

Born: Perugia (Italy), 6-1-1970

Nationality and citizenship: Italian

Home address: Strada dei Conservoni 2/S, 06131, Perugia

Work address: Department of Agricultural, Food and Environmental Sciences, University of Perugia, Borgo XX Giugno 74, 06121, Perugia

E-mail: lorenzo.covarelli@unipg.it

EDUCATION

1994: Master's degree in Agricultural Sciences at the Faculty of Agriculture of the University of Perugia. Final mark 110/110, with distinction.

1994-1997: PhD in Agronomy and Crop Science at the Faculty of Agriculture of the University of Perugia.

CAREER

Nov 2016 – **to date**: indefinite position as an Associate Professor in the Italian academic scientific sector AGR/12 - Plant Pathology at the Department of Agricultural, Food and Environmental Sciences of the University of Perugia.

Jan 2005 – Oct 2016: indefinite position as a Research Scientist in the Italian academic scientific sector AGR/12 - Plant Pathology at the Department of Agricultural, Food and Environmental Sciences of the University of Perugia.

Jan 2002 – May 2002 and Oct 2002 – Dec 2002: Research Scientist at the Department of Disease and Stress Biology of the John Innes Centre (Norwich, UK) working on the factors affecting trichothecene mycotoxin biosynthesis by *Fusarium* species in wheat and on the infection process of a GFP tagged *F. graminearum* isolate in maize by confocal laser scanning microscopy.

1999 – 2003: post-doc research contract at the Department of Arboriculture and Plant Protection of the University of Perugia on a project titled "Influence of agronomic practices on foliar diseases and foot rot of wheat".

1997-1999: post-doc research contract at the Institute of Agronomy and Crop Science of the Faculty of Agriculture of the University of Perugia on the design and management of field plot experimental trials for the control of weeds in wheat, maize, sunflower, linseed and turf grasses and of *Orobancha* spp. in tobacco.

RESEARCH EXPERIENCE AT FOREIGN INSTITUTIONS

1996: five months at the Department of Soil Science and Plant Nutrition of the Wageningen Agricultural University (NL) during PhD.

Jan 2000 – Apr 2000: research fellowship within EU COST Action 835 at the Department of Cereal Research of the John Innes Centre (Norwich, UK) on the use of molecular diagnostic techniques to detect and quantify wheat pathogens. Supervisor Dr Paul Nicholson.

Nov 2000 - Nov 2001: one year EU post-doc Marie Curie Individual Fellowship (QLK1-CT-2000-51240) at the Department of Cereal Research of the John Innes Centre (Norwich, UK) on the project “Factors affecting trichothecene mycotoxins production by *Fusarium* species in wheat”. Supervisor Dr P. Nicholson.

2011-2012: visiting scientist for seven months (2-10-11 to 30-4-12) at CSIRO Plant Industry (Brisbane, Australia) working on a project titled “Mechanisms of host-*Fusarium* interactions”. Supervisor: Dr J. Manners. During his stay, Prof. Covarelli obtained an Endeavour Award Research Fellowship by the Australian Government (1-1-12 to 30-4-12).

2012-2013: award of a CSIRO McMaster research fellowship for six months (29-10-12 to 28-4-13) at CSIRO Plant Industry (Brisbane, Australia) on a project titled “*Fusarium* pathogenomics”. Supervisor Dr D. Gardiner.

2015: Erasmus Traineeship grant by the University of Perugia at the John Innes Centre (Norwich, UK) from 11 to 24 June 2015.

Jan 2017 – May 2017: visiting professor at CSIRO Agriculture and Food (Brisbane, Australia) working on the identification-characterization of fungal pathogens and gene knockout.

Feb 2017: Prof. Covarelli has been selected for a Research fellow position at the Centre for Crop and Disease Management of Curtin University (Perth, Australia) and will start a co-appointment employment between Perugia and Perth in August 2018.

RESEARCH PROJECTS

2000 – Responsible of a project funded by the University of Perugia on the use of molecular techniques to study foot rot and head blight of wheat.

2002-2015 – Responsible of several projects funded by Syngenta Crop Protection S.p.A. on the field control of wheat foliar diseases, head blight and mycotoxins.

2006-2013 – Responsible of a project funded by Bayer Crop Science S.r.l. on the field control of head blight of wheat and the reduction of mycotoxin contamination.

2007-2013 – Responsible of a project funded by Gowan S.p.A. on the field control of foliar diseases and head blight of wheat and the reduction of mycotoxin contamination.

2012-2016 – Responsible of a project funded by Dow AgroSciences S.r.l. on the field control of leaf blotch and head blight of wheat.

2010-2012 and 2018 – Responsible of projects funded by BASF Italia S.r.l. on the field control of foliar diseases and head blight of wheat and the reduction of mycotoxin contamination.

2010-2014 – Responsible of a project funded by Du Pont de Nemours on the field control of foliar wheat diseases, fusarium head blight and mycotoxins.

