#### PROFESSIONAL INFORMATION

# Giovanna Felis



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| WORK EXPERIENCE           |  |
|---------------------------|--|
| September 2014 - present  | Associate professor (SSD AGRI-08 Agricultural food and environmental microbiology,<br>formerly AGR/16 – Agricultural microbiology) -<br>Dept. Biotechnology, University of Verona, Italy<br>Teaching (Agricultural Microbiology; Healthy food and gut microbiota; Microbes for innovation and  |
|                           | sustainability);<br>Research (biodiversity analysis and regulatory aspects related to microbial bioresources for agro-food,<br>beverage and health applications); supervision of BS, MS, and PhD students;<br>Participation to institutional activities:   |
|                           | <ul> <li>Third Mission QA Officer, University Third Mission Commission and Chair of the QA<br/>Commission Third Mission of the Biotechnology Department</li> <li>Deputy Coordinator of the Board of Professors of the PhD in Smart Agrifood Sciences -<br/>Department of Biotechnology</li> <li>Sector Tertiary education and research</li> </ul>  |
| June 2011 – August 2014   | Assistant professor (SSD AGR/16 – Agricultural microbiology)   |
|                           | Research (biodiversity analysis and regulatory aspects related to microbial bioresources for agro-food, beverage and health applications);<br>Teaching (functional foods); supervision/co-supervision of BS, MS, and PhD students.<br>Visiting scholar   |
|                           | <ul> <li>at the Health and Nutrition Sciences Department at Montclair State University (USA) (Feb 2014, 2 weeks), financially supported by the Global Education Center of MSU.</li> <li>at the CSIC-IPLA, Villaviciosa, Spain as part of the Integrated Action Italy-Spain 2010 - MIUR Prot. IT10MD12L (November 2012, one week)</li> <li>Sector Tertiary education and research</li> </ul>  |
| March 2008 – May 2011     | <b>Postdoctoral fellow (Assegno di ricerca, SSD AGR/16)</b><br>Dept. Biotechnology, University of Verona, Italy<br><u>Sector</u> Tertiary education and research   |
| October 2006 – March 2007 | Visiting scientist<br>The Kluyver Center for Genomics of Industrial Fermentations, c/o NIZO FOOD RESEARCH (Ede,<br>The Netherlands) https://www.nizo.com/<br>Research on food bacteria ( <i>Lactococcus lactis</i> ) by means of molecular methods and tools (DNA<br>microarray)<br><u>Sector:</u> Business, Starter cultures, services for food industry  |
| March 2004 – August 2006  | <ul> <li>Research fellow (Borse di studio)         <ul> <li>Istituto Zootecnico e Caseario della Sardegna (now AGRIS Sardegna,<br/>https://www.sardegnaagricoltura.it/innovazionericerca/), Olmedo (SS) – March -Juy 2004</li> <li>Dept. biomedical sciences, Section clinical microbiology, University of Sassari (Italy)<br/>september 2004- August 2006</li> </ul> </li> <li>Sectors: Applied research and Tertiary education and research</li> </ul> |
| EDUCATION AND TRAINING    |  |

2001-2004

PhD in Agro-industrial biotechnology

University of Verona, Italy

1994-2000 Laurea (Joint BS and MS) in Agro-Industrial Biotechnology, major field Microbiology University of Verona (Italy)

## PERSONAL SKILLS

| Mother tongue(s)  | Italian   |
|-------------------|---|
| Other language(s) | English (B2)  |
| Digital skills    | Expert user of MS office, softwares for phylogenetic analyses and specific database. Content creation, communication, and information processing. |

#### RESEARCH INTERESTS AND PROJECTS

Research interests, awards and related information

Research activities are focused on the characterization of microbial biodiversity (bacteria and yeasts), as bioresources: indeed, pure cultures, consortia or microbiomes can be analysed and rationally applied to improve quality, safety and sustainability of food and beverages (cheese, sourdough, wine and functional foods), feed (SCO, single cell oil), health-related products/ecological niches (probiotics and gut microbiome) and agriculture (targeting insect pests microbiomes). Regulatory aspects on the use of microrganisms for food and agriculture is a connected area of interest.

Analysis of microbial diversity is accompanied by a recognized expertise on microbial (bacterial) taxonomy, with specific focus on lactic acid bacteria (genus *Lactobacillus* and related genera) as one of the leaders of the international research group that reclassified *Lactobacillus* and related genera in 2020, (Zheng *et al.*).

