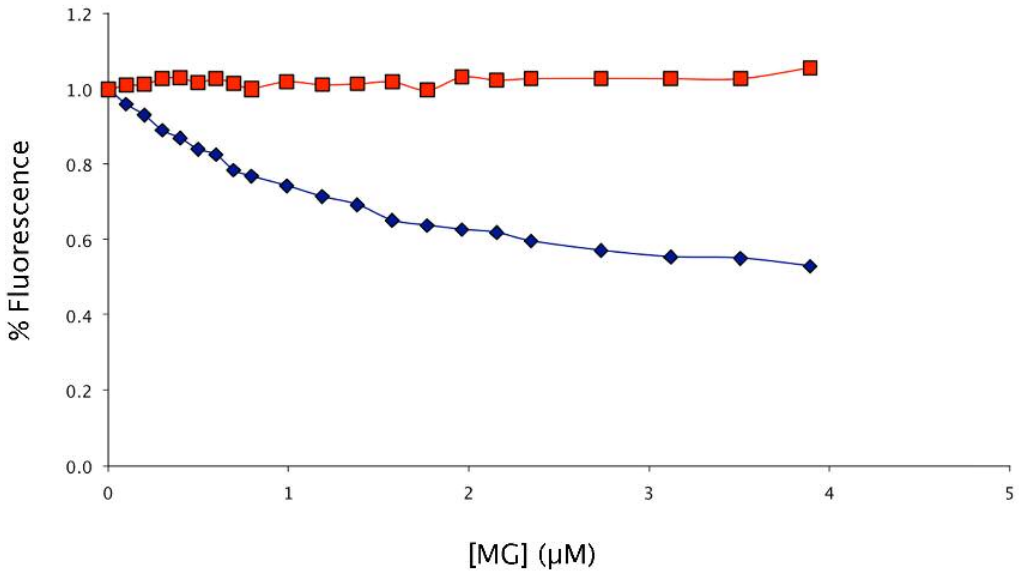
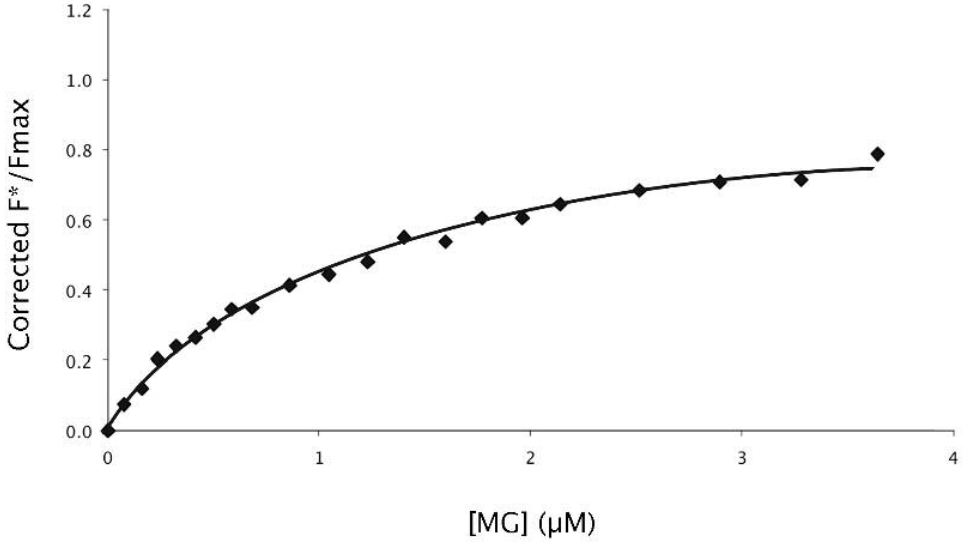
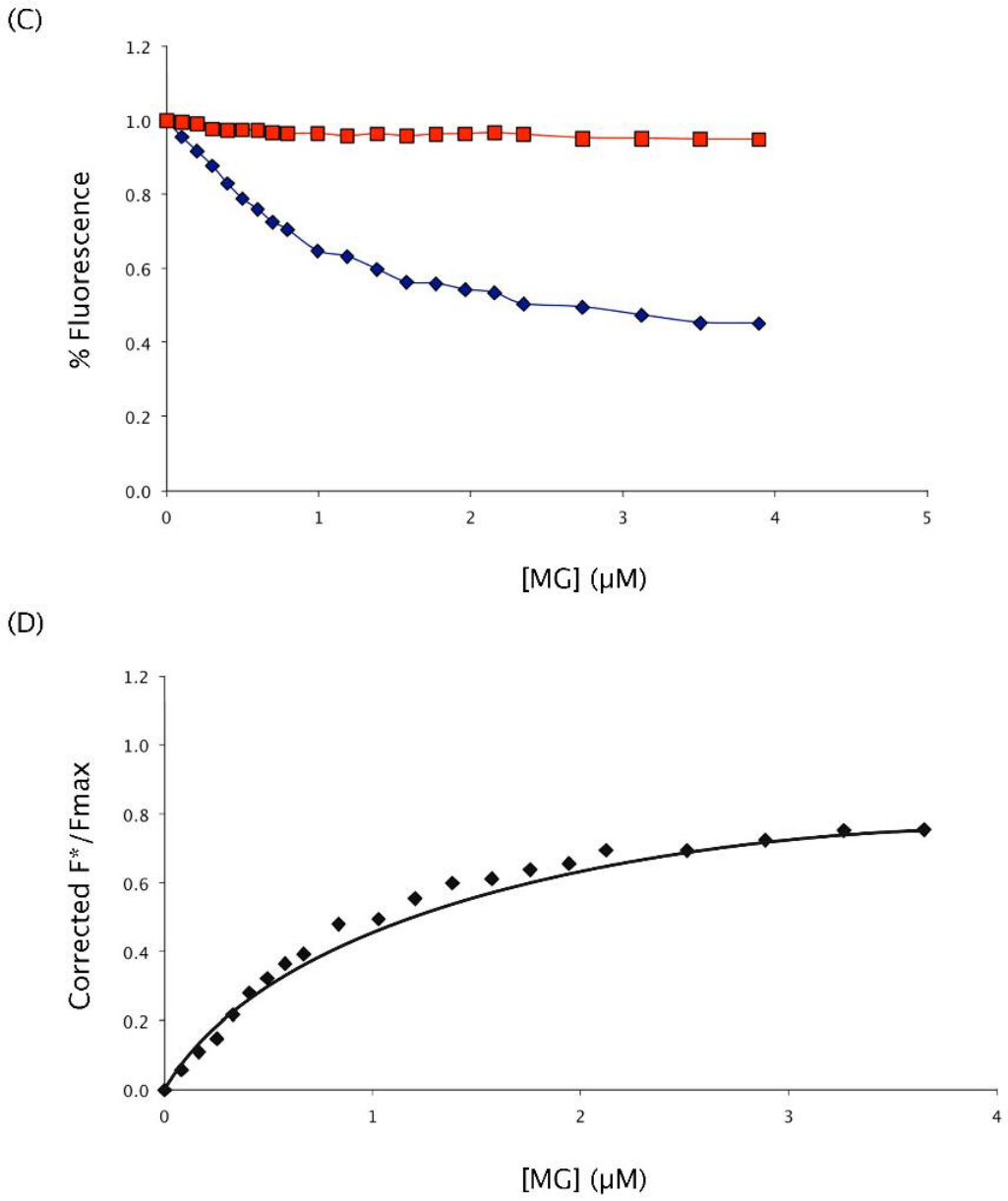
(A)


