

**PROJECT TITLE**

CHARACTERIZATION OF SPLICEOSOME FUNCTION IN ARABIDOPSIS TOLERANCE TO WATER STRESS

---

**CONSORTIUM**

P 1	Rafael Catalá		
-----	---------------	--	--

## SUMMARY OF THE REPORT

Drought is one of the main environmental adverse conditions limiting crop yield worldwide. Understanding the molecular mechanisms controlling plant response to water limitation is essential if we want to obtain new crop varieties with increased tolerance to this adverse situation. It is well known that plant response to water stress is tightly controlled by changes in gene expression. Recently, the modulation of splicing has emerged as a new layer of regulation in the control of stress-induced gene expression. We designed this project to study the role of different core components of the spliceosome, the macromolecule that catalyze splicing reaction, in the regulation of plant adaptation to water limitation. We have characterized the tolerance to drought of 23 Arabidopsis mutants with altered expression of these intermediaries. For this characterization, we have monitored different traits (i.e. plant size, weight, photosystems status by chlorophyll fluorescence, etc.) of wild-type and mutant plants growth under control conditions or under severe irrigation limitation. The analysis of the data obtained will give us very interesting data not only to understand the molecular mechanisms controlling plant adaptation to abiotic stress, but also to increase our knowledge about the regulation of the splicing process.