

## PERSONAL INFORMATION

### Giovanna Cristina Varese



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Sex: Female | Date of birth: 07/04/1967 | Nationality: Italian

Enterprise	University	EPR
<input type="checkbox"/> Management Level	<input checked="" type="checkbox"/> Full professor	<input type="checkbox"/> Research Director and 1st level Technologist / First Researcher and 2nd level Technologist
<input type="checkbox"/> Mid-Management Level	<input type="checkbox"/> Associate Professor	<input type="checkbox"/> Level III Researcher and Technologist
<input type="checkbox"/> Employee / worker level	<input type="checkbox"/> Researcher and Technologist of IV, V, VI and VII level / Technical collaborator	<input type="checkbox"/> Researcher and Technologist of IV, V, VI and VII level / Technical collaborator

## PERSONAL STATEMENT

Expert in Fungal taxonomy and Biotechnology and in microbial Biobanking

Full Professor at the Department of Life Sciences and Systems Biology, University of Torino Coordinator of the Joint Research Unit (JRU) MIRRI-IT

Head of the *Mycotheca Universitatis Taurinensis* (MUT), University of Torino

Professor GC Varese's research interests cover all aspects of mycology, from systematics to biotechnological applications of fungi. She he has been responsible for managing, implementing and enhancing the fungal culture collection (MUT), which over the years has become one of the largest *ex situ* collections of microorganisms in Italy and in Europe. The main institutional tasks of MUT are the acquisition, conservation, identification, characterization and distribution of fungi for educational, scientific and industrial purposes. Since 2017 Coordinator and Representative of the University of Turin of the Joint Research Unit (JRU) MIRRI-IT for the creation of the Italian network of collections of microorganisms.

The research activity of Prof GC Varese has therefore evolved over time together with the MUT activities with the specific intent of guaranteeing the safeguarding of the genetic resources and the diversity of fungi, emphasizing their genetic plasticity and physiological versatility, in order to explore and enhance the biotechnological potential of these organisms in different fields of application. Noteworthy is also the application of MUT fungal strains for innovation in industrial technology, developed in collaboration with several national and international companies.

## WORK EXPERIENCE

- (2019 – Current) **Full Professor, Department of Life Sciences and Systems Biology**  
*University of Torino, Italy*  
**Main activities and responsibilities:** Management of the *Mycotheca Universitatis Taurinensis* (MUT); coordination of MUT research activities in the field of basic and applied mycology; implementation of MUT fungal strains for industrial technology development; teaching and supervision of B.Sc., M.Sc. and PhD students, Representative of University of Torino in different Boards.
- (2015–2019) **Associate Professor, Department of Life Sciences and Systems Biology**  
*University of Torino, Italy*  
**Main activities and responsibilities:** Management of the *Mycotheca Universitatis Taurinensis* (MUT); Coordination of MUT research activities in the field of basic and applied mycology; Teaching at multiple B.Sc. and M.Sc. courses at the University of Torino, PhD students' supervision.
- (2006–2015) **Researcher and Assistant Professor in Mycology and Botany, Department of Life Sciences and Systems Biology**  
*University of Torino, Italy*  
**Main activities and responsibilities:** Head of the *Mycotheca Universitatis Taurinensis* (MUT), the fungal culture collection of the University of Torino, Teaching at one B.Sc. and M.Sc. course at the University of Torino, PhD students' supervision.
- (1999–2006) **Technician (D), Department of Life Sciences and Systems Biology**  
*University of Torino, Italy*  
**Main activities and responsibilities:** Research in mycology and maintenance of the fungal collection at the *Mycotheca Universitatis Taurinensis* (MUT)

## EDUCATION AND TRAINING

- (1997-1999) **Galileo Postdoctoral Research Fellow**, Italo-French University at University of Torino (Italy). Fellowship within Galileo program for exchange between young researchers in a research program entitled "Role of rhizosphere bacteria in the diversity and specificity of ectomycorrhizal symbionts associated with larch in the Alps".
- (1995-1997) **Postdoctoral Researcher**, University of Torino (Italy). Postdoctoral fellowship entitled "Microfungi associated with ectomycorrhizal roots: functional significance and interactions with the host plant and ectomycorrhizal symbionts".
- (1991-1994) **PhD in Fungal Biology and Biotechnology**, University of Torino (Italy). Thesis title: Interactions between rhizobia fungi with different nutritional biology.
- (1986-1991) **BSc in in Biological Sciences (First Class Honours)**, University of Torino (Italy), Thesis title: Rhizoplanic fungi of *Fagus sylvatica* L. and their interactions.

