**Paola Lavermicocca**
**18.06.1959**

**ROLE**:
2007 - today. Research Director
2010 - today. Leader of the Research Unit "Microbiology and quality of food productions"
2001-2007. Senior research scientist
1984 -2000. Research scientist

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***Education and training***

1982-1983. Experimental thesis in microbiology at Institute of Microbiology and Technology, Faculty of Agriculture of University of Bari
1983. Biology degree cum laude.
1983-1984. Research activities at former Institute of toxins and mycotoxins – CNR
1984 – 1996. Periodic stays as a researcher at: Cranfield University -Biotechnology Centre (UK); Department of Agroindustrial Research ENEA (Rome); Department of Biochemical Sciences, University "La Sapienza" (Rome)

***Skills and competences***

Food microbiology. Project management and coordination of R&D projects aimed at improving food quality by applying microbiological, chemical and molecular methodologies to select and apply microbial strains (and metabolites) with probiotic and pro-technological properties. Development of innovative functional foods. Assessment of effectiveness of functional foods in clinical trials in collaboration with gastroenterologists.

Principal investigator and /or coordinator of European (WP leader), national and regional research project. Technology transfer and patenting.

Qualified as Full Professor (2014-2020) by the National Scientific Qualification (07/F2-Agr. Microbiol.)

***Main research projects***

**Project leadership and coordination**

- Contract for patent licensing. Technology transfer of two patents to the private enterprise Agrimperiale Spa for the realization of probiotic foods. (2016 -). Project leader and coordination.
- Cluster Tecnologici Regionali - Puglia. - Biotechnologies for innovation of Apulian agro-food chain (BiotecA QCBRAJ6) (2015-2016). ISPA's project leader and coordination.
- P.O.N. Cluster Agrifood Nazionale SO.FI.A. (2013-2016) WP5 Coordination and member of the scientific committee.
- EU Project FP7-222654-2. Design and development of realistic food models with well characterised micro- and macro-structure and composition – DREAM (2009-2013). WP6 Coordination acting as WP leader (2010-2013).
- PON art. 12/agro DM593 "Ortobiotici pugliesi: alimenti vegetali probiotici. (2007-2011). Project leader and coordination.
- POR– Asse I. Piemonte Region. Agrofood. Innovation for SMEs. Project PROFISH (2012-2014) Project leader and coordination.
- POR– Asse I. Piemonte Region. Agrofood. Innovation for SMEs. Project AQUA (2010-2012) Project leader and coordination.
- Regione Puglia. Reti Di Laboratori Pubblici Di Ricerca. "Rete Alimenti funzionali" (2009-2012) Coordination of RU ISPA.
- Progetto "Cassa di Risparmio di Puglia" da titolo "Fegato e alimenti funzionali:" (2005-2006) Project leader and coordination.
- PON L.297 DM 593/2000, PANTI: "Miglioramento delle caratteristiche organolettiche, nutrizionali e salutistiche dei pani tipici da semola di grano duro". (2005-2009). Coordination of RU ISPA.
- MIUR– Piano di Potenziamento delle Reti di Ricerca del MURST Progetto MAIA "Studio dei lieviti naturali per la valorizzazione di pani tipici del mezzogiorno" (2000-2004) Coordination of RU ISPA.
- Trasferimento tecnologico di due brevetti industriali. Contratto COPAIM da titolo "Utilizzo di ceppi lattici selezionati probiotici per il miglioramento dei prodotti (2005-2006) Project leader and coordination.
- POP Misura 4.3.1. Regione Puglia "Miglioramento della qualità delle olive da mensa in Puglia" (1996-1999). Project leader and coordination.
- EU Project FAIR CT98-4075 "Natural antifungal systems for prevention of food spoilage in bakery

products"( 1998-2002). WP leader.

- National and Regional research projects (1984-1998).