For this study, G, Felis received the LABIP 2023 Award for Mid-career Senior Researcher for "outstanding work in relation to the elaboration and introduction of the new taxonomy of the former Lactobacillus genus", awarded by the Lactic Acid Bacteria Industrial Platform, (https://labip.com/).

Positively evaluated as full professor (Abilitazione Scientifica Nazionale) sector 07/l1 until 12 april 2033.

H-index: 40 (Scopus 21/01/2025)

Roles and present projects Deputy chairperson of the Subcommittee on the taxonomy of *Bifidobacterium, Lactobacillus* and related genera (international committee) (2015 to date)

Curator of the Verona University Culture Collection VUCC-DBT), collection of selected microbial strains. The Culture Collection participated in the PNRR Infrastructure project SUS-MIRRI Area ESFRI "Health and Food", granted by the European Commission NextGenerationEU Code N° IR0000005 <u>https://www.sus-mirri.it/.</u> Co-PI for UO24 in the project (PI is Prof. Silvia Lampis).

Participant to the activities of project Interconnected Nord-Est Innovation Ecosystem (iNEST), funded from the European Union Next-GenerationEU (PIANO NAZIONALE DI RIPRESA E RESILIENZA (PNRR) – MISSIONE 4 COMPONENTE 2, INVESTIMENTO 1.5 – D.D. 1058 23/06/2022, ECS00000043), – spoke 7 smart agri-food, Research and Lab village activities (https://www.consorzioinest.it/creation-of-a-network-of-joint-strategic-laboratories-between-universities-and-companies/).

Co-founder of the spin off company Microbion srl <u>www.microbion.it</u> (since 2011 to date)

Past roles and projects Co-opted member of the International Committee on the Systematics of Prokaryotes (2020-2023)

Participation to research project R-UN, agreement between the Veneto Region and the Universities of Veneto (Convenzione operativa di attuazione dell'accordo di programma quadro tra Regione del Veneto e Università del Veneto) for the implementation of the study and research activities planned for the years 2020-2021 CUP H74I19001690007.

Scientific supervisor of 4 Joint Research projects University of Verona and 4 different companies on

different aspects of food microbiology (JP 2016 LAB-Go - with Malga Faggioli 1140; JP 2015 - PROUD-STICKS with Panificio Zorzi s.r.l.; JP 2014 - FORTIS-Klu with Laboratories Turval s.r.l.; JP 2012 - MicroPhyto - with WIZ Chemicals s.r.l.)

Proposal of Marie Skłodowska-Curie Innovative Training Networks – ITN, European Industrial Doctorate – EID "Microbial Interactions for Sustainable and Smart WINEmaking" call 2019 in partnership with Lallemand OENOLOGY and TFTAK, positively evaluated.

Member of the administration board of the spin off company Microbion srl <u>www.microbion.it</u> (2011 - 2014).

