

# CURRICULUM VITAE ET STUDIORUM

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## PROF. GIANLUIGI CARDINALI

### Addresses

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## Personal Data

Name **Gianluigi Cardinali**  
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Date of Birth 14 – 04 -1964  
Married, four children

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## Education

2003 Stage on yeast molecular phylogeny at the Tennessee State University – Prof. Ganter  
2001 Theoretical stage on yeast molecular phylogeny at the Tennessee State University – Prof. Ganter  
1993-1995 Post Doctoral fellowship at the Heinrich Heine University of Düsseldorf with Prof. C.P. Hollenberg to study the galactose metabolism in *Saccharomyces cerevisiae* and *Kluyveromyces lactis*  
1989-1993 Doctoral Degree at the University of Perugia in Fungal Biotechnology with a thesis on the molecular taxonomy of the *Saccharomyces sensu stricto* group  
1992 Research stage at the University of California at Davis, California, USA with Dr. E.O. Shuster, on the phylogeny of *CDC28* and *CDC34* genes  
1991 Stage at the Gulbenkian Institute,- Oeiras, Portugal, on the sugar transport in *Saccharomyces sensu stricto* group  
1988 International Course on "Molecular Methods in Yeast Taxonomy" at the Gulbenkian Institute,- Oeiras, Portugal  
1983-1988 Degree of Agricultural Engineer at the College of Agriculture of the University of Perugia – Thesis on the use of the protoplast fusion for yeast genetic improvement-*Summa cum Laude*  
1987 Erasmus Grant at the Thames Polytechnic of London (currently University of Greenwich) on the aminoacidic composition of dihydroorotase

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## Employment and positions

Dic 2014 National Scientific Habilitation as Full Professor  
Since 2014 Associate Professor at the Department of Pharmaceutical Sciences of the University of Perugia  
Since 2013 Member of the Doctorate school in Biotechnology  
2012-2013 Member of the Doctorate School in Biochemical and Biotechnological Sciences  
Since 2011 Affiliated to the Excellence Research Center CEMIN  
Since 2004 Associate Professor at the Department of Applied Biology of the University of Perugia and member of the College of Agriculture  
2002 Habilitation as Associate Professor  
2004-2012 Member of the Doctorate school in Plant Biology and Biotechnology  
1995-2003 Member of the Doctorate school in Fungal Biotechnology

1994-2004 Assistant Professor at the Department of Applied Biology of the University of Perugia and member of the College of Agriculture

1993 Technical Assistant at the Heinrich Heine Universitaet – Duesseldorf - (D)

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## Appointments

Since 2018 Comitato tecnico-scientifico per la valutazione delle domande di iscrizione nel Registro Regionale per la tutela del patrimonio genetico di interesse agrario a rischio di erosione genetica - Region Umbria - **Member of the board.**

2017-2020 Scientific Commette of Fondazione Scienza e Fede. Holy See, Pontifical Council of Culture - **Member**

Since 2017 **Responsible for the Quality** of the Department of Pharmaceutical Sciences. DSF -

Since 2014 Steering Board of the Dep. Pharmaceutical Sciences- **member**

Since 2015 Technical Scientific Board of the ITS (Higher College of Technology) Biotechnologies. ITS Umbria - **President**

2010-2014 STOQ project agreement between the University of Perugia and the Pontifical Council for the Culture. UNIPG- The Holy See - **Local responsible**

2013-2016 Scientific Commette of Fondazione Scienza e Fede. Holy See, Pontifical Council of Culture - **Member.**

2011 Commission of genetic resources for Food and Agriculture. FAO - **Expert.**

2011-2015 Bioethical Board of the University of Perugia. UNIPG - **Vice president.**

2010-2012 Italian Society of Food, Agricultural and Environmental Microbiology. SIMTREA - **Secretary**

2009-2012 Working group for the Italian guidelines for the conservation and exploitation of the biodiversity of agricultural interest (GIBA). MiPAF - **Coordinator**

2008 Italian Ministry of Agriculture (MiPAF) for the Organic Yeast definition - Bruxelles, July 10-11 2008. MiPAF - **Expert**

2007-2008 Expert panel on the organic wine at the Italian Ministry of Agriculture (MiPAF). MiPAF - **Member.**

