Electronic Supplementary Material (ESI) for Analytical Methods.

Supplementary Data

1. **Lithium acetate does not interfere with the fluorescence of DCF**

As seen in Figure1, fluorescence of DCF is not quenched upon addition of lithium acetate.

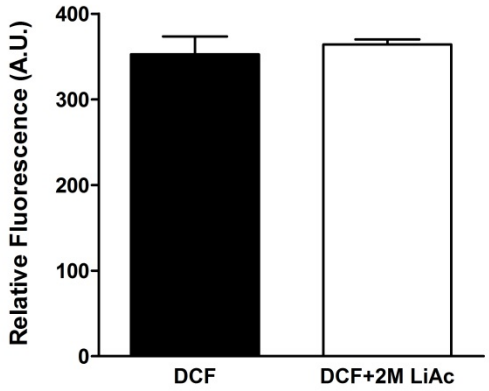

Figure 1: Fluorescence of DCF after adding 2M lithium acetate, pH 8.5. H_2DCF-DA was cleaved by esterase to generate H_2DCF. H_2DCF was then was exposed to H_2O_2 and HRP to generate the fluorescent DCF. Following this, lithium acetate was added to assess if it quenches fluorescence.

2. **Fluorescence of DCF is not affected by pH in the range of 7-9**

A solution of lithium acetate of 2M had a pH around 8.5. Figure 2 shows that fluorescence is not affected in the pH range of 7-9. The fluorescence values in the solutions of varying pH lie closely in the range of the control (Figure 2).

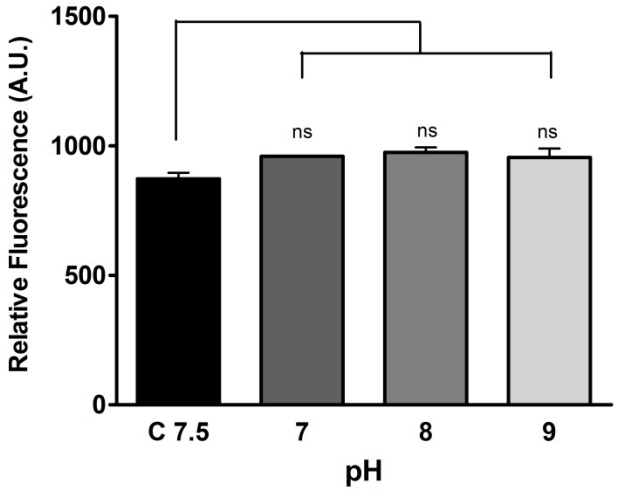

Figure 2: Fluorescence of DCF in solutions of pH ranging from 7-9. H_2DCF-DA was cleaved by esterase to generate H_2DCF. H_2DCF was then was exposed to H_2O_2 and HRP to generate the fluorescent DCF. Following this, buffers ranging in pH from 7-9 were added to assess if pH interferes with fluorescence. The control used was a yeast cell suspension in PBS (0.01M, 7.5 pH).

3. Time bound fluorescence of DCF in the presence of 2M lithium acetate

When DCF was incubated with 2M lithium acetate, the fluorescence was shown to be stable for over 10 minutes. This shows that lithium acetate treatment for 2 minutes does not affect the fluorescence in any way.

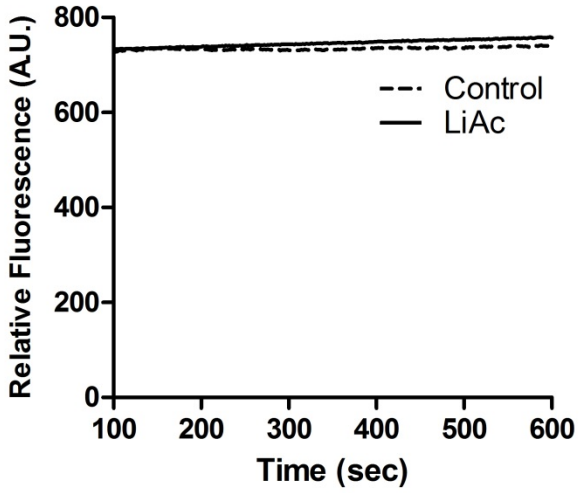

Figure 3: Time bound fluorescence of DCF (control) and DCF with lithium acetate (LiAc). Fluorescent DCF extracted by the lithium acetate method was exposed to 2M lithium acetate for 10 minutes and fluorescence measured every 5 seconds to assess whether LiAc quenches fluorescence.