

FELLOWSHIPS AWARDED FOR 2010

(N.B.: for confidentiality reasons, no names of individuals are given in this list)

Research Fellow's Nationality	Home institution	Destination Country	Host Laboratory	Duration of Fellowship (weeks)	Proposed Studies
ITA	National Institute of Geophysics and Volcanology	GBR	King's College London	24	Wildfire is amongst the most significant natural disturbance agents, impacting a wide range of ecosystems at small and large scales in almost all forested ecosystems of the planet. The subject of this research is wildfire in the frame of preservation of forests as a natural resource, and specifically the detection, characterisation and study of wildfires using new remote sensing methods that are capable of being applied to the next generation of small, light and affordable imaging spectroradiometers that can be mounted on civil protection aircraft, unmanned aerial vehicles or Earth-orbiting micro-satellites.
AUS	The University of Sydney	FRA	INRA-LAMETA	26	Title: Improving water quality in agricultural watersheds: Designing a decision framework for managers The subject of this research is bridging of the existing divide between the knowledge on bio-physical and chemical processes underlying water pollution from agricultural sources, and practical watershed management based on economic, social and policy criteria. This project aims at devising a decision framework encompassing these areas of knowledge and management criteria.
AUS	University of New England	USA	Cornell University	8	Insect food processing and nutrient allocation under a changing climate
POL	University of Technology and Life Sciences	USA	University of Wisconsin-Madison	11	Development of a low-input system for fodder and grain production: Intercropping winter cereals in a permanent stand of kura clover (<i>Trifolium ambiguum</i>).
USA	U.S. Geological Survey	GBR	Centre for Ecology & Hydrology	26	Development of an international impacted agricultural areas standard for ecological services - a synthesis of science, policy and law This project will produce an international impacted agricultural areas standard for ecological services through a review of pertinent literature and interviews/field visits with local, regional and national government officials and subject matter experts. This will result in an international synthesis of what works (using "small indicators") at the local level and national level to achieve environmental sustainability.
HUN	University of Pannonia	USA	University of Wisconsin, College of Agricultural and Life Sciences, Department of Plant Pathology	16	I would like to join to a research project running at the University of Wisconsin (U.W.), Department of Plant Pathology led by Professor Dennis Halterman. The subject of this project is to identify and to characterize novel resistance genes to potato late blight (<i>Phytophthora infestans</i>) in wild potato species using molecular genetics techniques. More over we would like to determine the origin of late blight resistance genes of some US and Hungarian potato cultivars too.
KOR	Chungbuk National University	USA	Cornell University	12	Characterization of RC-Mediated Regulation of Proanthocyanidin Biosynthesis as a Prerequisite for a Novel Weed Control Strategy in Rice: The overall goals are 1) To identify a rice proanthocyanidin biosynthetic gene regulated by RC. 2) To dissect the promoter of an RC-regulated proanthocyanidin biosynthetic gene to determine the region that is necessary for transcriptional activation by RC. 3) To develop a pathway-based model describing allelic interactions that govern pericarp color in rice.
USA	Cornell University	ITA	Universita di Bologna	6	Metabolomic analysis of phenolic compounds in grapes as a key to disease resistance and nutraceutical content

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CAN	Agriculture and Agri-Food Canada	ESP	Biosystems Engineering, IRTA	26	Comparing domestic vs imported greenhouse tomatoes: LCA approaches for new sustainable greenhouse systems To quantify via the LCA the environmental impact of greenhouse growing systems using anaerobic digestion of waste biomass as a source of energy and nutrients. We will also be using wetlands and bioreactors to treat and recycle effluents compared to conventional and organic farming in Canada, Mexico and the Mediterranean region. For Canada, comparisons will also be made for imported fruits.
POL	Poznan University of Life Sciences	USA	USDA Agricultural Research Service	14	Evaluation of nutrient balances as an indicator for the impact of agriculture on environment - a comparison of case studies from the US and Poland
USA	Cornell University	GBR	Cambridge University	26	The effect of steroid hormones and pregnancy on macrophage function
JPN	National Agricultural Research Center for Kyushu Okinawa Region, National Agriculture and Food Research Organization	USA	University of California, Davis	19	Comparative DNA analysis of several races of southern root-knot nematode, <i>Meloidogyne incognita</i> , for a designing of DNA marker(s) to identify nematode races, and detection of gene(s) involved in resistance of host plant leading to molecular breeding of crops: Towards a development of new nature friendly management of root knot nematodes.
DEU	Swiss Federal Institute of Technology (ETH) Zurich	USA	Animal Biosciences and Biotechnology Lab ANRI, ARS, USDA	8	Bioinformatics analysis and collation of streptococcal peptidoglycan hydrolases
POL	Wroclaw University of Environmental and Life Sciences	USA	School of Environment and Natural Resources, The Ohio State University	22	Improvement of fish meat quality by using a new "antioxidative potential booster" approach in fish feeding
JPN	The University of Tokyo	USA	North Carolina State University	26	The effect of glutamine on the gut health and immune status of weaning and nursing piglets The major drawback to rearing pigs artificially has been the high rate of death in artificially reared, early weaned piglets. The objective of this study is to determine the effect of dietary glutamine supplementation on the development of small-intestine immune status of weaning and nursing piglets.
JPN	National Agriculture and Food Research Organization	AUS	CSIRO	8	Characterization of MYB transcription factors of flavonoid biosynthesis in apples and the application for production of health promoting buckwheat varieties. In order to produce health promoting buckwheat varieties, we will clarify the molecular mechanisms of apple MYB genes, and apply for regulation of some specific flavonoid biosynthesis in buckwheat organs.
DEU	Leibniz-Institute for Agricultural Engineering	DNK	Aarhus University, Department of Agroecology and Environment	6	Modelling interactions of greenhouse gas abatement measures at the farm level
FRA	Agrocampus-Ouest	AUS	CSIRO Land and Water	19	High resolution sensing and modelling of the soil spatial variability
POL	Warsaw University of Life Sciences - SGGW	USA	USDA Forest Service Center for Forested Watershed Research	6	Hydrodynamic model of the Turkey Creek stream and riparian zone. A tool for assessing the hydrologic vulnerability of a watershed to management practices
NZL	AgResearch	USA	Baylor College of Medicine	6	Improving lactational persistency in dairy cows. Objective – To learn a genome wide DNA methylation analysis technique (MeDIP) as used in Prof. Rijnkels's laboratory. This technique will be very useful for dairy research to address epigenetic effects of nutrition, milking frequency, disease and other management practices. The applicant wishes to apply the learning gained to the problem of lactation persistence (post-peak decline in milk yield) a relevant and economically important issue to the dairy industry.