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## Publications for governative organizations

2015 Beed, F., A. Benedetti, G. Cardinali, S. Chakraborty, T. Dubois, K. Garrett and M. Halewood (2015). *Micro-organism genetic resources for food and agriculture and climate change. Coping with climate change – the roles of genetic resources for food and agriculture.* F. staff. Rome, **FAO.**

2012 Cardinali, G. and A. Benedetti (2012). *Linee guida per la conservazione e caratterizzazione della biodiversita' microbica di interesse agricolo.* Rome **MiPAF.**

2011 Beed, F., A. Benedetti, G. Cardinali, S. Chakraborty, T. Dubois, K. Garrett and M. Halewood (2011). "*Climate change and micro-organism genetic resources for food and agriculture: state of knowledge, risks and opportunities.*" Commission on Genetic Resources for Food and Agriculture.

Background Study Paper

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## Memberships

Italian Society of Agricultural, Food and Environmental Microbiology  
Italian Wine Group

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## Awards

- 2017 Gilead Fellowship prize for Digital research Project
- 2017 Premio SIMTREA per la miglior pubblicazione Scientifica dell'anno (Impact factor= 13). Società Italiana di Microbiologia Agraria Alimentare e Ambientale -.
- 2016 Gilead Fellowship prize for Invasive Fungal Infection Project : Caratterizzazione del biofilm ed efficacia del trattamento con Amfotericina B liposomiale in ceppi filmogeni del gruppo *Candida parapsilosis sensu lato*

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## Grants and Projects

- 2018 Ricerca Base 2018. MIUR - **Investigator.**
- 2017-2018 Biofilms: a correlative study. INFN DAFNE BEAMLINER - Project N°21. **Responsible of the Project.**
- 2017-18 Sistema in house microbiologico e metagenomico avanzato per il controllo dei microrganismi nelle produzioni di germogli e semi da germoglio. Regione Umbria - **Responsible of the Project.**
- 2017-18 FTIR spectroscopy and imaging of *Candida albicans* biofilm.(CALBIOFTIR). INFN-LNF DAFNE-Light Facility - Project N°9 SINBAD. **Responsible of the Project.**
- 2016-2018 Caratterizzazione del biofilm ed efficacia del trattamento con Amfotericina B liposomiale in ceppi filmogeni del gruppo *Candida parapsilosis sensu lato* Gilead Fellowship. **Responsible of the Project.**
- 2014-2018 Yeasts for the Sustainability in Viticulture and Oenology.(YesVitE). EU Fp-7 People - IRSES MSCA - 7PQ N.PIRSES-GA-2013-612441. **Responsible of RU.**
- 2014-2016 Caratterizzazione della variabilità del microbiota in germogli. Regione Umbria - Legge Reg 598. **Responsible of the Scientific Project.**
- 2013-2014 Aggiunta di ceppi autoctoni di *Debaryomyces hansenii* ai salumi umbri per il miglioramento qualitativo come Selezione Partecipativa microbiologica. Fondazione Cassa di Risparmio di Perugia - FCR-2013. **Responsible of the Project.**
- 2012-2016 Bioraffineria di terza generazione Integrata nel territorio MIUR - CLUSTER – CHIMICA VERDE 2012 **Responsible of OU.**
- 2010 Sistema di sterilizzazione microbiologica di semi con sistemi per agricoltura biologica. Regione Umbria - Legge 598 – 2010. **Scientific Coordinator.**
- 2010-2012 Microrganismi negli alimenti e nell'uomo: studio del microbiota e del relativo metaboloma in funzione della dieta omnivora, vegetariana o vegana. MIUR - PRIN 2010. **Responsible of the RU.**
- 2009-2012 Lieviti autoctoni per l'innovazione di prodotto nel settore vitivinicolo regionale Regione dell'Umbria - PSR – Umbria 2009 **Responsible of RU.**
- 2008 Tirocinio sulla biodiversità fungina nei suoli in via di desertificazione - Gianfranco Puddu. Regione Sardegna - Master and Back –2008. **Scientific Coordinator and Tutor.**

