

INTERNATIONAL WORKSHOP

**PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE**

**GENERAL ASPECTS AND RESEARCH OPPORTUNITIES**

ROME, 5 - 6 NOVEMBER 2009

THE ORGANISING COMMITTEE: Sergio CARRÀ, Antonio GRANITI, Lamberto MAFFEI, Michele MORGANTE, Alessandro PIGNATTI, Enrico PORCEDDU (*Coordinator*), Francesco SALAMINI, Gian Tommaso SCARASCIA MUGNOZZA

PROGRAMME

**Thursday, 5 November**

- 8.00 Registration and Poster set-up
- 9.00 Welcome addresses and introduction to the workshop
- 10.00 **Session 1 – Plant Genetic Resources for Food and Agriculture**  
Chair: Gian Tommaso SCARASCIA MUGNOZZA
- Alvaro TOLEDO (FAO, Rome, Italy), *Plant genetic resources: their strategic role in achieving global food security and sustainable agriculture*
- Shakeel BHATTI (ITPGRFA Secretary, FAO, Rome, Italy), *The International Treaty on Plant Genetic Resources for Food and Agriculture (PGRFA): inter-dependence of countries*
- 11.00 Coffee break
- 11.30 Emile FRISON (Bioversity International, Rome, Italy), *The multiple contributions of agrobiodiversity to food and nutrition security and to sustainable agriculture*
- Jozef TUROK (Bioversity International, Rome, Italy), *The European Cooperative Programme on plant genetic resources*
- Timothy HALL (DG Research, EU Commission, Brussels, Belgium), *EU activities on agro-biodiversity research*
- Discussion
- 13.00 End of the morning session
- 14.30 **Session 2 – Opportunities for research**  
Chair: Antonio GRANITI
- Wayne POWELL (University of Aberystwyth, United Kingdom), *A new era for plant genetic resources based on emerging genome approaches*
- Peter STAMP (ETH, Zürich, Switzerland), *Swiss maize landraces - a discovery and rediscovery*
- Andreas KARAMANOS (Biomedical Research Foundation, Athens, and Faculty of Crop Science, Agricultural University of Athens, Greece), *Drought resistance potentialities of Greek bread and durum wheat landraces*
- 16.00 Coffee break
- 16.30 Andreas GRANER (IPK, Gatersleben, Germany), *Utilization of plant genetic resources: opportunities and constraints*
- Beat KELLER (University of Zürich, Switzerland), *Unlocking genetic diversity from the gene pools of wheat and its relatives*
- Paola BONFANTE (IPP-CNR, Turin, Italy), *Plants and mycorrhizal fungi: an ancient ally for today's agriculture and food*

## Friday, 6 November

### 9.00 Session 2 – Opportunities for research (*continuation*)

Chair: Alessandro PIGNATTI

Maarten KOORNNEEF (University of Wageningen, The Netherlands), *Arabidopsis natural variation as model for biodiversity research*

Michele MORGANTE (University of Udine, Italy), *A genome based view of plant biodiversity*

Maud TENAILLON (INRA, Moulon, France), *Tracking adaptive changes, application for the management of genetic resources*

10.30 Coffee break

11.00 Peter M. A. TIGERSTEDT (University of Helsinki - Tigerstedt Consulting Ltd, Finland), *Pre-breeding and the epi-genetics issue*

Roland VON BOTHMER (Swedish University of Agricultural Sciences, Alnarp, Sweden), *Diversity in cultivated and wild barley*

Francesco SALAMINI (Parco Tecnologico Padano, Lodi, Italy), *Use of molecular genetic variability in plant breeding*

Discussion

13.00 End of the morning session

### 14.30 Session 3 – Contents for the Meeting Report. Discussion

Chair: Enrico PORCEDDU

Toby HODGKIN (Bioversity International, Rome, Italy), *Points for the Meeting Report*

Discussion

17.30 Sergio CARRÀ (Politecnico di Milano, Lincei representative at EASAC), *Conclusions*

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2010 has been declared the International Year of Biodiversity. In preparation for this event, the Accademia Nazionale dei Lincei has proposed to the European Academies Science Advisory Council (EASAC) a study on Plant Genetic Resources for Food and Agriculture (PGRFA), the biodiversity section that ensures food, goods and services to human beings. The aim is to verify the general aspects introduced by the International Treaty on Plant Genetic Resources (IT-PGRFA) and the research opportunities these resources may offer.

To gain first hand information on the importance of PGRFA for European agriculture, the Academy has carried out a survey. The survey results indicate that the PGRFA are assessed almost unanimously as important / very important and are expected to remain so in the future, in view of the strong dependence of European agriculture on foreign genetic resources, the present narrow genetic base in most crops, and the need of genes for new traits, such as those for biological resistance to disease and tolerance to environmental stress, and adaptation to climatic change.

Most European countries have a good system of conservation and a European Cooperative Programme is very active in coordinating conservation efforts. The almost two million samples preserved are mostly utilised as a source of genes but not for basic research. A wealth of knowledge can be obtained from their analyses, such as amount and distribution of variation, identification of genes underlying that variation, natural selection for complex characters and adaptation, co-evolution of plant-other organisms. The information gained would allow a better understanding on natural forces that shape and maintain life on the Earth and provide scientists with indications useful to breed more sustainable varieties and to design a better management strategies for crop and natural stands.

The Accademia Nazionale dei Lincei has organised an international workshop, where delegates from various Academies and international organisations will present and debate these important issues. Poster exhibition will enrich the programme.

*In cooperation with*

**ACCADEMIA NAZIONALE DELLE SCIENZE DETTA DEI XL, ISTITUTO DI GENETICA VEGETALE (IGV) - CNR,**

**SOCIETÀ ITALIANA DI GENETICA AGRARIA (SIGA), BIOVERSITY INTERNATIONAL,**

**ASSOCIAZIONE AMICI DELL'ACCADEMIA DEI LINCEI**

ACCADEMIA NAZIONALE DEI LINCEI - PALAZZO CORSINI, VIA DELLA LUNGARA 10

*Fino alle ore 10 è possibile l'accesso per le automobili da Lungotevere della Farnesina, 10*