



# AGRNNOVA

RESEARCH BEARS ITS FRUITS

## MAIN RESEARCH TOPICS

MAIN TOPICS	SUBJECTS	MAIN PARTNERS
Biology and epidemiology of pathogens of economically important crops and development of strategies of sustainable crop protection	<p>Diseases of vegetable, flower and fruit crops and development of management strategies with low environmental impact</p> <hr/> <p>Rice diseases</p> <hr/> <p>Diseases of soilless crops</p> <hr/> <p>Disease management in organic farming</p> <hr/> <p>Climate change and diseases of grapevine and poplar</p> <hr/> <p>Diseases of turfgrass</p>	<p><b>In Italy:</b> Ministry for Environment and Territory; Ministry for Agricultural Policies; Ministry of Industry; Piedmont Region; Liguria Region; Lombardy Region; Università Cattolica di Piacenza; Centro Regionale di sperimentazione e assistenza agricola (CeRSAA) of Albenga of the Chamber of Commerce of Savona; Consorzio di ricerca, sperimentazione e divulgazione per l'ortofrutticoltura (CRESO); Consorzio orticoltori associati italiani (OASI); Associazione Italiana Agricoltura biologica (AIAB); Novamont; Intrachem Bio Italia; Ente nazionale sementi elette (ENSE); ISI Sementi; Federazione Italiana Golf.</p> <p><b>Abroad:</b> University of Bonn (Germany); Columbia University, New York (USA); University of Cordoba (Spain); Pennsylvania State University, State College (USA)</p>
Biotechnological applications in plant and environment protection	<p>Molecular diagnostic of fungal pathogens</p> <hr/> <p>Characterization and development of biocontrol agents</p> <hr/> <p>Ethical aspects of biotechnological applications</p> <hr/> <p>Countermeasures for preventing agroterrorism</p>	<p><b>In Italy:</b> Isagro Ricerca; Chamber of Commerce of Torino</p> <p><b>Abroad:</b> University of Wageningen (The Netherlands); INRA (France); University of Bonn (Germany); University of Wageningen (The Netherlands); Kansas State University (USA); Regional Environmental Center for Central and Eastern Europe (REC) Budapest (Hungary); Central Science Laboratory, York (United Kingdom)</p>
Side-effects linked to the usage of pesticides	<p>Fungicide resistance</p> <hr/> <p>Alternatives to obsolete pesticides</p>	<p><b>In Italy:</b> Ministry for Environment and Territory; Piedmont Region; Società Italiana Sterilizzazioni (SIS); Cadir Lab; Dow Agrosiences</p> <p><b>Abroad:</b> Syngenta Crop Protection; Atofina; Janssen Pharmaceutica</p>
Plant disease management and food safety	<p>Biological control of post-harvest pathogens</p> <hr/> <p>Safety of horticultural crops</p> <hr/> <p>Mycotoxins</p>	<p><b>In Italy:</b> Ministry for Environment and Territory; Piedmont Region; Sicily Region; Liguria Region; Enosis; Nutrisan Sas; Cadir Lab; Institut Agricole Regional, Aosta</p> <p><b>Abroad:</b> University of Bonn (Germany)</p>



# LIST OF PROJECTS

YEAR 2005

FUNDING BODY	TITLE	DURATION
European Union	Seed Treatments for Organic Vegetable Production (STOVE), QLK5-CT-2002-02239	2003-2006
	Crop and food biosecurity, and provision of the means to anticipate and tackle crop bioterrorism (6403)	2005-2007
	Recycling and upgrading of bone meal for environmentally friendly crop protection and nutrition (Food-2005-514082)	2005-2007
	Playground harbour and research of sustainability (PHAROS), LIFE, 04 ENV/IT/000437	2004-2006
	Dissemination of sustainable alternatives to methyl bromide	2005-2007
	Promoting the stable to table approach in European regional development (PromSTAP, INTERREG III C)	2005-2007
	Organic farming network in teaching (MRENet)	2005-2007
	Organic farming: social, ethical, economical, scientific and technical aspects in a global perspective (ASIA-LINK)	2005-2007
NATO (Security through science)	Tools for crop biosecurity	2005-2006
NATO CCMS (Committee on Challenges in modern society)	Ecoter	2005-2006
Regional Environmental Center for Central and Eastern Europe (REC)	Identification of municipal environmental investments and partnership for EU accession	2005
	Plan for the reconstruction of the REC gardens	2005
Italian Ministry for Environment and Territory	Framework agreement on "Sustainable agriculture"	2005-2007
	Organic farming systems and techniques for the promotion of "Green agriculture in Dongtang Chongming Island"	2005-2007
	Reducing the use of chemicals tools introducing environmentally friendly farming practices in Serbia	2005-2006
	Desertification in Inner Mongolia	2005-2006
Ministry for Foreign affairs and Ministry for Productivity	Sustainable plant protection: modern techniques for disease management in China	2005-2006
Piedmont Region	<b>DOCUP Obiettivo 2:</b> From waste to resource: recycling industrial organic waste	2004-2006
	<b>CIPE Projects:</b> Safety and quality of vegetables produced in Piedmont	2004-2006
	Innovative technologies for soil disinfestation	
	Effect of climate change on grapevine disease	
	Selection, study of mode of action and efficacy, characterisation and development of yeasts as biocontrol agents of post-harvest pathogens of fruit	

