

SHORT CURRICULUM VITAE ANNALISA DE GIROLAMO



PERSONAL INFORMATION

Surname, Name **DE GIROLAMO, ANNALISA**
Address **VIA G. FORTUNATO 21 – 70019, TRIGGIANO (BARI), ITALY**
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ORCID / SCOPUS **0000-0002-3155-80027 / 6603916575**
Nationality **Italian**
Date and Place of birth **Bari, August 28, 1971**



WORK EXPERIENCE

Period (from – to) **MARCH 2020 – TO DATE**
Name and address of employer **Institute of Sciences of Food Production - National Research Council of Italy (CNR-ISPA)
Via G. Amendola 122/O, 70125 Bari Italy**
Type of business or sector **Food safety and food quality**
Occupation or position held **Senior Researcher**

Period (from – to) **OCTOBER 2001-FEBRUARY 2020**
Name and address of employer **Institute of Sciences of Food Production - National Research Council of Italy (CNR-ISPA)
Via G. Amendola 122/O, 70125 Bari Italy**
Type of business or sector **Food safety and food quality**
Occupation or position held **Researcher**
Main activities or responsibilities **ISPA Reference for the use of infrared spectroscopy, in combination with multivariate statistical analysis, for estimating mycotoxin contamination levels in foods and for authenticity and traceability studies. ISPA Reference for the synthesis of synthetic mediators for contaminants (aptamers, molecularly imprinted polymers) and their use for the development of analytical method for the analysis of mycotoxins and contaminants in food. Development/optimization/validation of traditional/innovative/rapid methods for mycotoxins analysis in food and feed. Organization of interlaboratory studies for the validation of methods, proficiency testing for the quality control of the laboratories, and related statistical data processing according to the AOAC/IUPAC guidelines and the ISO / IUPAC standards. Preparation and use of reference materials. Monitoring of the mycotoxin content during food processing (production of corn flakes, nixtamalized products, spaghetti, polenta, fruit or vegetable juices). Assessment of strategies for decontaminating and detoxifying foods from mycotoxins. Isolation and molecular characterization of mycotoxins, phytotoxins and phytoalexins.**

Period (from – to) **APRIL 2001 – SEPTEMBER 2001**
Name and address of employer **Institute of Sciences of Food Production - National Research Council of Italy (CNR-ISPA)
Via G. Amendola 122/O, 70125 Bari Italy**
Type of business or sector **Food safety and food quality**
Occupation or position held **Researcher (temporary job)**
Main activities or responsibilities **Participation in the EU Project "Safe organic vegetables and vegetable products by reducing risk factors and sources of fungal contaminants throughout the production chain: the carrot-*Alternaria* model (QLK1-CT-1999-00986)": validation through an interlaboratory study of an analytical method for the simultaneous determination of *Alternaria* toxins in carrots.**

Period (from – to) **APRIL 1999 – MARCH 2001**
Name and address of employer **Institute of Sciences of Food Production - National Research Council of Italy (CNR-ISPA)
Via G. Amendola 122/O, formerly Institute of Toxins and Mycotoxins from Plant Parasites - National Research Council of Italy (CNR-ITEM)**
Type of business or sector **Food safety and food quality**
Occupation or position held **Post-degree 2 years fellowship within the Operational Program 94/99 (code 1178/74) "Research and technological development in Higher Education" with the theme "Improvement of the quality of agro-food products".**
Main activities or responsibilities **Participation in the EU Project "Determination of fumonisins for future EU legislation (Standards, Measurement and Testing Program)" and related midterm meetings: development and in-house**

validation of a new method for the determination of fumonisins in corn and in corn based matrices such as: cornflakes, muffins, infant formula and extruded corn; organization of the Ruggedness test (with the participation of 4 EU laboratories); organization of an international interlaboratory study (with the participation of 23 laboratories) for the validation of the method developed in accordance with the AOAC / IUPAC and CEN guidelines; preparation of the study materials; statistical processing of results; drafting of final European reports and scientific publications.

