



**Supplementary Fig. 1.**  $H_2DCFDA$ -loaded cells under confocal microscope after cysteine-ascorbate deprived (CAD) medium stress. Increases in fluorescence are representative of increase in the rate of oxidative species generated. Fluorescence was monitored from the suspension of live cells after the incubation under CAD medium in the absence and presence of pyruvate (2 mM) and acetate (2 mM). We used mannitol (2 mM) and ascorbate (2 mM) as a positive control and without metabolite as a negative control. Increases in fluorescence are representative of increase in the rate of oxidative species generated.