2006-2008 – Participation in a project titled “Use of biological antagonists on wheat to obtain healthy seed for organic farming” funded by Umbria Region (Regione Umbria). Coordinator Prof. Curgonio Cappelli.

2006-2008 – Principal investigator of a competitive project funded by Fondazione Cassa di Risparmio di Perugia titled “Survey on mycotoxin contamination and presence of mycotoxigenic fungi on maize grain in the province of Perugia (Italy)”.

2002-2019 – Responsible of a project funded by Syngenta Crop Protection S.p.A. on the development of new durum wheat varieties with lower *Fusarium* head blight susceptibility and mycotoxin accumulation.

2006-2008 – Participation in a research project funded by the EU and the Italian Ministry for Agriculture, Food and Forestry on the phytopathological problems of biomass crops as an alternative to tobacco cultivation (Co.Al.Ta.2).

2010-2012 – Principal investigator of a competitive project funded by Fondazione Cassa di Risparmio di Perugia titled “Survey on the presence of mycotoxigenic fungi and mycotoxins in wheat grain in Umbria”.

2013-2014 – Co-principal investigator of a research project on the “Presence of ochratoxigenic *Aspergilli* and ochratoxins in different grapes varieties under integrated and organic farming managements” Funded by Umbria Region.

2013-2015 – Principal investigator of a competitive project funded by Fondazione Cassa di Risparmio di Perugia: “Barley for beer production in Umbria: survey on the presence of *Fusarium* head blight agents and mycotoxins”.

2012-2015 – Participation in a research project on the control of the Asian gall wasp *Dryocosmus kuriphilus* funded by Regione Umbria (PSR). Coordinator Prof. Carlo Ricci.

2014-2016 – Co-principal investigator of a competitive project funded by Fondazione Cassa di Risparmio di Perugia titled “Survey on the presence of ochratoxigenic fungi and of ochratoxin A in grapes and vineyards under integrated and organic conditions in the Umbria region”.

2015-2016 – Research unit coordinator of a project funded by Dr Covarelli's Department on the study of fungal adaptation by DNA methylation techniques. Coordinator Dr Benedetta Turchetti.

2016-2017 – Co-principal investigator of a competitive project funded by Fondazione Cassa di Risparmio di Perugia titled “Characterization of barley lines adapted to organic farming and low input agriculture for cultivation in the Umbria Region”.

LEADERSHIP ABILITY

Prof. Covarelli currently leads a research group composed by himself, a post-doctoral researcher, a PhD student, students working on their degree theses and shares four technicians with other colleagues. He also supervised 32 students during the experimental works for their Degree theses as well as several researchers during their fixed-term appointments while working in his research group.

SUPERVISION OF PhD STUDENTS

2008-2011: Dr Giovanni Beccari, XXIII cycle, “*Fusarium*-wheat pathosystem: host-pathogen interactions and novel tools for the study of plant resistance”. Italian Phytopathological Society Scaramuzzi prize 2011.

2014-2017: Dr Francesco Tini, XXX cycle, “Identification and role of virulence genes in *Fusarium graminearum*, the main causal agent of Fusarium Head Blight of wheat, interactions between members of the disease complex and their sensitivity to fungicides”.

PRIZES AND AWARDS

Marie Curie Individual Fellow 1999-2000

Australian Endeavour Award Fellow 2012

CSIRO Mc Master Fellow 2012-2013

SPEAKER AT CONFERENCES

Prof. Covarelli presented his research as oral communications at several international and national conferences.

TEACHING

Prof. Covarelli carried out about 700 hours of official teaching at the University of Perugia.

MAIN COLLABORATIONS

Dr Donald Gardiner, CSIRO Plant Industry, Brisbane (Australia).

Dr Paul Nicholson, John Innes Centre, Norwich (UK).

Prof. Massimo Reverberi, University of Rome La Sapienza (Italy)

Dr. Antonio Prodi, University of Bologna (Italy)

Prof. Jordi Mañes and Dr Cristina Juan, Universitat de Valencia, Valencia (Spain).

Dr Virgilio Balmas, University of Sassari (Italy)

Dr Veronica Lattanzio and Dr Gianfranco Perrone, ISPA-CNR (Italy).

Dr Michael Sulyok, University of Natural Resources and Life Sciences, IFA-Tulln (Austria).

Dr Silvio Uhlig, Norwegian Veterinary Institute, Oslo (Norway).

Dr Lukasz Stepień, Institute of Plant Genetics, Polish Academy of Sciences, Poznań, (Poland).

Prof. Christina Cowger, North Carolina State University, Raleigh (USA).

REFEREEING

Plant Pathology, Food Microbiology, Food and Chemical Toxicology, Food Control, Journal of Phytopathology, Molecular Plant Microbe Interactions, International Journal of Food Microbiology.

IMPACT INDICATORS

Publications indexed in the Scopus database: 28

Citations: 482

H-index: 14

PUBLICATIONS

Prof. Covarelli is co-author of about 100 publications, in peer-reviewed international journals, articles in Italian journals, short notes, conference papers and conference abstracts.