- 2008-2011 Marcatori di qualità del suolo utili al controllo dei processi produttivi in biologico.(MARKER IN BIO). MiPAF - Ricerca 2008. **Responsible of the Research Unit.**
- 2008-2011 Innocuità ed efficienza di proteine idrolizzate per la concimazione azotata in agricoltura biologica (PROIDRO). MiPAF - Ricerca 2008. **Responsible of RU.**
- 2008-2009 Biocidi naturali per la sicurezza e la salute. POR Umbria - FSE 2007-2013 Ob. 2 Sviluppo delle risorse umane nell'ambito di reti di imprese, di singole imprese e di singole imprese innovative. **Coordinator of the Project.**
- 2007-2009 Biomonitoraggio avanzato e biodegradazione di residui di fitofarmaci e loro metaboliti Fondazione Cassa di Risparmio Perugia 2007 - FCR 2007. **Scientific Coordinator.**
- 2006-2010 Ruolo dei biofilm microbici per la qualità e la sicurezza dei prodotti caseari. MiUR - FIRB Idee Progettuali 2006. **Responsible of RU.**
- 2005-2007 Proposta per un sistema certo di tracciabilità per il controllo e la protezione delle carni - Renewed. MiPAF - Tracciabilità -Tormancina. **Responsible of the Research.**
- 2004-2007 Rintracciabilità genetico-microbiologico-molecolare delle pomacee. MiPAF - MiPAF Ricerca 2004. **National Coordinator.**
- 2003-2005 Rintracciabilità Microbiologico-Molecolare dei Formaggi - (RINFOR ). MiPAF - Progetto a Sportello – 2003. **Responsible of RU.**
- 2003-2005 Prevenzione sanitaria mediante monitoraggio e risanamento degli ambienti inquinati".(FCR 2003). Fondazione Cassa di Risparmio di Perugia - Cod. progetto 2003.0071.020 SALUTE PUBBLICA. **Scientific Responsible.**
- 2002-2004 Proposta per un sistema certo di tracciabilità per il controllo e la protezione delle carni. MiPAF - Tracciabilità -Tormancina. **Responsible of the Research.**
- 2001-2003 Prevenzione sanitaria mediante monitoraggio e studio degli effetti degli inquinanti ambientali su organismi modello viventi. Fondazione Cassa di Risparmio di Perugia - FCR 2001. **Responsible of RU.**

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### **International Cooperative agreements**

- 2015-2017 Co-tutorship agreement between the University of Perugia and the University of Aas (Norway). - **Scientific Responsible - proposer.**
- 2010-2014 STOQ project agreement between the University of Perugia and the Pontifical Council for the Culture. UNIPG- The Holy See - **Local responsible**
- 2009-2012 Committee on the teaching of the Agricultural Microbiology. SIMTREA - **Coordinator.**
- 2001-2004 Cooperative agreement between Tennessee State University and Università degli Studi di Perugia. UNIPG- TSU - **Coordinator & proponent.**

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### **Editorial activity**

- 2015 Proceedings of the MD2015 International meeting – **Editor**
- 2009-2012 The Open Applied Bioinformatics Journal - **Member of the editorial board**

2011 Special issue on the bioinformatics applied to fungal taxonomy. **Editor**

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### Meeting Organizations

2017 IV International Conference on Microbial Diversity - Bari.(MD2017). SIMTREA - **Scientific Committee.**

2015 III International Conference on Microbial Diversity - The Challenge of Diversity - Perugia.(MD2015). SIMTREA - **Chair.**

2011 I International Conference on Microbial Diversity - Milan.(MD2011). SIMTREA - **Organizing Committee.**

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### Teaching

1999-2002 Applied Microbiology – DU Food Technology

2000-2005 Microbial Genetics – Master in Agricultural Science and Technology

2003-2005 Agricultural Microbiology - CLT Viticulture & Enology

2004-2010. Agricultural Microbiology and Microbial Biotechnologies – CL Biotechnologie

2004-2009 Microbiological Techniques – CL Biotechnologie

2005-2010 Microbiological Biotechnologies – CLS Biotechnologie Farmaceutiche

2010-2017 Microbial Genetics and Biotechnologies - CI Microbiologia – CLT Biotechnologie

Since 2018 Laboratories of Microbial and Cell Cultures Models - CLT Biotechnologie

Since 2018 Food Microbiology – CL Science of the human food and nutrition (SANU)