**Participation**

- EU Project SEE/B/0028/1.3/X. INNOFOODSEE. Setting up the innovation support mechanisms and increasing awareness on the potential of Food Innovation and RTD in the South- East Europe" (2011-2013).
- Progetto MIUR - art. 12/agro DM593: Ortobiotici pugliesi: alimenti vegetali probiotici - Formazione. Corso per esperto di trasformazione di prodotti vegetali (2007-2008)
- PON - MASTER in Sistemi di Qualità nell'Industria dei Prodotti Lievitati da Forno. (2004). Participant and member of the coordination committee.
- MURST - MAIA –"Microrganismi e loro metaboliti utili per il controllo biologico nella protezione delle piante" (2000-2004)

| ***No of Publications*** *(about total since 1985; see details for recent in dedicated section)* | **H-Index** |
|---|---|
| ***150*** | **22 (ISI WEB); 27 (Google Scholar)** |

***Patents***

• LAVERMICOCCA P., LONIGRO S. L., VISCONTI A., DE ANGELIS M., VALERIO F., MORELLI L., Table olives containing probiotic microrganisms. Applicant CNR. **Granted European Patent Office**. **EP1843664 B1** (8.7.2009); Granted Japan EP1843664 B1 (18.12.2009); Granted Canada CA 2546776; Granted Germany, France, England, Switzerland (Convention of London); Granted Greece N° 3070163 (9.10.2009); Granted Spain N° 04803365.8 (7.10.2009); Granted - Ufficio Italiano Brevetti e Marchi n°0001349713 del 1.12.2008. Exclusively licensed from CNR to an Italian medium enterprise.

• P. LAVERMICOCCA, S. L. LONIGRO, F. VALERIO, A. VISCONTI, S. VANADIA, N. CALABRESE, D. DI VENERE, L. MORELLI. Applicant CNR. Process for the preparation of vegetable preserves containing probiotic micro-organisms. PCT n° WO 2006/037517 A1. Granted Italy MI2004A001887- Procedimento per la preparazione di conserve alimentari vegetali contenenti microrganismi probiotici. Granted Italy Ufficio Italiano Brevetti e Marchi n° 0001357149 del 9.3.2009. Exclusively licensed from CNR to an Italian medium enterprise.

• P. LAVERMICOCCA, S. L. LONIGRO, A. VISCONTI. Applicant CNR. Realizzazione di barretta vegetale. Registered Italy MI2006A002201, 16.11.2006. PCT/EP2007/009591. Granted Italy Ufficio Italiano Brevetti e Marchi n° 0001377782 del 31.7.2009

• F. VALERIO, P. LAVERMICOCCA, S. L. LONIGRO, A. VISCONTI, P. DE BELLIS. Applicant CNR. Procedimento per prevenire l'alterazione microbiologica dei prodotti da forno. Registered Italy 8 febbraio 2005, MI2005A000172. PCT /EP2006/000913. Granted Ufficio Italiano Brevetti e Marchi n° 0001364639, 26.7.2010

**Project evaluation & Referee activities**

She acted as invited expert evaluating project for : European Commission (DG Research.), General Secretariat for Research & Technology of Greece, MIUR, Italian Ministry for Economic Development and Italian Regional Bodies.

Routinely refers for journals (ISI): Appl Environ Microbiol; Int J Food Microbiol; Life Sciences; J Agric Food Chem; and others.

***Other***

**Member of the international Scientific Committee or Advisory Board:**

- International Congress "Microbial Spoilers in Food 2017". Quimper (FR), June 28-30 2017
- International Conference "The Food Factor I Barcelona Conference". Barcelona (ES), November 2-4 2016
- International Conference "From Model Foods to Food Models". Nantes (FR), June 24-26 2013.
- International Congress Microbial Spoilers in Food. Quimper (FR), July 1-3, 2013

**2015-2016**. DISBA representative for National Cluster Agrifood Road map Line 1 Health&Wellbeing**.**
**2012-2016.** DISBA representative at Italian co-location center of the KIC Foodbest, the European consortium working to promote innovation and entrepreneurship in Food across Europe.

