2-year postdoc position to study mechanistic principles of plant growth regulation by low temperatures

**Place:** Severo Ochoa Plant Biotechnology and Genomics Center of Excellence at UPM – INIA, Madrid Spain

**Subject:** Plant growth is achieved by stem cell division followed by differentiation, however little is known about how stem cell activity is regulated by the environment and upon stress response. Shoot (SAM) and root (RAM) apical meristems are normally exposed to different temperatures during day, as soil temperature is below than above air and roots grow underground. The plant growth is slowed down by cold. The molecular mechanisms are unknown. We propose to investigate the role of a homeodomain cold sensitive transcription factor (COLD) in the regulation and compensation of growth upon decreasing temperatures. We will follow a synergistic multidisciplinary approach that combines genetics, time-lapse live cell imaging and spatio-temporal computational models. The candidate will address effect of COLD in stem cell regulators and stem cell division and differentiation in the SAM and the RAM upon a range of temperatures and resolve shoot-root growth dynamics using quantitatively measures of cell division, elongation, stem cell regulators activation/repression and COLD induction and movement. Project will be carried in close collaboration with two additional research teams providing synergistic expertise.

**Requirements:** PhD in Molecular or Developmental Biology or related discipline. An International research experience is highly desirable. To express your interest please send us your CV, a doctoral degree certificate, most important publications, at least two reference letters from your recent supervisors and describe what motivates you to do science by 31th May to Dr. Krzysztof Wabnik ([PlantDynamicsLab@gmail.com](mailto:PlantDynamicsLab@gmail.com))