Since 2005 Agricultural Microbiology – CLT Scienze Agrarie e Ambientali

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### Outreach & Citizen Science

2018 La Rivoluzione dei Big Data per lo scienziato e per tutti noi. Open Day of the Winter School on Biotechnology - Unipg - **Chair.**

2017 Microrganismi, Amici o nemici? UniPG - Scienza Infusa - **representative of the Department of Pharmaceutical Sciences.**

2015 La salvaguardia della bio-diversità microbica. I. Convegno Interdipartimentale: Confronti Sulla Bioetica - Unipg - **invited lecturer.**

2009 La specie microbica fra concezione e applicazione. Darwin tra Scienza Storia e Società - Chieti - **invited lecturer.**

2008 The microbial Species: concepts and applications. STOQ Project - Summer school on Evolution - Poblet - (E) - **invited lecturer.**

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## Technological Transfer

- 2013-2018 “Enzyme & Cell Biosolutions” (ECB ) spin-off . - Co-founder.
- 2007-2010 “MITES” Spin-off on the use of microbial derivatives for material traceability.  
UniPG - Founder
- 2006 Materiali plastici informativi decodificabili (MPID) . 06425232.3, INSTM-MITES-  
. EPO
- 2006 Prized as the best “spin off” project at the UniPG StartCup

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## Research Evaluations

- 2006 Evaluation CIVR: **Best** publication of the Scientific Area 07 of the University of Perugia
- 2004-2010 Evaluation ANVUR: 3 **Excellent** papers out of the 3 papers requested
- 2011-2014 Evaluation ANVUR: 2 **Excellent** papers out of the 2 papers requested

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## Research Metrics

- H Citations **19** (Scopus ); **22** (Google Scholar)
- Number of publications **2756**(Scopus ); **3906** (Google Scholar)
- Impact factor **83** printed; **87** total communications, of which **13** invited talks
- Metrics for ASN Commissioners Publications Total IF score = **256.7** average IF score = **3.21**
- Satisfied for **AGR/16** and **BIO/19**
- List available form <http://www.unipg.it/personale/gianluigi.cardinali>

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## Research Lines

1. **Mechanism of fungal and bacterial biofilm formation on abiotic surfaces.** Search of the biological mechanisms, definition of new determination techniques for the biomass and activity evaluation. Yeast Biofilm in the genus Candida: formation, dynamics and inhibition with single drugs or combinations
2. **Synergies between antifungal drugs**, considering: i. conventional antifungal (e.g. echinocandins, azoles etc.), ii. natural products (e.g. polyphenols etc); iii. Innovative products (i.e. nanoformulations)
3. **Definition of novel approaches to determine the MIC and MBC** of cultures, within the first 36-48 hrs. from the sampling, in order to obtain results before the time limit at which the patient mortality increases.
4. **Yeast Phylogenetics and Taxonomy.** This line of research has been followed with several approaches spanning from electro-karyotyping , various banding pattern based techniques to the current participation in the development of two

internationally recognized barcode markers (ITS and TEF1-alpha). Several species have been isolated and described. Currently this line of research is followed primarily using metabolomics (FTIR) and molecular genetics (Next Generation Seq) in simplex and multiplex. The two techniques are tailored to work separately or jointly for a fast diagnosis at the level of species.

5. **Intestinal microbiome of man and production animals** subject to different diets, by using metagenomics approaches.
6. **Stress response in yeast and bacteria**, determination of the stressing level, definition of the spectral areas responding to the stress, classification of the strains on the basis of the metabolomics stress response and of the cell mortality.
7. **Food Microbiology** with a special focus on the preservation and valorization of the biodiversity, traceability of products, definition of typical areas of production.
8. **Yeast Classical Genetics** – In this line of research are included classical genetics works to select yeast strains able to ferment at super-optimal temperature and other studies to improve the resistance of oenological strains to the active drying. The production of holo-homozygous and their subsequent selection has led to a set of oenological starters tested in the Regional Project on Autochthonous wine starters.
9. **Microbial species concept**, using yeasts as model. Bioinformatics applied to the identification, classification and fast diagnosis.
10. **Fourier Transform InfraRed Spectroscopy - FTIR Metabolomics** – This line, developed since 2005, includes three subdirectories: a) detection and quantification of mixed cultures by means of FTIR, b) Metabolomic characterization at the strain and population level, c) dereplication and definition of the population clonality.
11. **Bioinformatics** – This line of Research includes the production of applications in R and an early Excel Macro. In the last year, this line includes the development of new algorithms for massive data analysis, bioinformatics applied to taxonomy and phylogeny.
12. **Yeast Molecular Biology**- This line of research includes molecular genetics papers on the regulation of the GAL/LAC gene regulation and a series of papers to establish new methods in yeast molecular biology.