## BIBLIOMETRIC PARAMETERS

### Author of publications

- Author of more than 200 publications that relate to the mycology and microbiology; over 110 on peer-reviewed research journals and the others on national and international journals with revision committees as well as abstracts in conference books in international journals, which received 6314 citations, resulting in an h-index equal to 45 (Google Scholar, June 2023).
- Author of 9 book chapters.
- Author of 4 international patents and 6 national patents.

## AREA OF EXPERTISE

### Fungal Biotechnology and microbial Biobanking

1. Development, optimization and application of molecular methods for the detection, quantification and characterization of foodborne pathogens;
2. Biobanking: long term maintenance and storage of fungal genetic resources for basic and applied studies;
3. Characterization of fungi for their application in biotechnologies such as bioremediation, drug discovery and bioconversion;
4. Development of innovative industrial technologies in collaboration with national and international companies.

## NETWORKS AND MEMBERSHIPS

(2008-Current)

### Professional and academic memberships

#### Commission of trust

- 2021-2022, Member of the Novo Nordisk Foundation's Committee on the Challenge Program "Recycling for a sustainable society" Copenhagen, Denmark;
- 2020-to today, Member of the Technical Scientific Committee (CTS) for biodiversity of agricultural and food interest at the Italian Ministry of Agricultural Policies food and forestry (MIPAAF);
- 2020-to today, Member of the College of teachers of the Master in Science, Conservation & Valorization of marine resources at Université Cote D'azur (France);
- 2020-to today, Member of the Advisory Board of the Eu Project ASSEMBLEPLUS (H2020 – 730984);
- 2019-to today, Scientific Officer of the European Culture Collection Organization (ECCO);
- 2018-to today, Academic Referent for the for the implementation of collaboration program between Torino and Edge Hill University;
- 2017 to today, Coordinator of the Joint Research Unit (JRU) MIRRI-IT for the creation of a network of collections of microorganisms at national level under the supervision of Italian ministry of research;
- 2017 to today, Representative of the University of Torino at the Inter-university Center for Marine Biology and Applied Ecology (CIBM);
- Italian Representative at the Interim National Coordinators Forum (INCF) of the Microbial Resource research Infrastructure (MIRRI);
- 2016 to today, Representative for the University of Torino at the EU Platform on Food Losses and Food Waste;
- 2016 to today, Representative of the University of Torino and member of the Scientific Committee of the II Level Inter-university Master in "Bioeconomy and Circular Economy - BIOCIRCE" activated with the University of Milano-Bicocca, the University of Napoli "Federico II" and the University of Bologna;
- 2016 to today, Member of the Teaching Commission and Equity Commission of the M.Sc. in Sustainable Management of Natural Systems
- 2014-to 2021, Academic Referent for the partnership between Torino and the National University of Ireland Galway (IR);

- 2013 to today, Member of the Working Group in Industrial Biotechnology of Assobiotech and member of the Scientific Committee of the per Italian Forum on Biotechnology and Bioeconomy
- 2010 to today, Scientific Evaluation of International Research Projects for agencies and foundations in Italy, France, Netherland, Portugal, Czech Republic, Greek, Poland, USA, Chile;
- 2010 to today, Member of the Teaching Commission, Equity Commission and Commission Students' Career of the M.Sc. in Plant Biotechnology;
- 2008 to today, Member of the College of teachers of the II level Master in Science and Technology of Food and Human Nutrition Michele Ferrero;
- 2006 to today, Member of the College of teachers of the Doctoral School in Biological Sciences and Applied Biotechnologies of the University of Torino;

#### Academic memberships

- 2019 to today, Member of the Italian Society of General Microbiology and Microbial Biotechnology (SIMGBM)
- 2016-2018, Vice-President of the Italian Society of Agriculture, Environmental and Food Microbiology;
- 2008 to today, Mycology Group Advisor of the Italian Botany Society;
- 2008 to today, Member of the European Culture Collection Organization (ECCO);
- 2008 to today, Member of the World Culture Collection Organization (WFCC);