### RELEVANT AND RECENT PUBLICATIONS

| Publications | Most relevant recent publications, among the 98 published (https://www.scopus.com/authid/detail.uri?authorId=6603166406) are the following:  |
|--------------|--|
| 1.           | Pot B., Salvetti E., Mattarelli P., Felis G.E. The potential impact of the <i>Lactobacillus</i> name change: The results of an expert meeting organised by the Lactic Acid Bacteria Industrial Platform (LABIP) (2019) Trends in Food Science and Technology, 94, pp. 105-113. DOI: 10.1016/j.tifs.2019.07.006   |
| 2.           | Binati R.L., Innocente G., Gatto V., Celebrin A., Polo M., Felis G.E., Torriani S. Exploring the diversity of a collection of native non- <i>Saccharomyces</i> yeasts to develop co-starter cultures for winemaking (2019) Food Research International, 122, pp. 432-442. DOI: 10.1016/j.foodres.2019.04.043   |
| 3.           | Slaghenaufi D., Indorato C., Troiano E., Luzzini G., Felis G.E., Ugliano M. Fate of Grape-<br>Derived Terpenoids in Model Systems Containing Active Yeast Cells. (2020) Journal of<br>Agricultural and Food Chemistry, 68 (47), pp. 13294 – 13301, DOI: 10.1021/acs.jafc.9b08162   |
| 4.           | Zheng J., Wittouck S., Salvetti E., Franz C.M.A.P., Harris H.M.B., Mattarelli P., O'toole P.W., Pot B., Vandamme P., Walter J., Watanabe K., Wuyts S., Felis G.E., Gänzle M.G., Lebeer S. A taxonomic note on the genus <i>Lactobacillus</i> : Description of 23 novel genera, emended description of the genus <i>Lactobacillus</i> Beijerinck 1901, and union of <i>Lactobacillaceae</i> and <i>Leuconostocaceae</i> (2020), International Journal of Systematic and Evolutionary Microbiology 70 (4), art. no. 004107, pp. 2782 – 2858 DOI: 10.1099/ijsem.0.004107. |
| 5.           | Binati R.L., Salvetti E., Bzducha-Wróbel A., Bašinskienė L., Cizeikienė D., Bolzonella D., Felis G.E. Non-conventional yeasts for food and additives production in a circular economy perspective (2021) FEMS Yeast Research, 21 (7), art. no. foab052, DOI: 10.1093/femsyr/foab052  |
| 6.           | Calgaro M., Pandolfo M., Salvetti E., Marotta A., Larini I., Pane M., Amoruso A., Del Casale A., Vitulo N., Fiorio M., Felis G.E. Metabarcoding analysis of gut microbiota of healthy individuals reveals impact of probiotic and maltodextrin consumption (2021) Beneficial Microbes, 12 (2), pp. 121 - 136, DOI: 10.3920/BM2020.0137   |
| 7.           | de Almeida O.G.G., Vitulo N., De Martinis E.C.P., Felis G.E. Pangenome analyses of LuxS-<br>coding genes and enzymatic repertoires in cocoa-related lactic acid bacteria (2021)<br>Genomics, 113 (4), pp. 1659 – 1670, DOI: 10.1016/j.ygeno.2021.04.010  |
| 8.           | Troiano E., Larini I., Binati R.L., Gatto V., Torriani S., Buzzini P., Turchetti B., Salvetti E., Felis G.E. Finding a correct species assignment for a <i>Metschnikowia</i> strain: Insights from the genome sequencing of strain DBT012 (2023) FEMS Yeast Research, 23, art. no. foad024, DOI: 10.1093/femsyr/foad024  |
| 9.           | Turchetti B., Bevivino A., Casella P., Coleine C., Felis G.E., Girometta C.E., Molino A., Perugini I., Pollio A., Prigione V., Selbmann L., Varese G.C., Buzzini P. Selected Case Studies on Fastidious Eukaryotic Microorganisms: Issues and Investigation Strategies (2023), Diversity, 15, art. no. 862 DOI: 10.3390/d15070862  |
| 10.          | Larini I., Tintori S., Gatto V., Felis G.E., Salvetti E., Torriani S. Comparative genomics reveals the potential biotechnological applications of <i>Liquorilactobacillus nagelii</i> VUCC-R001, a strain isolated from kombucha tea (2024) Food Bioscience, 59, art. no. 104001, DOI:   |

10.1016/j.fbio.2024.104001.

- Lebano I., Fracchetti F., Vigni M.L., Mejia J.F., Felis G., Lampis S. MALDI-TOF as a powerful tool for identifying and differentiating closely related microorganisms: the strange case of three reference strains of *Paenibacillus polymyxa* (2024) Scientific Reports, 14 (1), art. no. 2585 DOI: 10.1038/s41598-023-50010-w
- Checchia I., Andreolli M., Lanza F., Santoiemma G., Mori N., Pasini M., Lampis S., Felis G.E. Testing low-risk bioactive compounds on *Halyomorpha halys*: an improved pipeline of analyses to investigate their effects on the bacterial endosymbiont *Candidatus* Pantoea carbekii (2024) Pest Management Science, DOI: 10.1002/ps.8564

Patents Patent WO 2018/ 014979 Al Microbion s.r.l. - Authors Fracchetti, Fabio; Torriani, Sandra; Del Casale, Antonio; Felis, Giovanna. Highly Polymorphic And Modular Extragenic (H.P.M.E.) Markers Within Specific Taxa Of Microorganisms And Use Thereof For Their Differentiation, Identification And Quantification – Patent WO 2019/123328 Ai Probiotical S.P.A. - Authors Pane, Marco; Amoruso, Angela; Fiorio, Mirta; Marotta, Angela; Felis, Giovanna; Del Casale, Antonio. - Composition For Use In The Treatment And/Or Improvement Of Sleep And Mood Disorders.

Verona, 20.01.2025