Information:

Part1: Yeast cells were suspended in 100 mM phosphate buffer, pH 6.8, to a cell density of 10% wet weight. At time 0, 4 mM DiOC2(3) were added to the suspension. At times ~180 s and 240 s, 30 mM glucose and 5 mM KCN were added to the suspension, respectively to initiate oscillations.

 Fig1: NADH and mitochondrial membrane potential (MMP) (sampling frequency fs= 0.5Hz)

Fig2: The effect of FCCP (0, 250 nM, 500 nM and 1 uM) on NADH and MMP oscillations. Cells were incubated in the inhibitor 10 min before being transferred to the measuring cell. fs= 0.5Hz.

Fig3: the effect of Iodoacetate on NADH and MMP. At time ~1000 s, 20 mM iodoacetate was added to the suspension. fs= 0.5Hz.

Fig4: Effect of azide on oscillations of NADH and mitochondrial membrane potential and incubated with 0 (A, B), 100 mM (C, D), 200 mM (E, F), and 400 mM (G, H) sodium azide for 10 min before being transferred to the measuring cell. fs= 0.5Hz.

Fig5: Effect of omeprazole on oscillations of mitochondrial membrane potential. Yeast cells were treated for 10 min with omeprazole. The following concentrations of omeprazole were added to the cells: (A) 0 mM; (B) 100 mM; (C) 150 mM; and (D) 250 mM. fs =0.5 Hz

Fig6: Time series of NADH fluorescence and pHi. pHi was determined from measurements of the ratio of excitations at 435 nm and 490 nm (emission 520 nm). Fs=1Hz.

Fig7: Effect of the addition of iodoacetate on pHi and NADH. At time approximately 1000 s 20 mM iodoacetate was added to the suspension. Fs=1Hz.

Fig8: The effect of omeprazole on pHi. Cells were treated with 250 μM omeprazole following addition of first 30 mM glucose and then 5 mM KCN.