

# Supporting Information

## Design, synthesis and biological activity of hydrogen peroxide responsive arylboronate melatonin hybrids

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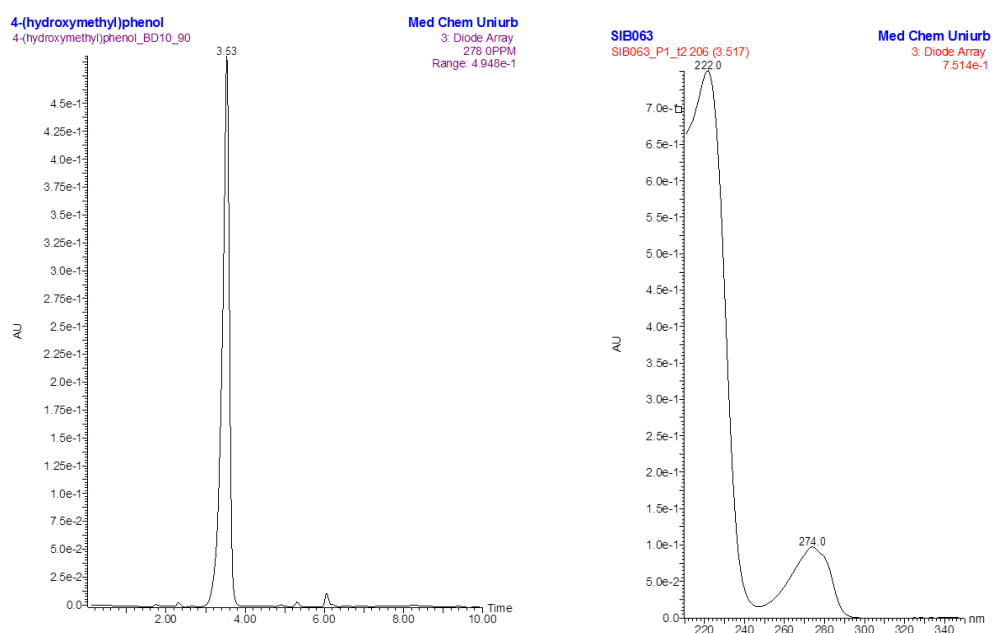
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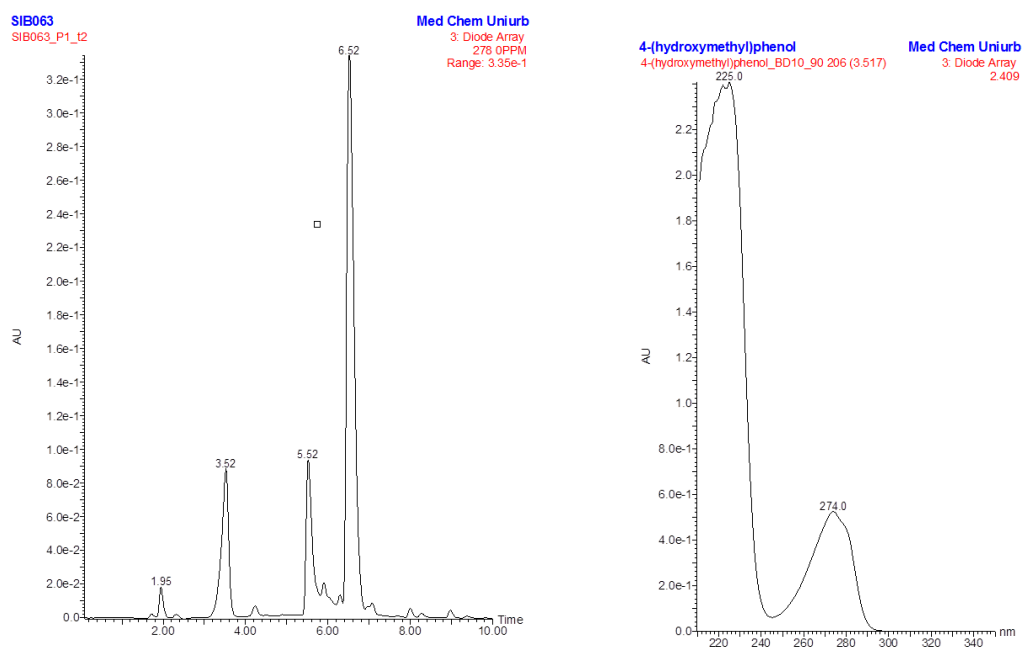
Page S2: Supplementary Figures S1 and S2