Participation in the EU Project "Safe organic vegetables and vegetable products by reducing risk factors and sources of fungal contaminants throughout the production chain: the carrot-*Alternaria* model" (QLK1-CT-1999-00986) and related midterm meetings: development of an analytical method for simultaneous determination of *Alternaria* toxins in carrots; evaluation of storage conditions on the production of *Alternaria* toxins and accumulation of phytoalexins in carrots.

Participation in the EU Project "European mycotoxin awareness network (EMAN)" (QLK1-CT-2000-01248) and related mid-term meetings: drafting of newsletters, information sheets and preparation of online courses on the issues of detoxification of cereals and feed contaminated with mycotoxins and intended for animal feed and risk assessment related to human exposure to mycotoxins.

Participation to national projects. Risk assessment of consumer exposure to mycotoxins, contaminants and nutrients.

Period (from – to)	JANUARY 1998 – MARCH 1999
Name and address of employer	Institute of Sciences of Food Production - National Research Council of Italy (CNR-ISPA) Via G. Amendola 122/O, formerly Institute of Toxins and Mycotoxins from Plant Parasites - National Research Council of Italy (CNR-ITEM)
Type of business or sector	Food safety and food quality
Occupation or position held	Post-degree annual training
Main activities or responsibilities	Participation in the EU Project "Determination of fumonisins for future EU legislation (Standards, Measurement and Testing Program)": comparison study of various analytical methods available in the literature to accurately determine the fumonisin content in maize and in maize-based matrices.

Development of biomarkers for the assessment of human and animal exposure to fumonisins by analyzing sphinganine/sphingosine in biological liquids. Participation in national projects: investigations on the occurrence of mycotoxins in cereals cropped in different Italian geographical areas. Strategies for decontaminating and detoxifying foods from mycotoxins

EDUCATION

Period (from – to)	September 1990 - November 1997
Name and type of organization providing education	University of Study of Bari "Aldo Moro"
Principal subjects / skills covered	Biological sciences
Title of qualification awarded	Degree in Biology with full marks

Period (from – to)	February 2000
Name and type of organization providing education	University of Study of Bari "Aldo Moro"
Title of qualification awarded	Qualification to the Biologist profession

NATIVE LANGUAGE **Italian**

OTHER LANGUAGES

Level	ENGLISH	SPANISH
Reading	B2	A2
Writing	B2	A1
Talking	B2	A1

TRAINING (main)

October 2009 (1 month)	Canadian/CNR fellowship at Carleton University (Ottawa, Canada). Gained experience on the use of the SELEX (Systematic Evolution of Ligands by EXponential Enrichment) procedure for the <i>in-vitro</i> selection of DNA synthetic mediators (aptamers) specific for mycotoxins.
November 2007 (1 month)	Award of a CNR short-mobility fellowship at the Department of Animal Feed, National Veterinary Institute (Uppsala, Sweden). Research activity: "Near infrared (NIR) spectroscopy for the detection of fungal infection and mycotoxins in feeds". Gained experience on multivariate statistical analysis to develop NIR spectroscopic methods.

- November 2005
(1 month) CNR/CONICET fellowship at the Universidad Nacional de Rio Cuarto, (Rio Cuarto, Cordoba, Argentina) within the bilateral project for scientific cooperation between CNR (Italy) and CONICET (Argentina). Gained experience on biomarkers of mycotoxin exposure.
- February 2000
(1 month) Award of a European fellowship at the “State Institute for Quality Control of Agricultural Products (RIKILT) Department of Food Safety and Health” in Wageningen (The Netherlands), within the project “Concerted Action Contract N° FAIR-98-4094, Mycotochain”. Gained experience on methods used for the assessment of consumer exposure to mycotoxins.

Research Activities (main)

December 2019 – December 2021

Scientific Responsible – Research Agreement between CNR-ISPA and the private company XEMA Co. Ltd. (Finland). Activity research: “Validation of ELISA test kits for qualitative and quantitative determination of *Fusarium* fungi in maize”.

