

cDNA-AFLP profiling in the embryo axes during common bean germination

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Mots-clés	early radicle growth [6], Gene Expression [7], gene markers [8], Phaseolus vulgaris [9], Plant Sciences [10]
Résumé en anglais	<p>cDNA-AFLP fingerprinting was used to identify genes with modulated expression during germination in common bean (<i>Phaseolus vulgaris</i> L.). The analysis was performed on the embryo axes. Nine time points covering the whole germination were considered and 800 transcript-derived fragments (PvTDFs) were scored. Among them, 80 % showed no changes during germination. The 97 PvTDFs showing differential expressions during germination were sequenced along with 14 constant transcripts that were randomly chosen. The expression of seven variable PvTDFs was confirmed by real-time RT-PCR. We observed that 92 % of the transcript changes, including 35 % of appearing mRNAs, took place before radicle protrusion, 0-17 h after imbibition (HAI). A major shift in gene expression was observed between 9 and 14 HAI, suggesting a key moment of cell re-programming. Sequence homologies were found for 52 % of the sequenced PvTDFs. The identified transcripts encode proteins belonging to several functional groups including transcription factors, proteins involved in storage compound hydrolysis, cell elongation or oxidative stress protection.</p>
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- [3] [http://okina.univ-angers.fr/publications?f\[author\]=12080](http://okina.univ-angers.fr/publications?f[author]=12080)
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