#### Institutional responsibilities

- 2018 to today, Member of the Monitoring Commission of the M.Sc. in Natural Systems Science, University of Torino, Italy;
- 2018 to 2020, co-referent of the Third Mission and Research Board Member of Dep. Life Science and Systems Biology, University of Torino, Italy;
- 2013 to 2015, member of the DBIOS Council at the University of Torino, University of Torino, Italy;
- 2014 to today, Member of the Teaching Commission, Equity Commission and Commission Students' Career of the M.Sc. in Plant Biotechnology, University of Torino, Italy;
- 2014 to today, Scientific Committee member of the Herbarium of the University of Torino, Italy;
- 2013 to 2015, member of the DBIOS Council at the University of Torino, University of Torino, Italy;
- 2006 to today, Scientific Director of the Mycotheca Universitatis Taurinensis (MUT), University of Torino, Italy and Responsible for its ISO 9001 certification;
- 2001 to 2002, Member of the Teaching Commission of the M.Sc. in Conservation and pedo-environmental balance in mountain areas, University of Torino, Italy;
- 1999 to 2013, Member of the Department Council at the Plant Biology Department, University of Torino, Italy.

#### Editorial responsibilities

- In recent years he has worked as Referee for more than 65 international journals;
- 2020 to today, Member of the Editorial Board of All life;
- 2020, guest Editor for the special issue "Endocrine Disruptor Chemicals and Estrogenic Activity in the Context of Health Risk Assessment" in International Journal of Environmental Research and Public Health;
- 2019, guest Editor for the special issue "New Microbial Isolates from Hostile Environment: Perspectives for a Cleaner Future" in Frontiers in Environmental Science;
- 2016 to today, Member of the Editorial Board of Frontiers in Microbiology, Frontiers in Environmental Science, Microbiology and Bioengineering and Biotechnology;
- 2014, Book Chapter referee: "Polyextremotolerance as the fungal answer to changing environment" in the book Microbial Evolution under Extreme Environment - Ed. C. Bakermans

## PROJECTS

(2000-Current)

#### Project or research unit coordinator in National and European projects (including projects with private Companies and Foundations)

- PNRR - Strengthening the MIRRI Italian Research Infrastructure for Sustainable Bioscience and Bioeconomy – National consortium Coordinator. Project funded by National Recovery and Resilience Plan (PNRR) is granted by the European Commission's NextGenerationEU programme, with a total budget of about €17.000.000 (2022);
- Tecniche avanzate di micorimedio: una soluzione sostenibile per la bonifica di suoli contaminati e per la sicurezza per gli operatori \_ Progetto INAIL BRIC 2022 (ID: 65). Coordinator.
- Un approccio one health per monitorare il destino delle bioplastiche nei suoli agrari. Fondazione CRT 2023. Action Leader.
- JGI Community Science Program (CSP 2020) - Shed light in the dark lineages of the fungal tree of life - Research Unit Coordinator within the project financed by the JGI Community Science Program aimed at the sequencing of 500 black yeast fungal genomes;
- SATURNO - Organic waste and carbon dioxide transformed into fuels, fertilizers and chemicals; concrete application of the circular economy (Bioeconomy Technological Platform Call Piedmont Region POR FESR 2014/2020) - Action Leader and Research unit coordinator in two Work-packages;
- Implementation and Sustainability of Microbial Resource Research Infrastructure for 21st Century (H2020-INFRADEV-2019-2) - Research Unit Coordinator;
- Discovery of Natural Antimicrobial Compounds (DONAC) - Progetto ARK Foundation (CH) (2019-2020) -
- Research unit coordinator in collaboration with CimArk e IHMA Europe;
- Cloning of DHODH from the rice-blast fungus (*M. oryzae*) - Progetto Bayer Crop Science's G4- Initiative 2019,