% Fluorescence
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0
1
2
3
4
5
[MG] (μM)

(B)


Corrected F*/Fmax
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0
1
2
3
4
[MG] (μM)



Supporting Information Figure S1. Determination of the binding affinity of Wt QacR (A-B) and QacR(E58A) (C-D) for malachite green by quenching of intrinsic tryptophan fluorescence
(A) Fluorescence quenching of Wt QacR (blue diamonds) and pure tryptophan (red squares) by malachite green (MG), with excitation and emission wavelengths of 295 nm and 340 nm, respectively. (B) Determination of the Wt QacR dissociation constant (K_d) for MG. QacR fluorescence values obtained from the titration, shown in (A), were corrected for inner filter effects using equation 1 (Grkovic *et al.*, 2003b). The proportion of quenchable QacR fluorescence (ΔF^*) and the corresponding free MG concentrations were then fitted to equation 2 (Grkovic *et al.*, 2003b). The points (black diamonds) represent the data derived from (A) with the line of best fit. The K_d value generated for MG in this instance was 1.17 μM. (C) Fluorescence quenching of QacR(E58A) (blue diamonds) and pure tryptophan (as described in A) (D) Determination of the QacR(E58A) dissociation constant (K_d) for MG. The points (black diamonds) represent the data derived from (C) with the line of best fit. The K_d value generated for MG in this instance was 0.92 μM.