triacylglycerols and phosphatidylcholines (D'Arco G., Blasi F., Cossignani L., Di Giacomo F., Ciavardelli D., Ventura F., Scipioni S., Simonetti M.S., Damiani P.), *Journal of the Science of Food and Agriculture* (ISSN 1097-0010), 92, 952-959, **2012**
19. *Candida rugosa* lipase selectivity towards *trans,cis*- and *cis,trans*- conjugated linoleic acid isomers (Laura G., Cossignani L., Simonetti M.S., Lombardi G., Blasi F.), *European Food Research and Technology* (ISSN: 1438-2377), 235, 53-59, **2012**
20. *In vitro* genotoxicity/antigenotoxicity testing of some conjugated linoleic acid isomers using comet assay (Blasi F., Dominici L., Moretti M., Villarini M., Maurelli S., Simonetti M.S., Damiani P., Cossignani L.), *European Journal of Lipid Science and Technology* (ISSN 1438-9312), 114, 1016-1024, **2012**
21. Analysis of CLA isomer distribution in nutritional supplements by single column Ag⁺-HPLC (Cossignani L., Giua L., Lombardi G., Simonetti M.S., Damiani P., Blasi F.), *Journal of the American Oil Chemists' Society* (ISSN 0003-021X), 90, 327-335, **2013**

22. Triacylglycerol stereospecific analysis and linear discriminant analysis for milk speciation (Blasi F., Lombardi G., Damiani P., Simonetti M.S., Giua L., Cossignani L.), *The Journal of Dairy Research* (ISSN 0022-0299), 80, 144-151, **2013**
23. Oxidative modifications of conjugated and unconjugated linoleic acid during heating (Laura G., Blasi F., Simonetti M.S., Cossignani L.), *Food Chemistry* (ISSN 0308-8146), 140, 680-685, **2013**
24. Characterisation of secondary metabolites in saffron from central Italy (Cascia, Umbria) (Cossignani L., Urbani E., Simonetti M.S., Maurizi A., Chiesi C., Blasi F.), *Food Chemistry* (ISSN 0308-8146), 143, 446-451, **2014**
25. Fatty acid composition and CLA content in goat milk and cheese samples from Umbrian market (Cossignani L., Giua L., Urbani E., Simonetti M.S., Blasi F.), *European Food Research and Technology* (ISSN 1438-2377), 239, 905-911, **2014**
26. Volatile compounds as indicators of conjugated and unconjugated linoleic acid thermal oxidation (Cossignani L., Giua L., Simonetti M.S., Blasi F.), *European Journal Of Lipid Science and Technology* (ISSN: 1438-7697), 116, 407-412, **2014**
27. Characterization of volatile fraction of saffron from central Italy (Cascia, Umbria) (Urbani E., Blasi F., Chiesi C., Maurizi A., Cossignani L.), *International Journal of Food Properties*, **2015**, in press
28. *In vitro* safety/protection assessment of resveratrol and pterostilbene in a human hepatoma cell line (HepG2) (Lombardi G., Vannini S., Marcotullio M.C., Dominici L., Villarini M., Cossignani L., Moretti M.), *Natural Product Communications*, **2015**, 10, 1-6