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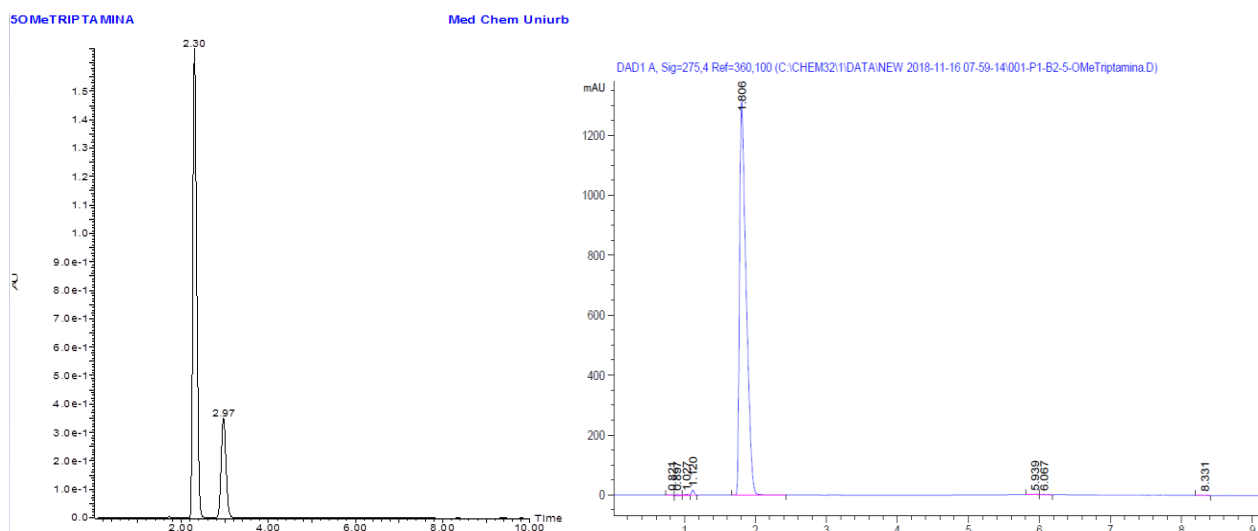
Page S4: Supplementary Figure S4



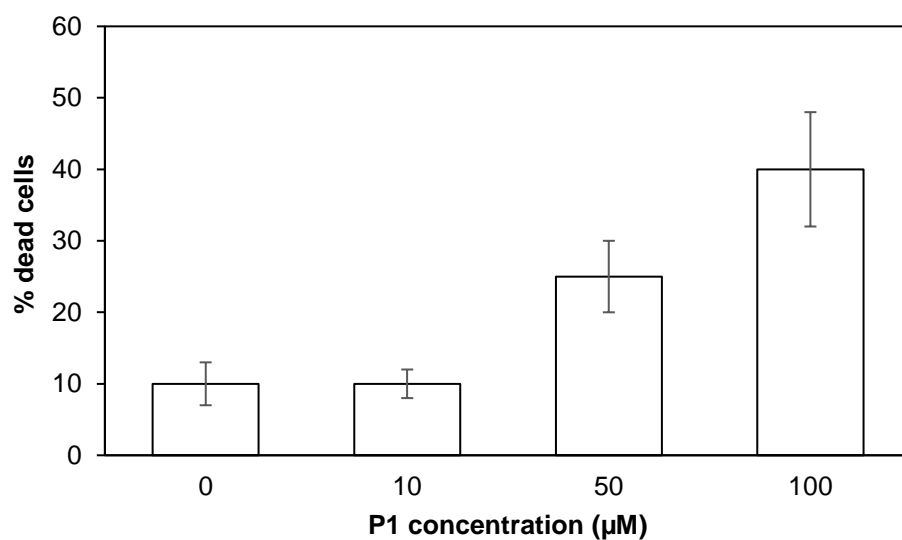
**Figure S1.** HPLC trace of an authentic sample of *p*-hydroxybenzyl alcohol (*p*-HBA,  $R_t=3.52$ ) and its UV spectra.



**Figure S2.** HPLC chromatogram ( $\lambda=278$  nm) of activation of **P1** by  $H_2O_2$  (after 15 min) and UV spectra of the peak at  $R_t=3.52$



**Figure S3.** HPLC traces of an authentic sample of 5-MeOT solubilized in a 1:1 v/v  $\text{CH}_3\text{CN}$ /physiological buffer saline. Right: linear gradient from a 10/90 (v/v) mixture  $\text{CH}_3\text{CN}/\text{HCOOH}$  0.1% in  $\text{H}_2\text{O}$  to a 90/10 mixture in 8 minutes and then 90/10 mixture for 2 min. Left: 20/80 (v/v) mixture  $\text{CH}_3\text{CN}/\text{HCOO}^-\text{NH}_4^+$  (10 mM) in  $\text{H}_2\text{O}$  for 2 min, then linear gradient to 100%  $\text{CH}_3\text{CN}$  in 8 minutes.



**Figure S4.** Trypan blue assay after exposure of HeLa cells to **P1** at 10, 50, 100  $\mu\text{M}$  for 24 h. At this time the total number of live and dead cells was counted by an automated cell counter. Data are the mean  $\pm$  SD of two separate experiments each carried out in triplicate.