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FRA	INRA	AUS	School of Economics, University of Queensland	26	Adaptation of agricultural production systems in a context of climate change: designing policies to encourage best practices
CAN	Agriculture & Agri-Food Canada	CHE	CABI Europe - Switzerland	8	Reduced-risk strategies for alien invasive insect pests. A significant number of IAS in Canada are of European origin. Climate change may disrupt species interactions at the same or adjacent trophic levels. As climate change influences each species differently, species interactions will appear, disappear, or change. Bio-climate simulation models will be developed to assess the potential impact of global warming on the ecology of host crop-herbivore-parasitoid agro-ecosystem.
HUN	Eotvos Lorand University	AUS	Centre for Comparative Genomics, Murdoch University	26	Studying the protein factors and protein-protein interactions of the expressing wheat storage proteins in transgenic rice endosperm.
USA	USDA Agricultural Research Service	ESP	University of Castilla - La Mancha	10	Water and carbon dioxide cycling in semiarid shrub-dominated ecosystems with contrasting rainfall regimes The climate is changing: how this will alter the hydrological and carbon dioxide cycles in semiarid regions worldwide is poorly understood. This fellowship will make innovative comparisons of experimental data to enhance our understanding of the similarities and differences in how the seasonality of rainfall controls biosphere-atmosphere exchanges of water and carbon dioxide in Mediterranean and monsoonal ecosystems.
FRA	International Centre for Higher Education in Agricultural Sciences, Montpellier SupAgro	CAN	Agriculture and AgriFood Canada - Horticultural Development and Research Centre	19	Toward sustainable agriculture: evaluation of pesticide spray risk assessment at different scales
POL	University of Life Sciences in Lublin	CAN	The University of British Columbia, Faculty of Land and Food Systems	14	Eco-Friendly Crop Rotations
ITA	CRA-ING	USA	United States Department of Agriculture, Agriculture Research Service	19	To use Life Cycle Assessment analysis as a tool to evaluate energy efficiency, environmental and economic sustainability of the most strategic energy supply chains in order to make better choices and more tactical investments in the future of sustainable renewable energy resources.
JPN	Organochemicals Division, National Institute for Agro-Environmental Sciences	FRA	INRA-Burgundy University, Laboratory of Soil and Environmental Microbiology	13	Physiological and molecular characterization of bacterial consortia mineralising chloro-substituted s-triazine herbicides (e.g. simazine, atrazine) or polychlorinated benzenes (e.g. quintozene (PCNB), PCP, HCB)
DEU	CSIC/EEZ	AUS	ARC Centre of Excellence; The University of Queensland;	9	Are Shoot-Derived Inhibitors (SDI) inhibitors, known to be involved in the autoregulation of nodulation, also involved in the autoregulation mycorrhization ?
CAN	McGill University	FRA	Université de Rouen	8	A DNA barcoding approach to assess earthworm diversity in riparian buffers at the interface of agricultural and aquatic ecosystems, and implications for nitrogen cycling.
ITA	CIHEAM - MAI Bari	USA	Department of Biological and Irrigation Engineering - Utah State University	26	Modeling water demand and simulating peak flow hydrographs for the analysis of operation of large-scale pressurized irrigation delivery systems - The proposed research project aims at the development and validation of a stochastic model for generating hydrographs of daily volumes and hourly flow rates in existing pressurized irrigation delivery networks for the peak demand period of the irrigation season.
ITA	University of Tuscia	DEU	MPI of Molecular Plant Physiology	12	Role of S nutrition on capability to cope with Fe shortage in Strategy I plants