

Summary
On Minor Research Project
(F.No. MS-27/201022/XII/13-14/CRO; Dated 29 October, 2014)

Entitled

“Investigation on differential behavior of UV-B radiation in cyanobacteria under copper toxicity: Physiological and biochemical approaches”

“The results show that copper (Cu) and UV-B (high fluence rate) adversely affected growth, photosynthetic efficiency and antioxidants such as superoxide dismutase (SOD), catalase (CAT) and peroxidase (POD) of both the cyanobacteria. Further, when Cu treatments were combined with high fluence rate of UV-B, growth and photosynthetic efficiency further declined. Interestingly, low fluence rate of UV-B protects photosynthetic efficiency of both the cyanobacteria against Cu stress. Moreover, *P. foveolarum* is less affected by Cu and high fluence rate of UV-B than *N. muscorum*. The results imply that low fluence rate-mediated protection of cyanobacteria under Cu stress involved up-regulation of antioxidant defense system i.e. SOD, CAT and POD. These results suggest that *P. foveolarum* may be used for sustainable agriculture under enhanced UV-B and Cu pollution”.

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