**Advisor activities on behalf of CNR**

**2014- 2017.** Acting as advisor on behalf of CNR in the evaluation process for admission to funding of 3 industrial projects submitted to FCS call of the Italian Ministry of Economic Development.

***Awards and other recognitions***

**2010.** "Best Innovator 2010". Innovation Award ITWIIN Puglia. For her activities in the field of functional foods she has been acknowledged by the Italian Women Innovators and Inventors Network linked to the European network EUWIIN.

**2005**. Her patent " Table olives containing probiotic microorganisms" was awarded and granted for PCT process by the Province of Rome within the "Call for supporting European and international patenting process".

***Main publications 2016-2000 (ISI and book chapters)***


1. Valerio, F., Conte, A., Di Biase, M., Lattanzio, V.M.T., Lonigro, S.L., Padalino, L., Pontonio, E., Lavermicocca, P. 2016. Formulation of yeast-leavened bread with reduced salt content by using a Lactobacillus plantarum fermentation product., Food Chemistry, (in press), doi: http://dx.doi.org/10.1016/j.foodchem.2016.11.135 IF:4.052

2. Angelo Sisto, Diomira Luongo, Lucia Treppiccione, Palmira De Bellis, Donato Di Venere, Paola Lavermicocca, Mauro Rossi. 2016. Effect of *Lactobacillus paracasei* culture filtrates and artichoke polyphenols on cytokine production by dendritic cells. Nutrients 8, 635. IF: 3.759

3. Valerio F., Di Biase M., Lattanzio V.M.T. and Lavermicocca P. (2016). Improvement of the antifungal activity of lactic acid bacteria by addition to the growth medium of phenylpyruvic acid, a precursor of phenyllactic acid International Journal of Food Microbiology 222: 1–7.*IF 3.155.*

4. Lavermicocca P., Valerio F., De Bellis P., Sisto A., Leguérinel I. 2016. Spore-forming bacteria associated with bread production: spoilage and toxigenic potential. In: Food Hygiene and Toxicology in Ready to Eat Foods, (Ed. P. Kotzekidou) Elsevier. Chapter 16, pp 275-293. ISBN: 978-0-12-801916-0

5. Lavermicocca P., Dekker M., Russo F., Valerio F., Di Venere D., Sisto A. *Lactobacillus paracasei*-enriched vegetables containing health promoting molecules. 2016. *In*: Probiotics, Prebiotics, and Synbiotics: Bioactive Foods in Health Promotion*. Eds Ronald Ross Watson & Victor R. Preedy, Elsevier* San Diego CA, *ISBN: 978-0-12-802189-7*

6. Giorgia Foca , Carlotta Ferrari , Alessandro Ulrici, Giorgia Sciutto, Silvia Prati, Stefano Morandi, Milena Brasca, Paola Lavermicocca, Silvia Lanteri and Paolo Oliveri. 2016. The potential of spectral and hyperspectral-imaging techniques for bacterial detection in food: A case study on lactic acid bacteria. Talanta 153: 111–119. IF: 4.035.

7. Valerio F. Lonigro S. L., Giribaldi M., Di Biase M., De Bellis P., Cavallarin L., Lavermicocca P. 2015. Probiotic Lactobacillus paracasei IMPC 2.1 strain delivered by ready-to-eat swordfish fillets colonizes the human gut after alternate-day supplementation. Journal of Functional foods (17: 468–475). IF 3.574

8. F. Valerio, M. Di Biase, V. Huchet, N. Desriac, S.L. Lonigro , P. Lavermicocca, D. Sohier, F. Postollec. 2015. Comparison of three *Bacillus amyloliquefaciens* strains growth behaviour and evaluation of the spoilage risk during bread shelf-life. *Food Microbiology 197: 30-39*. (published on line 2014) *IF 3.374;*