- Research unit coordinator;
- o European transdisciplinary networking platform for marine biotechnology (OC-2018-1-23025) - Member of the Management Committee (MC) and Work package leader for the European COST action project;
- o Bioactive molecules from marine fungi: new resources for blue biotechnology (Italian- French University Galileo Project 2018-19) - Project coordinator; project in collaboration with Université de Bretagne Occidentale;
- o Project CNR - ASRT "Biological Evaluation of extremophilic Chaetomium species for the production of metabolites for food and pharmaceutical uses (2019-2021) - Research project collaborator within the CNR - ASRT (SAC.AD002.034) project partnering the Italian National Research Council and the Suez Canal University of Egypt;
- o Implementation of the Turin University Culture Collection (TUCC) for the management of microbial resources of the University of Turin (CRT Foundation 2018) – Project Coordinator;
- o Bioremediation and revegetation to restore the public use of contaminated land (LIFE15 ENV/IT/000396)(2016-2019) - Work package leader and Research Unit Coordinator;
- o Mediterranean marine fungi: a novel source of bioactive secondary metabolites (Italian- French University, Galileo Project 2015-16) - Project coordinator; in collaboration with Université de Nice-Sophia Antipolis;
- o Microbial Resource Research Infrastructure (FP7-INFRASTRUCTURES) (2012-2016) - Work package leader and Research Unit Coordinator;
- o Discovering marine mycobiota: identification, characterization and preservation of fungi associated to algae for future biotechnological exploitation (Italian-French University, Galileo Project 2013-14) - Project coordinator; in collaboration with Technopôle Brest-Iroise ESMISAB;
- o MYCOPLANT - Root Microbiome For Plant Health: Dissecting The Role Of Soil Fungi (2013-2015) - Research unit coordinator;
- o Banking Rhizosphere Micro-Organisms European - Russian Initiative to set up a network of rhizosphere microbiological resources centres (FP7-KBBE-2010-4) - Work package leader and Research Unit Coordinator;
- o PRIN 2004 - A system of IT tools for the creation of interactive floras at national level - Scientific collaborator;
- o Center of Excellence for Biosensing through the use of Plant and Microbial Organisms (CEBIOVEM 2003 – 2006) - Research unit coordinator for two main work packages;
- o PRIN 2002 - A system of online tools for the identification of plants and fungi in Italy - Scientific collaborator;
- o European project "Sustainable bio-technologies against forest regeneration decline and soil erosion in north-eastern Bohemia" INCO COPERNICUS (IC18-CT98-0035)(2000-2002) - Research unit coordinator;

## INTERACTIONS WITH PRIVATE COMPANIES

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- o 2006 to today; numerous fruitful collaborations with private companies and Foundations through the activation of conventions, services or co-financed projects of technology transfer in different biotechnological sectors.

## ORGANIZATION OF CONFERENCES AND WORKSHOPS

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- o 2021. Member of the Organizing Committee of the 39th Annual Meeting of the European Culture Collections' Organisation - 22-24 September 2021 London, UK (virtual meeting);
- o 2019 President of the Scientific Committee and of the Organizing Committee of the XXXVIII Annual Meeting of the European Culture Collection Organization (ECCO2019) - 12-14 June 2019, Torino, Italy;
- o 2019. Member of the Scientific Committee of the 7th Conference on Physiology of Yeasts & Filamentous Fungi (7PYFF) - 24-27 June, Milan, Italy;
- o 2019. Organizing Committee of the Workshop "Multidisciplinary approach for the development of eco-sustainable cities: urban gardens, redevelopment and social inclusion interventions, 24 September 2019, Torino, Italy;
- o 2018. Member of the Organizing Committee of the IFIB 2018 International Congress. International Forum on Industrial biotechnology and Bioeconomy: from biotechnology new resources from industry, 27-28 September 2018, Torino, Italy;
- o 2016. Member of the Organizing Committee of the ICOMID 2016 International Congress - 23 November 2016 Moscow, Russia;
- o 2014. Member of the Organizing Committee of International Congress IFIB 2014. Italian Forum on Industrial biotechnology and Bioeconomy: from biotechnology new resources from industry, 25-26 September 2014, Genova, Italy.
- o 2013. Member of the Organizing Committee of the IFIB 2013 International Congress. Italian Forum on Industrial biotechnology and Bioeconomy: from biotechnology new resources from industry, 22-23 September 2013, Naples.

## PERSONAL SKILLS

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Mother tongue(s) Italian

Other language(s) English

Torino, 4 Luglio 2023

*Giovanna Cristina Varese*