## LIST OF PROJECTS

YEAR 2005

FUNDING BODY	TITLE	DURATION
Piedmont Region	<p><b>Other projects:</b></p> <p>Sensitivity to fungicides of populations of <i>Plasmopara viticola</i>, <i>Uncinula necatrix</i> and <i>Venturia inaequalis</i></p> <p>Certified composted material for organic farming</p> <p>Use of grafting in the management of soilborne diseases</p>	2005
Liguria Region	Downy mildew of basil: biology, epidemiology and control	2004-2005
Lombardy Region	Biology and epidemiology of a fusarium wilt of lettuce detected in Lombardy and control measures	2003-2005
Sicily Region	Quality and safety of vegetables produced under greenhouse and in open field	2003-2006
Dow Agrosciences	Grapevine disease management aimed at preventing the development of fungicide resistance	2004-2006
Several agrochemical companies: Montanwerke Brixlegg (Austria), Valagro, Arkema, BASF Agro S.p.A., Janssen Pharmaceutica N.V. (Belgium), Kwizda Italia s.r.l., Maktheshim Chemical Works Ltd. (Israel), Agrimix, Scotts International, ...	Evaluation of the efficacy of chemical and biological pesticides	2005

### KNOWLEDGE AND TECHNOLOGY TRANSFER

#### In Italy

##### *Centre for Pesticides Efficacy Evaluation and Certification*

The Centre cooperated in 2005 with various Italian and international companies, such as Montanwerke Brixlegg (Austria), Valagro, Arkema, BASF Agro S.p.A., Janssen Pharmaceutica N.V. (Belgium), Kwizda Italia s.r.l., Maktheshim Chemical Works Ltd. (Israel), Agrimix, Scotts International. The experimental trials have been carried out at Grugliasco, by using growth chambers, greenhouses and a new vineyards belonging to Agroinnova and at the Institut Agricole Regional of Aosta, at golf courses located at Avigliana (TO) and Robassomero (TO), at the Ce.R.S.A.A. of Albenga, belonging to the Chamber of Commerce of Savona. Moreover, several trials were carried out in private farms, located in Piedmont, Campania and Sicily.

##### *Diagnostic Center*

The Certified Laboratory for the Diagnosis of fungal, bacterial and viral diseases received samples from ornamental nurseries as well as from seed companies located in different Regions.

#### Technology transfer in developing countries

In 2005, several projects, listed in the following table, took place in the field of sustainable crop protection and sustainable agriculture.

PROJECT	COUNTRY	FINANCING INSTITUTION
Reducing the use of methyl bromide for soil disinfection	China	Ministry for Environment and Territory
Sustainable agriculture	China	Ministry for Environment and Territory
Organic farming systems and techniques for the promotion of green agriculture in Dongtang Chonming island	China	Ministry for Environment and Territory
Reduction of old pesticides (POPS)	China	Ministry for Environment and Territory
Desertification in Inner Mongolia	China	Ministry for Environment and Territory
Alternatives to methyl bromide	Romania	UNIDO and Ministry for Environment and Territory
Reducing the use of chemical tools and introducing environmentally friendly farming practices in Serbia	Serbia	Ministry for Environment and Territory
Reduction of pesticides in horticulture	Morocco	Piedmont Regional Government
International courses on sustainable agriculture	China, Eastern Europe	Ministry for Environment and Territory

**SUPPORT TO POLICY-MAKERS**

Also in 2005 Agroinnova provided technical support to the international activities of the Italian Ministry for the Environment and Territory, with a technical advisory service, during several international meetings. In particular Agroinnova has been involved in several international negotiations dealing with agro-environmental issues. The Director of Agroinnova was part of the official Italian delegation of the governmental visits to China and to Serbia.