April 2016 – March 2020

Participant (ISPA reference for aptamer-based methods) - Horizon 2020 EU Project: “Integrated and innovative key actions for mycotoxin management in the food and feed chain (MycKey, Grant agreement H2020-SFS-2015-2, N. ID 678781).

January 2018 – March 2020

Scientific Responsible – Research Agreement between CNR-ISPA and the Institute of Medicinal Plant Development (IMPLAD, Beijing, China). Activity research: “Cooperation activities between the two Parties within the Mycokey project in the field of aptamers”.

March 2016 – March 2017

Scientific Responsible – Research Agreement between CNR-ISPA and Philippine Center for Postharvest Development and Mechanization (PHilMech, Muñoz, Nueva Ecija, Republic of the Philippines). Activity research: “Potential of infrared spectroscopy for detection of aflatoxins in mixed varieties of yellow corn”.

January 2014 – December 2018

Supporting leader - NEN (Nederlands Normalisatie-instituut) project “Multimethod for determination of zearalenone and trichothecenes at least including deoxynivalenol (DON) and its acetylated derivatives (3-acetyl-DON and 15-acetyl-DON), nivalenol and T2 and HT-2 in cereals and cereal products by LC-MS/MS” (Mandate M/520 EN, March 6, 2013).

April 2009 – September 2013

Participant (ISPA reference for evaluating the fate of mycotoxins during food processing) - 7th FP EU Large Collaborative Project: “Novel integrated strategies for worldwide mycotoxin reduction in food and feed chains” – MYCORED (Grant agreement No. 222690).

January 2007 – January 2012

Participant (ISPA reference for PT organization and statistical data evaluation) - 6th FP EU Project “Monitoring and Quality Assurance in the Food Supply Chain- MoniQA (N. FOOD-CT-2006-36337).

March 2007 – August 2009

Participant (Co-responsible for method development and organization of the interlaboratory study) - NEN (Nederlands Normalisatie-instituut) project “Determination of fumonisins B₁ and B₂ in maize based foods for infants and young children” (Mandate M 383/EN February 7, 2006). The method developed was adopted by CEN as a Standard method (EN 16187:2015).

January 2001 – May 2004

Participant - 5th FP EU Project “Safe organic vegetables and vegetable products by reducing risk factors and sources of fungal contaminants throughout the production chain: the carrot-*Alternaria* model” (Grant agreement QLK1-CT-1999-00986).

March 1998 – March 2000

Participant (Co-responsible for method development and organization of the interlaboratory study) - EU Project (Standards, Measurement and Testing Programme) “Determination of fumonisins for future EU legislation” (SMT, Contract No. SMT4-CT97-2193). The method developed was adopted by AOAC International as official one (AOAC Official Method 2001.04) and by CEN as Standard method (EN 14352:2004).

Teaching/Evaluating/Editorial board Activities (main)

Tutor of several PhD and degree thesis on Food Safety. Supervisor of several foreign guests hosted at the CNR-ISPA laboratories. Teacher at post-graduate masters. Training Laboratory Assistant in several international courses. Peer-reviewer for 20 ISI journals. Co-guest editor of the ISI journals “Journal of Chemistry” and “Spectroscopy Based Biosensors (Special issue of *Biosensors*)”. Member representing of Directive Committee of ISPA-CNR (from 2009 to 2016). Evaluator of MIUR research projects. Member of scientific committees at CNR competitions. Several oral presentations at National and International Conferences.

Publications

48 Articles in International Scientific Journals (ISI). 1 Chapter in book. 3 Books of project results. 2 European reports. 9 Articles in National or not ISI Scientific Journals. 17 Proceedings and over 90 abstracts of participation in International/National congresses.

