A PhD position is available at the Paloma Mas laboratory (CRAG, Barcelona, Spain) to study the role of the circadian clock on plant growth and organogenesis. We are seeking highly motivated students with experience in Molecular and Cellular Biology.

If interested, please send an email with CV and a motivation letter to: paloma.mas@cragenomica.es

Rhythms are everywhere in nature: from the flowering of Chinese bamboo every 100 years to the depolarization of heart ventricles every second. In the lab, we are interested in a particular type of biological rhythms that occur every 24 hours, just coinciding with the period of the earth rotation. The cellular mechanism that generates these 24-h rhythms is known as circadian clock and it is present in almost all organisms examined to date. The proper function of the clock is particularly relevant in plants as matching their physiology with the external environmental conditions is key for optimal development and survival. Our recent studies have shown that similar to humans, plants have a Master Clock at the shoot apex that synchronizes rhythms in different parts of the plant. Our research line thus focuses on understanding the function of this Master Clock and its role in the control of plant growth and organogenesis. We will perform "jet lag" experiments and change the external environmental conditions to examine clock synchronization. We will also use a battery of clock mutants and perform micrografting experiments and laser-microdissection coupled with genome-wide ("omics") studies to elucidate the molecular mechanisms of clock function at the shoot apex. Our final goal is to combine genetic, biochemical, molecular, cellular and physiological approaches using state-of-the-art techniques to obtain a complete understanding of how the circadian clock orchestrates growth in plants.

Selected Lab Publications:

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