Proceedings of the XLIX Italian Society of Agricultural Genetics Annual Congress
Potenza, Italy – 12/15 September, 2005
ISBN **88-900622-6-6**

Poster Abstract - B.41

REVERSE AND FORWARD GENETICS IN *MEDICAGO TRUNCATULA*

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Medicago truncatula, retrotransposons, functional genomics

Medicago truncatula is considered a model-species for forage legumes. In the frame of the FIRB project "Post Genomics of Forage Legumes" we are using the tobacco Tnt1 retrotransposon to produce a collection of mutants of *Medicago truncatula*. Because the activity of this retroelement is induced by tissue culture, we are regenerating several hundreds plants using low Tnt copy number lines as source material.

Southern analysis of regenerated lines has showedan average of 10-15 Tnt copies per line.

Inverse PCR experiments, carried out on randomly picked Tnt plants, have indicated that about 30% of the characterized insertions are found within exons. Several lines, with insertions in genes involved in processes of interest for the project are under characterization. At the same time some lines with an interesting dwarf phenotype are being studied by forward genetics approaches.