## Publications

### A. ISI- SCOPUS Indexed

1. Tascini C, Sozio E, Corte L, Sbrana F, Scarparo C, Ripoli A, Bertolino G, Merelli M, Tagliaferri E, Corcione A, Matteo B, Gianluigi C and Francesco M. The role of biofilm forming on mortality in patients with candidemia: a study derived from real world data. *Infectious Diseases*. **2018**:1-6.
2. Roscini L, Vassiliou A, Corte L, Casagrande Pierantoni D, Robert V, Tascini C, Mattana S, Alunni Cardinali M, Orfanos SE, Fioretto D and **Cardinali G**. Yeast Biofilm as a Bridge Between Medical and Environmental Microbiology Across Different Detection Techniques. *Infectious Diseases and Therapy*. **2018**;7(1):27-34.
3. Scarponi F, Mattana S, Corezzi S, Caponi S, Comez L, Sassi P, Morresi A, Paolantoni M, Urbanelli L, Emiliani C, Roscini L, Corte L, **Cardinali G**, Palombo F, Sandercock JR and Fioretto D. High-Performance Versatile Setup for Simultaneous Brillouin-Raman Microspectroscopy. *Physical Review X*. **2017**;7(3).
4. Sbrana F, **Cardinali G**, Dal Pino B, Bigazzi F, Sabatino L, Pianelli M, Luciani R and Sampietro T. A case of ‘anaphylactic-like’ reaction during LDL apheresis: a pathophysiological hypothesis on white wine containing metabisulphite. *Transfusion Medicine*. **2017**;26(6):460-1.
5. Mattana S, Alunni Cardinali M, Caponi S, Casagrande Pierantoni D, Corte L, Roscini L, **Cardinali G** and Fioretto D. High-contrast Brillouin and Raman micro-spectroscopy for simultaneous mechanical and chemical investigation of microbial biofilms. *Biophys Chem*. **2017**;229:123-9.
6. Colabella C, Corte L, Roscini L, Shapaval V, Kohler A, Tafintseva V, Tascini C and **Cardinali G**. Merging FT-IR and NGS for simultaneous phenotypic and genotypic identification of pathogenic *Candida* species. *PLoS One*. **2017**;12(12):e0188104.
7. **Cardinali G**, Corte L and Robert V. Next Generation Sequencing: problems and opportunities for next generation studies of microbial communities in food and food industry. *Current Opinion in Food Science*. **2017**;17:62-7.
8. Carannante N, Pagliano P, Rossi M, Attanasio V, Rescigno C, Corte L, Tascini C and **Cardinali G**. Invasive listeriosis in a patient with several episodes of antibiotic associated colitis presumably due to *Clostridium difficile*. *Infection*. **2017**:1-3.
9. Vu D, Groenewald M, Szöke S, **Cardinali G**, Eberhardt U, Stielow B, de Vries M, Verkley GJM, Crous PW, Boekhout T and Robert V. DNA barcoding analysis of more than 9000 yeast isolates contributes to quantitative thresholds for yeast species and genera delimitation. *Studies in Mycology*. **2016**.
10. Tiecco M, Roscini L, Corte L, Colabella C, Germani R and **Cardinali G**. Ionic Conductivity as Tool to Study Biocidal Activity of Sulfobetaine Micelles against *Saccharomyces cerevisiae* Model Cells. *Langmuir*. **2016**.
11. Tascini C, **Cardinali G**, Barletta V, Di Paolo A, Leonildi A, Zucchelli G, Corte L, Colabella C, Roscini L, Consorte A, Pasticci MB, Menichetti F and Bongiorno MG. First Case of

Trichoderma longibrachiatum CIED (Cardiac Implantable Electronic Device)-Associated Endocarditis in a Non-immunocompromised Host: Biofilm Removal and Diagnostic Problems in the Light of the Current Literature. Mycopathologia. **2016**.

