



Figure S1. The detoxification enzymes belonging to ascorbate-glutathione cycle. The superoxide radicals ($\text{O}_2^{\cdot-}$) are removed by superoxide dismutase (SOD) which leads to hydrogen peroxide (H_2O_2) formation. The ascorbate (AsA) is regenerated by oxidized forms by a cycle catalyzed by ascorbate peroxidase (APX) enzyme. The AsA is converted to monodehydroascorbate (MDHA) by APX, then the monodehydroascorbate reductase (MDHAR) oxidizes the MDHA and reduces the NADP^+ that is regenerated by Ferredoxin (Fd). The MDHA can be converted to AsA and dehydroascorbate (DHA) by non-enzymatic reaction. The DHA is converted by dehydroascorbate reductase enzyme (DHAR) to AsA, contemporary the reduced glutathione (GSH) is transformed in oxidized glutathione (GSSG) by NADPH .