

# Italy

[http://www.Arabidopsis.org/info/2010\\_projects/Italy.jsp](http://www.Arabidopsis.org/info/2010_projects/Italy.jsp)

Contact: Paola Vittorioso

University of Rome "La Sapienza", Dept. Genetics and Molecular Biology, Rome

Email: [paola.vittorioso@uniroma1.it](mailto:paola.vittorioso@uniroma1.it)

Most of the Italian groups actively engaged in *Arabidopsis* research are involved in national and international plant functional genomic network projects. In the last few years, development of a common technological platform has allowed for creation of a network among groups of the highest qualification in Italian universities, public research institutes and the most relevant plant biotechnology companies. This national network, funded by the Italian Ministry of Research (MIUR), represents a first step towards the establishment of a National Plant Biotechnology Center. Post-genomic technologies and other existing technologies will be made available to all partners of the network. The network has developed technologies for (1) gene functional analysis (i.e., RNA interference, negative and positive dominant transformants, Tilling), (2) the analysis of interactions between genes (i.e., *Arabidopsis* macro- and micro-arrays, real-time PCR) and (3) the identification of protein partners and targets (i.e., TAP-TAG analysis, two hybrid analysis in yeast and plants, and stable antibodies phage display libraries).

## Current Research Projects

- Italy will participate in the ERA-NET program, a novel feature of the European Union's 6<sup>th</sup> Framework Program that provides support for transnational networking and coordination of national research programs.
- The Italian Ministry of Research has funded several collaborations between Arabidopsis groups from two different countries. One such collaboration involving Italy (P. Costantino) and Spain (R. Solano) aims to contribute to transcriptional regulation analysis of two important processes of higher plants: seed germination and the responses to necrotrophic fungi, respectively. This project is based on the joint exploitation of complementary technologies for the identification of TF targets available in the two proposing laboratories: (1) TAP-TAG and ChIP technologies, being developed in Rome for Arabidopsis (MIUR funded), and (2) microarray analysis, with technology fully established in Madrid.
- Another Italian group (B. Mattei) is one of the partners involved in the project "Functional Genomics for Biogenesis of the Plant Cell Wall" using Arabidopsis as a model system, and funded by the UE Marie Curie Training Network.
- Italy (L. Colombo) is also participating in the EU FP6 Marie Curie Training Project "TRANSISTOR" (Trans-cis element regulating key switches in plant development).

## Major funding sources for Arabidopsis functional genomics:

- MIUR ([www.miur.it](http://www.miur.it)) will support the First Call for Proposal of the ERA-NET Plant Genomics as part of its institutional activities. National Call Coordination: Dr. M. Massulli, [mauro.massulli@miur.it](mailto:mauro.massulli@miur.it). The Ministry has also funded many national projects (PRIN 2005-2007).
- The UE Marie Curie Training Network is funding the projects: "Functional Genomics for Biogenesis of the Plant Cell Wall" (2005-2009), and "Transistor" (Trans-cis Regulatory Element regulating key switches in plant development).
- The Italian Space Agency ([www.asi.it](http://www.asi.it))
- The European space Agency ([www.esa.int/esaCP/index.html](http://www.esa.int/esaCP/index.html))
- The Institut Pasteur ([www.pasteur.fr/pasteur/international/Dai\\_en/lines.html](http://www.pasteur.fr/pasteur/international/Dai_en/lines.html))