12. Moktaduzzaman M, Galafassi S, Vigentini I, Foschino R, Corte L, **Cardinali G**, Piškur J and Compagno C. Strain-dependent tolerance to acetic acid in *Dekkera bruxellensis*. Annals of Microbiology. **2016**:1-9.
13. Favaro L, Corte L, Roscini L, Cagnin L, Tiecco M, Colabella C, Berti A, Basaglia M, **Cardinali G** and Casella S. A novel FTIR-based approach to evaluate the interactions between lignocellulosic inhibitory compounds and their effect on yeast metabolism. RSC Advances. **2016**;6(53):47981-9.
14. Corte L, Roscini L, Colabella C, Tascini C, Leonildi A, Sozio E, Menichetti F, Merelli M, Scarparo C, Meyer W, **Cardinali G** and Bassetti M. Exploring ecological modelling to investigate factors governing the colonization success in nosocomial environment of *Candida albicans* and other pathogenic yeasts. Scientific Reports. **2016**;6:26860.
15. Brouwer CPJM, Vu TV, Zhou M, **Cardinali G**, Welling MM, van de Wiele N and Robert V. Current Opportunities and Challenges of Next Generation Sequencing (NGS) of DNA; Determining Health and Diseases. British Biotechnology Journal. **2016**;13(4).
16. Tascini C, Sozio E, Tintori G, Ripoli A, Sbrana F, Del Turco ER, Bertolino G, Fortunato S, Carmassi F and **Cardinali G**. Peripherally inserted central catheter as a predominant risk factor for candidemia in critically ill patients in Internal Medicine wards in Italy. Intensive care medicine. **2015**:1-2.
17. Stielow J, Lévesque C, Seifert K, Meyer W, Irinyi L, Smits D, Renfurm R, Verkley G, Groenewald M and Chaduli D. One fungus, which genes? Development and assessment of universal primers for potential secondary fungal DNA barcodes. Persoonia-Molecular Phylogeny and Evolution of Fungi. **2015**.
18. Robert V, **Cardinali G** and Casadevall A. Distribution and impact of yeast thermal tolerance permissive for mammalian infection. BMC biology. **2015**;13(1):18.
19. Irinyi L, Serena C, Garcia-Hermoso D, Arabatzis M, Desnos-Ollivier M, Vu D, **Cardinali G**, Arthur I, Normand A-C and Giraldo A. International Society of Human and Animal Mycology (ISHAM)-ITS reference DNA barcoding database—the quality controlled standard tool for routine identification of human and animal pathogenic fungi. Medical Mycology. **2015**:myv008.
20. Ferrocino I, Di Cagno R, De Angelis M, Turrone S, Vannini L, Bancalari E, Rantsiou K, **Cardinali G**, Neviani E and Cocolin L. Fecal Microbiota in Healthy Subjects Following Omnivore, Vegetarian and Vegan Diets: Culturable Populations and rRNA DGGE Profiling. PLoS ONE. **2015**;10(6):e0128669.
21. Corte L, Tiecco M, Roscini L, De Vincenzi S, Colabella C, Germani R, Tascini C and **Cardinali G**. FTIR Metabolomic Fingerprint Reveals Different Modes of Action Exerted by Structural Variants of *N-Alkyltropinium Bromide* Surfactants on *Escherichia coli* and *Listeria innocua* Cells. PLoS ONE. **2015**;10(1):e0115275.
22. Corte L, di Cagno R, Groenewald M, Roscini L, Colabella C, Gobbetti M and **Cardinali G**. Phenotypic and molecular diversity of *Meyerozyma guilliermondii* strains isolated from food

and other environmental niches, hints for an incipient speciation. *Food Microbiology*. **2015**;48:206-15.

