

## PERSONAL INFORMATIONS

## Diego Mora



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Gender male | Date of birth 04/28/1970 | Nationality Italian

## CURRENT POSITION

Professor in Agricultural Microbiology at the Department of Food Environmental and Nutritional Sciences (DeFENS), University of Milan

## PROFESSIONAL DATA

(From October 1 <sup>st</sup> 2021)	Coordinator of the PhD program in Food Systems
From February 2019 to October 2021)	Vice Director of the Department of Food, Environmental and Nutritional Sciences (DeFENS)
(from October 2020)	External member of the commission "Training and Education" National Order of Food Technologists.
(from February 2019 to October 2020)	National vice president of COSTAL (National Coordination of Masters in Food Science and Technology)
(from November 2018 to June 2021)	Member of the commission of "Abilitazione Scientifica Nazionale" sector 07/I1, AGR/16
(from April 2017)	Full Professor at DeFENS (UniMI)
(from October 2015 to October 2020)	Head of the teaching board of the Bachelor and the Master degree in Food Science and Technology
(from 2010 to 2017)	Associate Professor at the Department of Food Science and Technology (DiSTAM) (UniMI)
(from 2001 to 2010)	Researcher at DiSTAM (UniMI)

## EDUCATION AND TRAINING

(1994 – 1997)	PhD in Food Biotechnology at DiSTAM (UniMI)
(1989-1994)	Master degree in Food Science and Technology (UniMI)

## PERSONAL SKILLS

Mother language

Other language

Italian

English

COMPRENSION		SPEAKING		WRITTEN
Listening	Reading	Interaction	Oral communication	
C1	C1	C1	C1	C1

Livelli: A1/A2: Utente base - B1/B2: Utente intermedio - C1/C2: Utente avanzato  
 Quadro Comune Europeo di Riferimento delle Lingue

## PROFESSIONAL SKILLS

Prof. Mora has carried out research activities in the field of Agricultural and Food Microbiology. Specifically, the research activities coordinated by dr. Mora fall into the following fields: i) biology of microorganisms and diversity, ii) biology and biotechnology of microorganisms of food interest with particular reference to the microbial group of lactic acid bacteria of dairy interest, iii) the role of virome in the modulation of microbial communities and in the spread of antibiotic resistance. The scientific activity of dr. Mora is proven by more than 100 publications in international journals peer reviewed, 3459 citations, h index 34 (SCOPUS, May 2022, Diego Mora-ORCID n. 0000-0002-6692-9301).

Prof. Mora is responsible for the following courses: Biology of microorganisms, Bachelor degree in Food Science and Technology; Biotechnology of food fermentations, Master's degree in Food Science and Technology;

*Autorizzo il trattamento dei miei dati personali ai sensi del Decreto Legislativo 30 giugno 2003, n. 196 (Codice in materia di protezione dei dati personali) e sue successive modifiche e integrazioni, nonché del Regolamento UE 679/2016 (Regolamento Generale sulla Protezione dei dati o, più brevemente, RGPD).*

## Awards

1998. Best PhD thesis in General Microbiology and Microbial Biotechnology from SIMGBM;

2015. "SIMTREA Excellence" for the best scientific publication "Mora D, Arioli S (2014) Urease in Health and Disease. PLOS PATHOGENS, 10(12): e1004472.

## International collaborations

Prof. Erko Stackebrandt, DSMZ, Braunschweig, Germany (2000-2001).

Prof. M. Karp, Department of Chemistry and Bioengineering, Tampere University of Technology, Tampere, Finland (2007-2014).

Prof. D. van Sinderen and Dr F. Turrone, Alimentary Pharmabiotic Centre and Department of Microbiology, Bioscience Institute, National University of Ireland, Western Road, Cork, Ireland (2011-2015).

Prof. EM. Comelli, Department of Nutritional Sciences, Faculty of Medicine, University of Toronto, Toronto, ON, Canada (2009-2013).

Dr C. Monnet, INRA, UMR782 Génie et Microbiologie des Procédés Alimentaires, 78850 Thiverval-Grignon, France (2005-2009).

Prof MR. Oggioni, Department of Genetics, University of Leicester, United Kingdom (2015-).

Dr P. Halami, Central Food Technological Research Institute, Mysore, India (2007).

Prof. Willem de Vos, Research Program Unit Immunobiology, Medicum, University of Helsinki, Helsinki, Finland, Laboratory of Microbiology, Wageningen University, Wageningen, The Netherlands.

## International meeting

Member of the Scientific Committee and Chairman of the International Congress on "ExoFlowMetry 2019" 13-15 November 2019, Rome (Italy);

## Invited/selected speaker at international meetings

2019. *Invited speaker* at the "2<sup>nd</sup> International Bio-Fermentation Nutrients Symposium" organized by Procelys Lesaffre, "Development of omic-based protocols for the microbiological characterization of probiotics". Shanghai 20-21 Novembre 2019.

