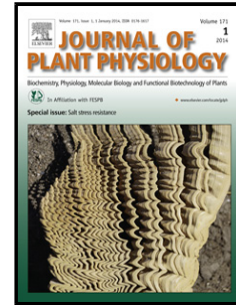


## Accepted Manuscript

Title: Plant growth regulator interactions in physiological processes for controlling plant regeneration and *in vitro* development of *Tulbaghia simmleri*

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PII: S0176-1617(18)30017-8  
DOI: <https://doi.org/10.1016/j.jplph.2018.01.005>  
Reference: JPLPH 52719

To appear in:

Received date: 28-9-2017  
Revised date: 9-1-2018  
Accepted date: 10-1-2018

Please cite this article as: Kumari Aloka, Baskaran Ponnusamy, Plačková Lenka, Němčáková Hana, Nisler Jaroslav, Doležal Karel, Van Staden Johannes. Plant growth regulator interactions in physiological processes for controlling plant regeneration and *in vitro* development of *Tulbaghia simmleri*. *Journal of Plant Physiology* <https://doi.org/10.1016/j.jplph.2018.01.005>

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**Plant growth regulator interactions in physiological processes for  
controlling plant regeneration and *in vitro* development of *Tulbaghia  
simmleri***

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**ABSTRACT**

The endogenous auxin and cytokinin contents of *in vitro* regenerated *Tulbaghia simmleri* maintained on applied plant growth regulators in Murashige and Skoog (MS) medium were investigated using UHPLC-MS analysis. The highest number of shoots (27.6 per leaf) were produced in MS medium supplemented with 2.5 µM thidiazuron. A higher number of these shoots were rooted with 10 µM 6-(2-hydroxy-3-methylbenzylamino) purine (PI-55, cytokinin antagonist). Production of somatic embryos (SEs: 16.4 – 4.6, globular to cotyledonary stages) improved significantly with liquid MS medium containing 2.5 µM picloram, 2.5 µM phloroglucinol (PG) and 1.5 µM gibberellic acid or 1.5 µM PI-55 and 1.0 µM *trans*-zeatin. SEs (torpedo and cotyledonary stages) germinated (100%) in plant growth regulator free MS

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