23. Cardellini F, Germani R, **Cardinali G**, Corte L, Roscini L, Spreti N and Tiecco M. Room temperature deep eutectic solvents of (1s)-(+)-10-camphorsulfonic acid and sulfobetaines: hydrogen bond-based mixtures with low ionicity and structure-dependent toxicity. *RSC Advances*. **2015**.
24. Calasso M, Mancini L, Di Cagno R, **Cardinali G** and Gobbetti M. Microbial cell-free extracts as sources of enzyme activities to be used for enhancement flavor development of ewe milk cheese. *Journal of dairy science*. **2015**;98(9):5874-89.
25. Vu D, Szöke S, Wiwie C, Baumbach J, **Cardinali G**, Röttger R and Robert V. Massive fungal biodiversity data re-annotation with multi-level clustering. *Scientific reports*. **2014**;4.
26. Vigentini I, Antoniani D, Roscini L, Comasio A, Galafassi S, Picozzi C, Corte L, Compagno C, Dal Bello F and **Cardinali G**. *Candida milleri* species reveals intraspecific genetic and metabolic polymorphisms. *Food Microbiology*. **2014**;42:72-81.
27. Tiecco M, Corte L, Roscini L, Colabella C, Germani R and **Cardinali G**. A novel, rapid and automated conductometric method to evaluate surfactant-cells interactions by means of critical micellar concentration analysis. *Chemico-biological interactions*. **2014**.
28. Tascini C, Sbrana F, **Cardinali G**, Ripoli A, Leonildi A, Amadori F and Menichetti F. Arterial blood culture to hasten the diagnosis of candidemia in critically ill patients. *Intensive care medicine*. **2014**.
29. Schoch CL, Robbertse B, Robert V, Vu D, **Cardinali G**, Irinyi L, Meyer W, Nilsson RH, Hughes K, Miller AN, Kirk PM, Abarenkov K, Aime MC, Ariyawansa HA, Bidartondo M, Boekhout T, Buyck B, Cai Q, Chen J, Crespo A, Crous PW, Damm U, De Beer ZW, Dentinger BTM, Divakar PK, Dueñas M, Feau N, Fliegerova K, García MA, Ge Z-W, Griffith GW, Groenewald JZ, Groenewald M, Grube M, Gryzenhout M, Gueidan C, Guo L, Hambleton S, Hamelin R, Hansen K, Hofstetter V, Hong S-B, Houbraeken J, Hyde KD, Inderbitzin P, Johnston PR, Karunarathna SC, Kõljalg U, Kovács GM, Kraichak E, Krizsan K, Kurtzman CP, Larsson K-H, Leavitt S, Letcher PM, Liimatainen K, Liu J-K, Lodge DJ, Jennifer Luangsa-ard J, Lumbsch HT, Maharachchikumbura SSN, Manamgoda D, Martín MP, Minnis AM, Moncalvo J-M, Mulè G, Nakasone KK, Niskanen T, Olariaga I, Papp T, Petkovits T, Pino-Bodas R, Powell MJ, Raja HA, Redecker D, Sarmiento-Ramirez JM, Seifert KA, Shrestha B, Stenroos S, Stielow B, Suh S-O, Tanaka K, Tedersoo L, Telleria MT, Udayanga D, Untereiner WA, Diéguez Uribeondo J, Subbarao KV, Vágvölgyi C, Visagie C, Voigt K, Walker DM, Weir BS, Weiß M, Wijayawardene NN, Wingfield MJ, Xu JP, Yang ZL, Zhang N, Zhuang W-Y and Federhen S. Finding needles in haystacks: linking scientific names, reference specimens and molecular data for Fungi. *Database- the journal of biological database and curation*. **2014**;2014.
30. Filannino P, **Cardinali G**, Rizzello C, Buchin S, De Angelis M, Gobbetti M and Di Cagno R. Metabolic responses of *Lactobacillus plantarum* strains during fermentation and storage of vegetable and fruit juices. *Applied and Environmental Microbiology*. **2014**:AEM. 03885-13.
31. Corte L, Tiecco M, Roscini L, Germani R and **Cardinali G**. FTIR analysis of the metabolomic stress response induced by N-alkyltropinium bromide surfactants in the yeasts *Saccharomyces cerevisiae* and *Candida albicans*. *Colloids and Surfaces B: Biointerfaces*. **2014**;116:761-71.

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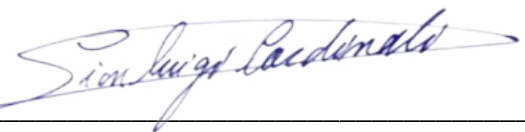
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