

Accepted Manuscript

Title: Insight into cellular proteome of *Lolium multiflorum*/*Festuca arundinacea* introgression forms to decipher crucial mechanisms of cold acclimation in forage grasses

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PII: S0168-9452(18)30176-6
DOI: <https://doi.org/10.1016/j.plantsci.2018.04.002>
Reference: PSL 9805

To appear in: *Plant Science*

Received date: 7-2-2018
Revised date: 4-4-2018
Accepted date: 5-4-2018

Please cite this article as: Adam Augustyniak, Dawid Perlikowski, Marcin Rapacz, Janusz Kościelniak, Arkadiusz Kosmala, Insight into cellular proteome of *Lolium multiflorum*/*Festuca arundinacea* introgression forms to decipher crucial mechanisms of cold acclimation in forage grasses, *Plant Science* <https://doi.org/10.1016/j.plantsci.2018.04.002>

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Insight into cellular proteome of *Lolium multiflorum*/*Festuca arundinacea* introgression forms to decipher crucial mechanisms of cold acclimation in forage grasses

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Highlights:

- Cold acclimation of photosynthetic apparatus is crucial to improve frost tolerance in *Lolium-Festuca* hybrids.
- The capacity to acclimate photosynthesis to low temperature could be controlled by the efficiency of carbon assimilation and metabolism.
- Accumulation and activity of different forms of chloroplast aldolase trigger a course of the Calvin cycle.

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