Date March 31, 2020

Signature



Selected publications of the last 5 years (*corresponding author)

1. **De Girolamo A.***, Cortese M., Cervellieri S., Lippolis V., Pascale M., Logrieco A.F., Suman M. (2019). Tracing the geographical origin of durum wheat by FT-NIR spectroscopy. *Foods* 8 (10), 450. DOI: [10.3390/foods8100450](https://doi.org/10.3390/foods8100450).
2. **De Girolamo A.***, von Holst C., Cortese M., Cervellieri S., Pascale M., Longobardi F., Catucci L., Lippolis V. (2019). Rapid screening of ochratoxin A in wheat by infrared spectroscopy. *Food Chemistry*, 282, 95-100. DOI: [10.1016/j.foodchem.2019.01.008](https://doi.org/10.1016/j.foodchem.2019.01.008).
3. **De Girolamo A.***, Cervellieri S., Cortese M., Porricelli A., Pascale M., Longobardi F., von-Holst C., Ciaccheri L., Lippolis V. (2019). Fourier transform near-infrared and mid-infrared spectroscopy as efficient tools for rapid screening of deoxynivalenol contamination in wheat bran. *Journal of the Science of Food and Agriculture*, 99, 1946-1953. DOI: [10.1002/jsfa.9392](https://doi.org/10.1002/jsfa.9392).
4. **De Girolamo A.***, McKeague M., Pascale M., Cortese M., DeRosa M.C. (2019). Chapter 3 - Immobilization of aptamers on substrates. In "Aptamers for Analytical Applications: Affinity Optimization and Method Design". (Ed. Wiley-VCH Verlag GmbH, 2019) ISBN 352-73-4267-2, pp. 85-126. DOI: [10.1002/9783527806799.ch3](https://doi.org/10.1002/9783527806799.ch3).
5. Lippolis V., Cervellieri S., Damascelli A., Pascale M., Di Gioia A., Longobardi F., **De Girolamo A.** (2018) Rapid prediction of deoxynivalenol contamination in wheat bran by MOS-based electronic nose and characterization of the relevant pattern of volatile compounds. *Journal of the Science of Food and Agriculture*, 98, 4955-4962. DOI: [10.1002/jsfa.9028](https://doi.org/10.1002/jsfa.9028).
6. **De Girolamo A.***, Ciasca B., Stroka J., Bratinova S., Pascale M., Visconti A., Lattanzio V.M.T. (2017). Performance evaluation of LC-MS/MS methods for multi-mycotoxin determination in maize and wheat by means of international Proficiency Testing (2017). *TrAC-Trends in Analytical Chemistry*, 86, 222-234, DOI: [10.1016/j.trac.2016.11.005](https://doi.org/10.1016/j.trac.2016.11.005).
7. Bianco M., Sonato A., **De Girolamo A.**, Pascale M., Romanato F., Rinaldi R., Arima V. (2017). An aptamer-based SPR-polarization platform for high sensitive OTA detection. *Sensors and Actuators B*, 241, 314–320. DOI: [10.1016/j.snb.2016.10.056](https://doi.org/10.1016/j.snb.2016.10.056).
8. **De Girolamo A.***, Lattanzio M., Schena R., Visconti A., Pascale M. (2016). Effect of alkaline cooking of maize on the content of fumonisins B1 and B2 and their hydrolysed forms. *Food Chemistry*, 192, 1083-1089. DOI: [10.1016/j.foodchem.2015.07.059](https://doi.org/10.1016/j.foodchem.2015.07.059).
9. Valenzano S., **De Girolamo A.***, DeRosa M.C., McKeague M., Schena R., Catucci L., Pascale M (2016). Screening and Identification of DNA aptamers to tyramine using in vitro selection and high-throughput sequencing. *ACS Combinatorial Science*, 18, 302–313. DOI: [10.1021/acscombsci.5b00163](https://doi.org/10.1021/acscombsci.5b00163).
10. McKeague M., **De Girolamo A.***, Valenzano S., Pascale M., Ruscito A., Velu R., Frost N.R., Hill K., Smith M., McConnell E.M., DeRosa M.C. (2015). Comprehensive analytical comparison of strategies used for small molecule aptamer evaluation. *Analytical Chemistry*, 87, 8608-8612. DOI: [10.1021/acs.analchem.5b0210](https://doi.org/10.1021/acs.analchem.5b0210).