**LIFE-LONG LEARNING**

The Courses organized in 2005 (reported below in the table) covered important topics in the field of food safety, sustainable crop protection and sustainable agriculture.

Course (language)	Ordered by	Duration	Type, number of participants
Traceability in the agro-food sector (Italian)	Coldiretti	66 hours	Extension specialists, 80
Sustainable crop protection (English)	Ministry of Foreign Affairs	10 days (May 2005)	Researchers from China, 5
Organic farming systems (English)	Shanghai University, Shanghai Academy of Social Sciences	14 days (July 10-24 2005)	Researchers from the Shanghai area, 10
Organic farming systems (English)	Shanghai University, Shanghai Academy of Social Sciences	14 days (August 28 - September 11, 2005)	Researchers from the Shanghai area, 10
Sustainable crop protection (English)	Serbian Institutions in the agricultural field	14 days (October-November 2005)	Serbian researchers and technicians, 10

In cooperation with the Venice International University, Agroinnova participated into the development and implementation of International Courses for Sustainability addressed at senior governmental officials, professors, and experts of the People's Republic of China and Central and Eastern European countries.

**Journal**

The Centre hosts the Scientific Management and part of the Editorial Staff of the Journal "Informatore Fito-patologico - La Difesa delle Piante" (Il Sole 24 Ore), the most important Italian journal in the field of crop protection. Moreover, it extended its cooperation with Terra e Vita, a weekly technical journal, always belonging to the Il Sole 24 Ore group.

**Scientific Societies**

The Centre is the seat of the vice-Presidency of the International Society for Plant Pathology (ISPP), of the Past-Presidency of the Italian Society for Crop Protection (A.I.P.P.) and of the Association of Scientific Agrarian Societies (A.I.S.S.A.).

**Congresses and Meetings**

The 2005 Incontri Fitoiatrici have been organized in Torino (24-25 February 2005). The topic was "Pest and disease management in horticulture".

**Visiting scientists and students**

Surname and name	Role	Coming from	Topic covered (length of stay)
Wellington Bressan	Visiting scientist	EMBRAPA, Sete Lagas, Mato Grosso, Brasil	Biological control (12 months)
Suarez Elena	Visiting Scientist	Centro Superiore de Investigation Cientifica (CSIS), Cordoba, Spain	Molecular diagnostic (3 months)
Chen Guokang	Ph.D. student	China Agricultural University (CAU), Beijing, China	Use of resistant varieties of vegetable crops (6 months)
Hirata Lucia	M.S. Student	University of Dourados, Mato Grosso, Brasil	Integrated control (9 months)

**Stages abroad of Agroinnova coworkers**

Surname and name	Role	Location	Topic covered (length of stay)
Tinivella Federico	Ph.D. student	Department of Plant Biology, Royal Veterinary and Agricultural University, Copenhagen, Denmark	Characterization of biological control agents (6 months)
Grasso Valeria	Ph.D. student	Syngenta Crop Protection, Sector Research Biology, Stein (Switzerland)	Molecular aspects of fungicide resistance (6 months)
Ghiringhelli Dario	Ph.D. student	Central Science Laboratory, Plant Health Team, York, United Kingdom	Molecular diagnostic (3 months)
Salinari Francesca	Ph.D. student	Institute of Environmental Sciences, Bangor (United Kingdom)	Effect of climate change on diseases (6 months)
Pasquali Matias	Senior research fellow	Cereal Disease Laboratory University of Minnesota (USA)	Molecular genetics (12 months)

**AWARD**

In 2005, M.L. Gullino has been awarded the "Van den Brande" award from the University of Gent (Belgium) for her achievements in the field of crop protection.

