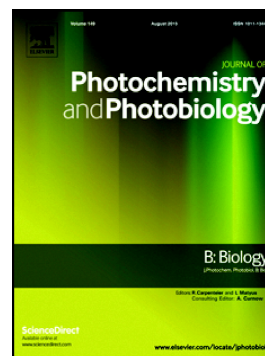


## Accepted Manuscript

Cadmium toxicity and its amelioration by kinetin in tomato seedlings vis-à-vis ascorbate-glutathione cycle

Shikha Singh, Anita Singh, Prabhat Kumar Srivastava, Sheo Mohan Prasad



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**Title:** Cadmium toxicity and its amelioration by kinetin in tomato seedlings *vis-à-vis* ascorbate-glutathione cycle

**Authors:** Shikha Singh<sup>\*a</sup>, Anita Singh<sup>\*a</sup>, Prabhat Kumar Srivastava<sup>\*a,b</sup> and Sheo Mohan Prasad<sup>\*\*a</sup>

**Affiliations:** <sup>a</sup> Ranjan Plant Physiology and Biochemistry Laboratory, Department of Botany, University of Allahabad, Allahabad-211002, India

<sup>b</sup> Pt. Ravi Shankar Tripathi Government Degree College, Bhaiyathan, Surajpur-497231, C.G., India (Present Institution)

**\*Equally Contributed**

**\*\*Corresponding author**

**e-mails:** 21shikha.au@gmail.com  
anita.1710@gmail.com  
prabhatsrivastava.au@gmail.com  
profsmprasad@gmail.com

**Mob. No.:** +919450609911

**Fax:** +91-532-2461009

**Tel:** +91-532-2462048

**Abstract** The supplementation of plant hormones may enhance the tolerance capacity of plants against certain environmental stresses by increasing their physiological functioning and detoxification capacity. To answer the question that whether a phytohormone ‘kinetin’ (KN, 6-furfuylaminopurine), one of the artificial cytokinins could ameliorate the cadmium induced toxicity in tomato seedlings, the effect of KN was assessed in differentially cadmium (Cd<sub>1</sub>: 3 mg kg<sup>-1</sup> sand and Cd<sub>2</sub>: 9 mg kg<sup>-1</sup> sand) intoxicated tomato seedlings by estimating the changes in reactive oxygen species (ROS, *viz.* superoxide radical and H<sub>2</sub>O<sub>2</sub> generation) and probable alteration in photosystem II photochemistry, ascorbate-glutathione cycle enzymes and their metabolites. Accumulation of Cd in tomato seedlings increased the production of ROS by negatively impacting PS II photochemistry

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