2019. *Invited speaker* at the International Congress "Probiotics, prebiotics, new foods, nutraceuticals and botanicals for nutrition & human and microbiota health", September 8-10, 2019, "How to obtain nowadays reliable high quality multistrain probiotic for clinical practice: the case of VSL#3".

2019. *Invited speaker* at the 25<sup>th</sup> FISMAD Congress, March 29<sup>th</sup> 2019, "VSL#3, microbiological identity card and quality assessment".

2018. *Invited speaker* at the 11<sup>th</sup> Meeting on Global Microbial Identifier (Geneva, Switzerland), "Viromes As Genetic Reservoir for the Microbial Communities in Food-Associated Environments: A Focus on Antimicrobial- Resistance Genes";

2013-*Selected speaker* at the *Microbial Diversity 2013 – Microbial Interactions In Complex Ecosystems* (Turin, Italy), "The overexpression of PmrB reduce the sensitivity of *Streptococcus thermophilus* towards several antimicrobial molecules";

*Selected speaker for short presentation* at the "II International Conference on Antimicrobial Research" (Lisbon, Portugal), "Overexpression of the MFS transporter *pmrB* in *Streptococcus thermophilus* improves the efficiency of ethidium bromide efflux and the growth fitness under stressed condition";

2011-*Selected speaker for short presentation* at the "5<sup>th</sup> International Conference on Analysis of Microbial Cells at the Single Cell Level", "Single-growing unit phenotypic heterogeneity in *Streptococcus thermophilus* DSM20617";

2009- *Selected speaker for short presentation* al convegno internazionale 10<sup>th</sup> International Symposium on Lactic Acid Bacteria (Egmond aan Zee, The Netherlands) con una relazione dal titolo "A single-growing unit approach highlights phenotypic cell

heterogeneity in *Streptococcus thermophilus*”;

2008- Selected speaker al convegno internazionale 9<sup>th</sup> *International Symposium on Lactic Acid Bacteria* (Egmond aan Zee, The Netherlands) con una relazione dal titolo “The role of carbon dioxide and alkalinizing reactions on the energetic metabolism in *Streptococcus thermophilus*”;

#### Paper referee activity

Dr Mora has done paper referee activity for the following international Journals: *Applied and Environmental Microbiology*, *Annals of Microbiology*, *Applied Biochemistry and Biotechnology*, *Applied Microbiology and Biotechnology*, *Biotechnology and Applied Biochemistry*, *Biotechnology and Bioengineering*, *Biotechnology Progress*, *Biotechnology Advances*, *BMC Microbiology*, *Canadian Journal of Microbiology*, *Cellular and Molecular Life Sciences*, *Current Microbiology*, *The FEBS Journal*, *FEMS Microbiology Letters*, *Folia Microbiologica*, *Food Control*, *Food Microbiology*, *Frontiers in Microbiology*, *International Journal of Food Science*, *International Journal of Systematic and Evolutionary Microbiology*, *International Journal of Food Microbiology*, *International Journal of Microbiology*, *International Journal of Probiotics and Prebiotics*, *Journal of Applied Microbiology*, *Journal of Basic Microbiology*, *Journal of Biotechnology*, *Journal of Dairy Science*, *Journal of Veterinary Medicine B*, *Letters in Applied Microbiology*, *Microbial Cell Factory*, *FEBS Open Bio*, *Probiotics and Antimicrobial Proteins*, *PLOS One*, *Proteomics*, *Research in Microbiology*.

#### Editorial Board

Dr Mora belongs to the Editorial board of the international journal *Annals of Microbiology* (Springer);

#### Project referee

Dr Mora has done project referee activity for the following institution: MIUR, Free University of Bozen, Poland National Science Center.

#### Financed Projects

PRIN 2006: Genetic variability and functional analysis of *Streptococcus thermophilus* strains of industrial interest. Research unit leader. 24 months;

FP7-KBBE-2008-2B: Confronting the clinical relevance of biocide induced antibiotic resistance; Research unit leader. 36 months;

Indo-Italian program of cooperation POC 2005-7, BS 4: Molecular characterization of novel bacteriocin producing bacterial strains and development of applications for food-biopreservation process. PI of the Italian Unit. 36 months;

Safe Food Microbes (n. 30059587) financed by Regione Lombardia and MIUR. Research Unit leader. 24 months. 2012-2013.

#### Patents

Guglielmetti S, Mora D. (2008). Preparation of polyfunctional fermented food products. International Patent Application WO/2008/131899. Publication date: 6th November 2008. International Application No.: PCT/EP2008/003267.