## UNIVERSITY STAFF

SURNAME AND NAME	QUALIFICATION AND ROLE
Garibaldi Angelo	Full Professor, President
Gullino Maria Lodovica	Full Professor, Director
Puleo Maria	Administrative secretary
Botton Paola	Chief secretary
Martano Guido	Technician
Manaresi Ileana	Secretary

## ADDITIONAL STAFF SUPPORTED THROUGH PROJECTS

SURNAME AND NAME	ROLE
Camponogara Andrea	Technician on placement in Beijing
Tinivella Federico	Technician
Larocca Manuela	Technician
Cipolla Linda	Technician
Gilardi Giovanna	Senior research fellow
Bertetti Domenico	Senior research fellow
Pasquali Matias	Senior research fellow
Spadaro Davide	Senior research fellow
Rettori Andrea	Senior research fellow
Minerdi Daniela	Senior research fellow
Mosso Giovanni	Senior research fellow
Grasso Valeria	Ph. D. Student
Keji Said	Ph. D. Student
Salinari Francesca	Ph. D. Student
Ghiringhelli Dario	Ph. D. Student
Clematis Francesca	Ph. D. Student
Sanna Mattia	Ph. D. Student
Casulli Enzo	Ph. D. Student
Ciavorella Annalisa	Ph. D. Student
Brero Davide	Ph. D. Student
Ricauda Aimonino Davide	Ph. D. Student
Gaggero Laura	Ph. D. Student
Costadone Laura	SINAPSIS research fellow
Dematteis Flavia	SINAPSIS research fellow
Chesi Veronica	Research fellow
Vlachos Giuseppe	Research fellow
Rizzo Francesco	Consultant on placement in Budapest
Savigliano Riccardo	Consultant on placement in Rome
Capodagli Nevio	Consultant on placement in Beijing
Ivic Milan	Consultant on placement in Bucarest
Titone Patrizia	Consultant for the Centre for Pesticide Efficacy Evaluation (turf)
Mocioni Massimo	Consultant for the Centre for Pesticide Efficacy Evaluation (turf)
Monchiero Matteo	Consultant for the Centre for Pesticide Efficacy Evaluation (grapevine)
Di Piero Erica	Consultant for the Centre for Pesticide Efficacy
Pensa Pietro	Consultant for the Centre for Pesticide Efficacy Evaluation (vegetables)
Salvi Davide	Consultant on placement in Albenga
Marcenaro Lavinia	Consultant on placement in Albenga
Bevilacqua Alessandro	Consultant
Luongo Incoronata	Qualified field worker
Cesano Alessandro	Qualified field worker
Zerbini Gabriele	Qualified field worker
Asinari Elena	Teaching manager
Pugliese Massimo	Tutor
Cipeletti Ania	Secretary
Cimini Antonia	On stage from ICE

## BOOKS

Proceedings Incontri Fitoiatrici 2005 (2005) Difesa delle colture in orto-floro-frutticoltura Ace Internazionale, 196 pages

## BOOK CHAPTERS

Gullino M.L., Garibaldi A. (2005) Evolution of fungal diseases of ornamental plants and their management. In: Biodiversity of fungi. Their role in Human life. Deshmukh S.K. and M.K. Rai eds., Science Publishers Inc., Enfield, N.H., Usa, 357-374.

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- Garibaldi A., Minuto A., Gullino M.L. (2005) Verticillium wilt incited by *Verticillium dahliae* in eggplant grafted on *Solanum torvum* in Italy. *Plant Disease*, 89, 777.
- Gilardi G., Tinivella F., Gullino M.L., Garibaldi A. (2005) Seed dressing to control *Fusarium oxysporum* f. sp. *lactucae*. *Zeitschrift für Pflanzenkrankheiten und Pflanzenschutz.*, 112, 240-246.
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18. Minuto A., Pensa P., Minuto G., Garibaldi A. (2005) *Verticillium dahliae*: nuovo parassita della dimorfoteca coltivata in vaso. *Informatore Fitopatologico - La difesa delle piante*, 55 (1), 54-56.
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27. Spadaro D., Ciavarella A., Garibaldi A., Gullino M.L. (2005) Ampliamento dello spettro d'azione di lieviti antagonisti per la lotta biologica in post-raccolta su pomacee. *Informatore Fitopatologico – La Difesa delle piante*, 55 (10), 56-59.
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Via Leonardo da Vinci, 44 - 10095 Grugliasco (Torino) - Italy

Phone +39 011 6708539 - Fax +39 011 6709307 - www.agrinnova.org - E-mail: agrinnova@unito.it