9. De Bellis P., F. Minervini, M. Di Biase, F. Valerio, P. Lavermicocca, A. Sisto. 2015. Toxigenic potential and heat survival of spore-forming bacteria isolated from bread and ingredients. *International Journal of Food Microbiology* 45:2-9. (published on line 2014)*IF 3.155.*

10. Valerio F, Di Biase M, Caputo L, Creanza TM, Ancona N, Visconti A, Lavermicocca P (2014). Effect of Lactobacillus brevis - based bioingredient and bran on microbiological, physico-chemical and textural quality of yeast leavened bread during storage. Innovative Food Science & Emerging Technologies 25: 2–8. (published on line 2013) *IF 3.273.*

11. Valerio F, Lonigro SL, Di Biase M, de Candia S, Callegari ML, Lavermicocca P (2013). Bioprotection of ready-to-eat probiotic artichokes processed with *Lactobacillus paracasei* LMGP22043 against foodborne pathogens. *Journal of Food Science* 78:1757-1763. IF: 1.649.

12. Sarvan I., F. Valerio, S. L. Lonigro, S. De Candia, R. Verkerk, M. Dekker, P. Lavermicocca. 2013. Glucosinolate content of blanched cabbage (*Brassica oleracea* var. *capitata*) fermented by the probiotic strain *Lactobacillus paracasei* LMG-P22043. *Food Research International*, 54: 706-710. *IF 3.050.*

13. Valerio F., P. De Bellis, M. Di Biase, S.L. Lonigro, B. Giussani, A. Visconti, P. Lavermicocca, A. Sisto. 2012. Diversity of spore-forming bacteria and identification of Bacillus amyloliquefaciens as a species frequently associated with the ropy spoilage of bread. International Journal of Food Microbiology 156: 278–285. IF 3.327

14. G. Riezzo, A. Orlando, B. D'Attoma, V. Guerra, F. Valerio, P. Lavermicocca, S. De Candia, F. Russo. 2012. Randomised clinical trial: efficacy of the *Lactobacillus paracasei* enriched artichokes in the treatment of patients with functional constipation – a double-blind, controlled, crossover study. *Alimentary Pharmacology & Therapeutics* 35:441-450. *IF 4.55.*

15. A. Orlando, M.G. Refolo, C. Messa, L. Amati, P. Lavermicocca, F. Russo. 2012. Anti-proliferative and pro-apoptotic effects of viable or heat-killed *Lactobacillus paracasei* IMPC2.1 and *Lactobacillus rhamnosus* GG in HGC-27 gastric and DLD-1 colon cell lines. *Nutrition and Cancer*, 64 (7): 1103-1111. IF 2.783.

16. Sisto A. and Lavermicocca P. 2012. Suitability of a probiotic *Lactobacillus paracasei* strain as a starter culture in olive fermentation and development of the innovative patented product "probiotic table olives". *Frontiers in Microbiology*, May 2012, Vol 3, article 174. IF 3.941.

17. D'Arienzo R., Bozzella G., Rossi M., De Bellis P., Lavermicocca P., Sisto A. 2011 Distinct immunomodulatory properties of *Lactobacillus paracasei* strains *J. Appl. Microbiol*. 111, 1482–1491. IF. 2.337.

18. VALERIO F., DE CANDIA S., LONIGRO S. L., RUSSO F., RIEZZO G., ORLANDO A., DE BELLIS P., SISTO A. and LAVERMICOCCA P.. 2011. Role of the probiotic strain *Lactobacillus paracasei* LMGP22043 carried by artichokes in influencing faecal bacteria and biochemical parameters in human subjects. *J. Appl. Microbiol*. 111: 155-164. IF. 2.337.

19. VALERIO F., RUSSO F., DE CANDIA S., RIEZZO G., ORLANDO A., LONIGRO S. L. and LAVERMICOCCA P. 2010 Effects of probiotic *Lactobacillus paracasei*-enriched artichokes on constipated subjects: a pilot study. *J Clin Gastroenterol* 44: S49-S53. IF. 3.159.

