

**COLLECTION, CHARACTERIZATION AND DNA STORAGE OF
ARABIDOPSIS THALIANA (L.) HEYNH. (BRASSICACEAE) ECOTYPES
COLLECTED IN ITALY**

G. MARUCA, G. LAGHETTI, G. SONNANTE, D. PIGNONE, F. LOSAVIO, L. MONTI

Institute of Plant Genetics (IGV) – CNR, Via Amendola, 165/A, Bari

Arabidopsis thaliana, model plant, phenotypic characterization

Arabidopsis thaliana (L.) Heynh., a small annual white flowered species of the Brassicaceae family, has become a very important model system in plant genetic research, thanks to its small genome, short generation time and simplicity to be mutagenized. In contrast with plants possessing larger genomes, it is suitable to current studies of molecular biology for the establishment of gene functions. The importance of isolation and functional analyses of genes in *A.thaliana*, likewise the identification of fundamental mechanisms is that it can be used to find their homologues in crop plants. For this reason there is a great scientific interest in this widely studied plant species, and many stock centers store samples of *A. thaliana* collected in different locations in Europe, Central Asia and Africa.

Considering that Italy and the Mediterranean Basin have been poorly explored for the collection of this plant species, the Institute of Plant Genetics (IGV) of CNR (National Research Council) of Bari (Italy) has started a research activity on collecting, conservation and characterization of *A. thaliana* ecotypes from Italy. Samples from several populations were sampled and collected mainly from Southern Italy. Ten plants per each populations were grown under standard conditions in a greenhouse and phenotypic traits were scored during the various physiological phases. Variation analysis of these characters has allowed the identification of a subset useful to assemble a short descriptor list for rapid field evaluation of the collected samples. Additional 10 plants per population were grown and DNA was extracted from rosette leaves. DNA quality and concentration were checked and DNA was stored at -80° C in order to start a DNA collection implemented in the recently constituted DNA bank at the IGV, Bari.