Guglielmetti S, Mora D. (2008). Preparation of polyfunctional fermented food products. International Patent Application WO/2008/131899. Publication date: 6th November 2008. International Application No.: PCT/EP2008/003267.

Mora D., Pintus, P. (2008). A method for the preparation of *Penicillium* spores and the use of the latter in the food field. EP 06425435.2

Guglielmetti S, Mora D. (2012). *Bifidobacterium bifidum* strains for application in gastrointestinal diseases. International Patent Application WO/2012/104226. Publication date: 9th August 2012. International Application No.: PCT/EP2012/051369.

#### Advisory board and consultant activities for private company

Dr. Mora is involved in advisory board, consultancy and research contracts for several private companies operating in the fields of starter cultures for dairy applications and probiotics.

## Publications

- 1-Arioli, S. Della Scala, G., Martinović, A., Scaglioni, L., Mazzini, S., Volonté, F., Pedersen, M.B., Mora, D. In *Streptococcus thermophilus*, Ammonia from Urea Hydrolysis Paradoxically Boosts Acidification and Reveals a New Regulatory Mechanism of Glycolysis; (2022) *Microbiology Spectrum*, <https://doi.org/10.1128/spectrum.02760-21>
- 2-Bancalari, E., Gatti, M., Bottari, B., Mora, D., Arioli, S. Disclosing *Lactobacillus delbrueckii* subsp. *bulgaricus* intraspecific diversity in exopolysaccharides production; (2022) *Food Microbiology*, 102, art. no. 103924, DOI: 10.1016/j.fm.2021.103924;
- 3-Aguilar-Toalá, J.E., Arioli, S., Behare, P., Belzer, C., Berni Canani, R., Chatel, J.-M., D'Auria, E., de Freitas, M.Q., Elinav, E., Esmerino, E.A., García, H.S., da Cruz, A.G., González-Córdova, A.F., Guglielmetti, S., de Toledo Guimarães, J., Hernández-Mendoza, A., Langella, P., Liceaga, A.M., Magnani, M., Martin, R., Mohamad Lal, M.T., Mora, D., Moradi, M., Morelli, L., Mosca, F., Nazzaro, F., Pimentel, T.C., Ran, C., Ranadheera, C.S., Rescigno, M., Salas, A., Sant'Ana, A.S., Sivieri, K., Sokol, H., Taverniti, V., Vallejo-Cordoba, B., Zelenka, J., Zhou, Z. Postbiotics – when simplification fails to clarify (2021) *Nature Reviews Gastroenterology and Hepatology*, 18 (11), pp. 825-826. DOI: 10.1038/s41575-021-00521-6;
- 4-Petrella, C., Strimpakos, G., Torcinaro, A., Middei, S., Ricci, V., Gargari, G., Mora, D., De Santa, F., Farioli-Vecchioli, S. Proneurogenic and neuroprotective effect of a multi strain probiotic mixture in a mouse model of acute inflammation: Involvement of the gut-brain axis (2021) *Pharmacological Research*, 172, art. no. 105795, DOI: 10.1016/j.phrs.2021.105795;
- 5-Mugnai, G., Stuknytė, M., Arioli, S., Gargari, G., Adessi, A., Mora, D. 57466221200;22936157800;21933660500;57190440568;36456620000;7004700913;Virus-like particles isolated from reactivated biological soil crusts (2021) *Biology and Fertility of Soils*, 57 (6), pp. 863-868. DOI: 10.1007/s00374-021-01567-z;
- 6-Simões da Silva, T.M., Piazzentin, A.C.M., Mendonça, C.M.N., Converti, A., Bogsan, C.S.B., Mora, D., de Souza Oliveira, R.P. Buffalo milk increases viability and resistance of probiotic bacteria in dairy beverages under in vitro simulated gastrointestinal conditions (2020) *Journal of Dairy Science*, 103 (9), pp. 7890-7897. DOI: 10.3168/jds.2019-18078;
- 7-Martinović, A., Cocuzzi, R., Arioli, S., Mora, D. *Streptococcus thermophilus*: To survive, or not to survive the gastrointestinal tract, that is the question! (2020) *Nutrients*, 12 (8), art. no. 2175, pp. 1-13. DOI: 10.3390/nut12082175;
- 8-Catinella, G., Mattio, L.M., Musso, L., Arioli, S., Mora, D., Beretta, G.L., Zaffaroni, N., Pinto, A., Dallavalle, S. Structural requirements of benzofuran derivatives dehydro- $\delta$ -and dehydro- $\epsilon$ -viniferin for antimicrobial activity against the foodborne pathogen *listeria monocytogenes* (2020) *International Journal of Molecular Sciences*, 21 (6), art. no. 2168. DOI: 10.3390/ijms21062168;
- 9-Mattio, L.M., Dallavalle, S., Musso, L., Filardi, R., Franzetti, L., Pellegrino, L., D'Incecco, P., Mora, D., Pinto, A., Arioli, S. Antimicrobial activity of resveratrol-derived monomers and dimers against foodborne pathogens (2019) *Scientific Reports*, 9 (1), art. no. 19525. DOI: 10.1038/s41598-019-55975-1;
- 10-Scala, G.D., Volonté, F., Ricci, G., Pedersen, M.B., Arioli, S., Mora, D. Development of a milk-based medium for the selection of urease-defective mutants of *Streptococcus thermophilus* (2019) *International Journal of Food Microbiology*, 308, art. no. 108304. DOI: 10.1016/j.ijfoodmicro.2019.108304;
- 11-Mora, D., Filardi, R., Arioli, S., Boeren, S., Aalvink, S., de Vos, W.M. Development of omics-based protocols for the microbiological characterization of multi-strain formulations marketed as probiotics: the case of VSL#3 (2019) *Microbial Biotechnology*, 12 (6), pp. 1371-1386. DOI: 10.1111/1751-7915.13476;
- 11-Pepè Sciarria, T., Arioli, S., Gargari, G., Mora, D., Adani, F. Monitoring microbial communities' dynamics during the start-up of microbial fuel cells by high-throughput screening techniques (2019) *Biotechnology Reports*, 21, art. no. e00310. DOI: 10.1016/j.btre.2019.e00310;