20. Sisto A, Cipriani MG, Morea M, Lonigro SL, Valerio F, Lavermicocca P. 2010. An Rhs-like genetic element is involved in bacteriocin production by *Pseudomonas savastanoi pv. Savastanoi*. *Antonie van Leeuwenhoek* 98:505–517. IF 2.091

21. LAVERMICOCCA P., ROSSI M., RUSSO F. and SRIRAJASKANTHAN R. 2010. Table olives: a carrier for delivering probiotic bacteria to humans. In: Olives and olive oil in health and disease prevention (Preedy V. R. and Watson R. R. eds.) pp.735-743 Elsevier, San Diego, CA. ISBN 978-0-12-374420-3.

22. De Bellis P., Valerio F., Lonigro S.L., Sisto A. and Lavermicocca P. 2010. Probiotic table olives: microbial populations adhering on olive surface in fermentation sets inoculated with the probiotic strain

*Lactobacillus paracasei* IMPC2.1 in an industrial plant. *International Journal of Food Microbiology*. 140: 6-13 *IF 3.155.*

23. LAVERMICOCCA P, VALERIO F e FOSCHINO R. 2010. La contaminazione microbica e le infezioni virali nei prodotti lievitati da forno. pp. 207-227 In: Biotecnologia dei prodotti lievitati da forno (Eds M. Gobbetti e A. Corsetti) – Casa Editrice Ambrosiana (CEA). ISBN 978-88-08-18121-3.

24. SISTO A., DE BELLIS P., VISCONTI A., MORELLI L., and LAVERMICOCCA P.. 2009. Development of a PCR assay for the strain-specific identification of the probiotic strain Lactobacillus paracasei IMPC2.1. *International Journal of Food Microbiology*. 136: 59–65. IF *3.155.*

25. D'ARIENZO R., MAURANO F., LAVERMICOCCA P., RICCA E., ROSSI M. 2009. Modulation of the immune response by probiotic strains in a mouse model of gluten sensitivity. Cytokine. 48: 254–259 IF 3.019

26. Valerio F., Favilla M., De Bellis P., Sisto A., De Candia S., Lavermicocca P. 2009. Antifungal activity of lactic acid bacterial strains isolated from semolina ecosystem against *Penicillium roqueforti*, *Aspergillus niger* and *Endomyces fibuliger* contaminating bakery products. *Systematic and Applied Microbiology*. 32: 438–448. *IF 3.310.*

27. LONIGRO S.L., VALERIO F., ANGELIS M., DE BELLIS P. and LAVERMICOCCA P. 2009. Microfluidic technology applied to cell-wall protein analysis of olive related lactic acid bacteria. *International Journal of Food Microbiology*. 130: 6–11. IF 3.155.

28. LAVERMICOCCA P., VALERIO F., LONIGRO S. L., DI LEO A. and VISCONTI A. 2008. Antagonistic activity of potential probiotic lactobacilli against the ureolytic pathogen *Yersinia enterocolitica. Current Microbiology* 56:175–181. *I.F.* 1.815

29. Valerio F., De Bellis P., Lonigro S. L., Visconti A., Lavermicocca P. 2008. Use of *Lactobacillus plantarum* fermentation products in bread-making to prevent *Bacillus subtilis* ropy spoilage. *International Journal of Food Microbiology* 122: 328-332. *IF 3.155.*

30. Valerio F., P. De Bellis , Lonigro S. L., Morelli L., Visconti A., And Lavermicocca P. 2006. In vitro and in vivo survival and transit tolerance of potentially probiotic strains carried by artichokes in the gastrointestinal tract. *Applied and Environmental Microbiology*. 72: 3042-3045. *I.F. 3.952.*

31. LAVERMICOCCA P. 2006 Highlights on new food research. *Digestive and Liver Disease* 38(S2): S295-S299. *I.F.* 2.889.

32. Lavermicocca P., Valerio F., Lonigro S. L., De Angelis M., Morelli L., Callegari M. L., Rizzello C. G., and Visconti A. 2005. Adhesion and survival of Lactobacilli and Bifidobacteria on table olives with the aim of formulating a new probiotic food. *Applied and Environmental Microbiology* 71(8): 4233-4240. *I.F. 3.952.*

