

<b><u>TITLE</u></b>	<b>Combined genetic approaches to disclose seed growth and germination control by indolic compounds (Eol -TSP2-09)</b>
<b><u>RESEARCHER PROFILE</u></b>	Postdoctoral: First Stage Researcher (R1) or Recognised Researcher (R2)
<b><u>TYPE OF CONTRACT</u></b>	Temporary contract of 2 years
<b><u>IP</u></b>	<b>Stephan Pollmann</b>
<b><u>GROUP INFORMATION</u></b>	<a href="http://www.cbgp.upm.es/index.php/es/informacion-cientifica/desarrollo-de-plantas/plant-hormonal">www.cbgp.upm.es/index.php/es/informacion-cientifica/desarrollo-de-plantas/plant-hormonal</a>
<b><u>OFFER DETAILS</u></b>	<p>Seed quality is of paramount importance to agriculture and food security. Considerable economic losses result from sub-optimal seed performance, undermining food security and livelihoods. Seed quality is strongly influenced by the environmental stresses experienced by the mother plant. Climate change will further exacerbate economic losses and decrease the predictability of seed yield and quality for the farmer. The imminent challenges of climate change and food security require new knowledge of how stress impacts on seed quality. This includes a number of major seed characters such as germination percentage, vigor, and field establishment. Recent research provided evidence for an important role of auxin not only in the establishment of organ polarity during embryogenesis, but also during later phases of seed maturation. Auxin and auxin precursors have been described as determinants of seed size, dormancy, and germination. Auxin homeostasis is, however, strongly affected by environmental cues. The project addresses selected aspects of the challenges produced by global warming by characterizing seed size and resilience in response to environmental stress factors, such as drought and heat stress. We will take a combined genetics approach that employs genome-wide association studies (GWAS) and the broad natural variation of <i>Arabidopsis thaliana</i>, as well as a chemical genetics approach. The combined approaches have the ambition to unravel the molecular switchboards that determine seed fate from development, through storage, and germination, paying special attention to the role of indolic compounds in the determination of seed size, germinability and vigor.</p> <p>For more information on the group: <a href="http://www.bioworkx.net">www.bioworkx.net</a></p>
<b><u>MAIN RESPONSABILITIES</u></b>	The successful Postdoc candidate will work within an international and multidisciplinary research team that applies both computational and laboratory techniques to understand the role of indolic compounds in both seed maturation and germination.
<b><u>SPECIFIC OFFER REQUIREMENTS</u></b>	Applications should contain a detailed CV, a motivation letter and two recommendation letters.
<b><u>REQUIRED QUALIFICATIONS</u></b>	PhD degree in Biology, Biochemistry, Biotechnology or related areas.
<b><u>ELIGIBILITY CRITERIA</u></b>	Postdoctoral fellow with experience in plant molecular biology and plant genetics. Very good communication skills in English are compulsory. Additional experience in screening approaches and bioinformatics will be positively evaluated.