CONCLUSION

One of the most intriguing issues in NO biology is its dual function as a potent oxidant and effective antioxidant (Beligni, M.V. and Lamattina, L. 1999). This dual role of NO might depend on its concentration as well as on the status of the environment. Oxidative stress is the common result of the action of many environmental factors, manifesting itself in a cell by an increased level of reactive oxygen species (Mittler, R. 2002). The cytoprotective role of NO is mainly based on its ability to maintain the cellular redox homeostasis and to regulate the level and toxicity of ROS

The ability of NO to exert a protective function against oxidative stress is caused by the factors such as

(a) reaction with lipid radicals, which stops the propagation of lipid oxidation;

(b) scavenging the superoxide anion and formation of peroxynitrite (ONOO\(^{-}\)) that is toxic for plants but can be neutralized by ascorbate and glutathione;

(c) activation of antioxidant enzymes (SOD, CAT, and POX).

1. NO, a diffusible gaseous free radicle & a functional metabolite can protect plant tissues against salinity & metal induced oxidative stress.

2. NO, can provoke both benificial and harmful effects depending on concentration and localisation of NO in plants
3. Growth of both root & shoot is less affected with NaCl or metal (Cu, Cr & Pb) given after SNP pretreatments of the plants as compared to plants treated with NaCl or metal (Cu, Cr & Pb) without SNP treatments.

4. SNP, a NO donor counteract the NaCl & Metal (Cu, Cr & Pb) induced increase in the activity of SOD & POX.

5. SNP pre treatment followed by NaCl & Metal (Cu, Cr & Pb) treatment helps in reduction of ASC & GSH content in plants under NaCl & metal stress.

6. SNP pretreatment reduces the NaCl & metal induced lipid peroxidation