- 12-Tabanelli, G., Montanari, C., Arioli, S., Magnani, M., Patrignani, F., Lanciotti, R., Mora, D., Gardini, F. Physiological response of *Saccharomyces cerevisiae* to citral combined with thermal treatment(2019) *LWT*, 101, pp. 827-834. DOI: 10.1016/j.lwt.2018.12.006;
- 13-Arioli, S., Montanari, C., Magnani, M., Tabanelli, G., Patrignani, F., Lanciotti, R., Mora, D., Gardini, F. Modelling of *Listeria monocytogenes* Scott A after a mild heat treatment in the presence of thymol and carvacrol: Effects on culturability and viability (2019) *Journal of Food Engineering*, 240, pp. 73-82. DOI: 10.1016/j.jfoodeng.2018.07.014;
- 14-Arioli, S., Eraclio, G., Scala, G.D., Neri, E., Colombo, S., Scaloni, A., Fortina, M.G., Mora, D. Role of temperate bacteriophage  $\phi$ 20617 on *Streptococcus thermophilus* DSM 20617TAutolysis and biology (2018) *Frontiers in Microbiology*, 9 (NOV), art. no. 2719. DOI: 10.3389/fmicb.2018.02719;
- 15-Colombo, S., Arioli, S., Gargari, G., Neri, E., Della Scala, G., Mora, D. Characterization of airborne viromes in cheese production plants (2018) *Journal of Applied Microbiology*, 125 (5), pp. 1444-1454. DOI: 10.1111/jam.14046;
- 16-Douillard, F.P., Mora, D., Eijlander, R.T., Wels, M., De Vos, W.M. Comparative genomic analysis of the multispecies probiotic-marketed product VSL#3 (2018) *PLoS ONE*, 13 (2), art. no. e0192452. DOI: 10.1371/journal.pone.0192452;
- 17-Kaduskar, R.D., Scala, G.D., Al Jabri, Z.J.H., Arioli, S., Musso, L., Oggioni, M.R., Dallavalle, S., Mora, D. Promysalin is a salicylate-containing antimicrobial with a cell-membrane-disrupting mechanism of action on Gram-positive bacteria (2017) *Scientific Reports*, 7 (1), art. no. 8861. DOI: 10.1038/s41598-017-07567-0;
- 18-Colombo, S., Arioli, S., Neri, E., Della Scala, G., Gargari, G., Mora, D. Viromes as genetic reservoir for the microbial communities in aquatic environments: A focus on antimicrobial-resistance genes (2017) *Frontiers in Microbiology*, 8 (JUN), art. no. 1095. DOI: 10.3389/fmicb.2017.01095;
- 19-Arioli, S., Della Scala, G., Remagni, M.C., Stuknyte, M., Colombo, S., Guglielmetti, S., De Noni, I., Ragg, E., Mora, D. *Streptococcus thermophilus* urease activity boosts *Lactobacillus delbrueckii* subsp. *bulgaricus* homolactic fermentation(2017) *International Journal of Food Microbiology*, 247, pp. 55-64. DOI: 10.1016/j.ijfoodmicro.2016.01.006;
- 20-Colombo, S., Arioli, S., Guglielmetti, S., Lunelli, F., Mora, D. Virome-associated antibiotic-resistance genes in an experimental aquaculture facility (2016) *FEMS Microbiology Ecology*, 92 (3). DOI: 10.1093/femsec/fiw003;