33. VALERIO F., LAVERMICOCCA P., PASCALE M. and VISCONTI A. 2004. Production of phenyllactic acid by lactic acid bacteria: an approach to the selection of strains contributing to food quality and preservation. *FEMS Microbiology Letters* 233: 289-295. I.F. 2.046

34. P. LAVERMICOCCA, F. VALERIO and A. VISCONTI. 2003. Antifungal activity of phenyllactic acid against molds isolated from bakery products *Applied and Environmental Microbiology* 69 (1): 634-640. *I.F. 3.952.*

35. DE PINTO MARIA C., PAOLA LAVERMICOCCA, ANTONIO EVIDENTE, MARIA M. CORSARO, SILVIA LAZZARONI and LAURA DE GARA. 2003. Exopolysaccharides Produced by Plant Pathogenic Bacteria Affect Ascorbate Metabolism in Nicotiana tabacum. *Plant Cell Physiol*. 44(8): 803–810. I.F. 4.978

36. DI CAGNO R., M. DE ANGELIS, A. CORSETTI, P. LAVERMICOCCA, P. ARNAULT, P. TOSSUT, G. GALLO and M. GOBBETTI. 2003. Interactions between sourdough lactic acid bacteria and exogenous enzymes: effects on the microbial kinetics of acidification and dough textural properties. *Food Microbiology* 20: 67-75. I.F. *IF 3.374*

37. LAVERMICOCCA P., LONIGRO S.L., VALERIO F., EVIDENTE and VISCONTI A.. 2002. Reduction of olive knot disease by a bacteriocin from Pseudomonas syringae pv. ciccaronei. *Appl. Environ. Microbiol*. 68-3:1403-1407. *I.F. 3.952*

38. DI CAGNO R., DE ANGELIS M., LAVERMICOCCA P., DE VINCENZI M., GIOVANNINI , C., FACCIA M. and GOBBETTI M. 2002. Proteolysis by sourdough lactic acid bacteria: effects on wheat flour protein fractions and gliadin-peptides involved in human cereal intolerance. *Appl. Environ. Microbiol.* 68-2:623-633. *I.F. 3.952*

39. GOBBETTI M., LAVERMICOCCA P. e CORSETTI A. 2001. Microbiologia degli alimenti. pp. 217-302 In: Recenti sviluppi di igiene e microbiologia degli alimenti. (ed. G. De Felip) Tecniche Nuove, Milano. (capitolo di libro)

40. CORSETTI A., LAVERMICOCCA P., MOREA M., BARUZZI F., TOSTI N. and GOBBETTI M. 2001. Phenotypic and molecular identification and clustering of lactic acid bacteria and yeasts from wheat (species Triticum durum and Triticum aestivum) sourdoughs of Southern Italy. *Int. J. Food Microbiol*. 64:95-104. *IF 3.155*

41. GOBBETTI M, LAVERMICOCCA P., MINERVINI F. DE ANGELIS M. and CORSETTI A. 2000. Arabinose fermentation by Lactobacillus plantarum in sourdough added of pentosans and $\alpha$-L-arabinofuranosidase: a tool to increase the production of acetic acid. *Journal of Applied Microbiology* 88: 317-324. IF. 2.337

42. LAVERMICOCCA P., VALERIO F., EVIDENTE A., LAZZARONI S., CORSETTI A. and GOBBETTI M. 2000. Purification and characterization of novel antifungal compounds by sourdough *Lactobacillus plantarum* 21B. *Appl. Environ. Microbiol*. 66: 4084-4090. *I.F. 3.952*

Si autorizza l'uso dati personali ai sensi del D. lgs. 196/03 del 2003.
December 1st, 2016
Paola Lavermicocca