

Supplementary materials

MxyR OF *Mycobacterium tuberculosis* RESPONDS TO XYLAN; AN UNUSUAL LIGAND FOR A MarR FAMILY TRANSCRIPTIONAL REGULATOR[#]

S. Mauran^a, N. T. Perera^b, I. C. Perera^{a*}

^a*Synthetic Biology Laboratory, Department of Zoology and Environment Sciences, Faculty of
Science, University of Colombo, Colombo 03, Sri Lanka*

^b*Department of Chemistry, Faculty of Applied Sciences, University of Sri Jayewardenepura,
Nugegoda, Sri Lanka*

**e-mail: icperera@sci.cmb.ac.lk*

Table S1. sequences of synthetic oligonucleotides used in the current study

Primer	Sequence
MxyR_Fw	5' ACA GAATTC ATG GCC GTT TCC GAT CTA TCC 3'
MxyR_Rv	5' ACG GAATTC TTA TGA GGA CGC CAG CTT GG 3'
mxyOFw	5' CGA TCT CGG TTT CGC TTT GGT TCA C 3'
mxyORv	5' TGG GAT AGA TCG GAA ACG GCC AT 3'
PP1 Fw	5' AGT TTC ACA GAG TCA GTG CTC CTG ATG ACG GTG GCG GTT CAA TAC GTG TCA CTG TGC AGT CG 3'
PP1 Rv	5' CGA CTG CAC AGT GAC ACG TAT TGA ACC GCC ACC GTC ATC AGG AGC ACT GAC TCT GTG AAA CT 3'
PP2 Fw	5' CTA GGA CTC GAC TGC AGC ATG AAG TTA CCA CCC TTG GTT CAG GCT TAC GTG TCA GCG ATC 3'
PP2 Rv	5' GAT CGC TGA CAC GTA AGC CTG AAC CAA GGG TGG TAA CTT CAT GCT GCA GTC GAG TCC TAG 3'
PP3 Fw	5' CTA GGA CTC GAC TTC AGC TGG TTC AGT CAT TGA ACC ACA GGC TTA CGT GTC AGC GAT C 3'
PP3 Rv	5' GAT CGC TGA CAC GTA AGC CTG TGG TTC AAT GAC TGA ACC AGC TGA AGT CGA GTC CTA G 3'
PP4 Fw	5' GTC CGT TGA GAC GTA CAG ACC TGA CCA GGT ACA GTT GGT GGA CCA TGG CCG TGT CCG ATC TAT AC 3'

PP4 Rv

5' GTA TAG ATC GGA CAC GGC CAT GGT CCA CCA ACT GTA CCT
GGT CAG GTC TGT ACG TCT CAA CGG AC 3'

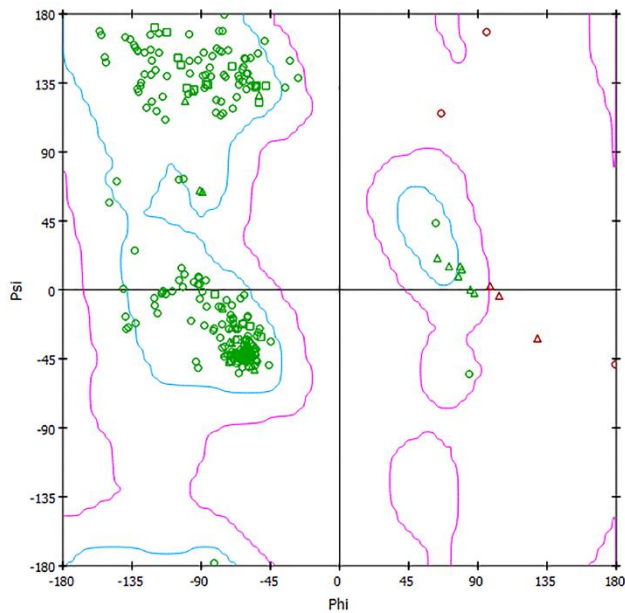


Figure S1. MxyR Model validation by Ramachandran's plot. It shows that majority of the residues (91.5%) are in the favored region of the plot.

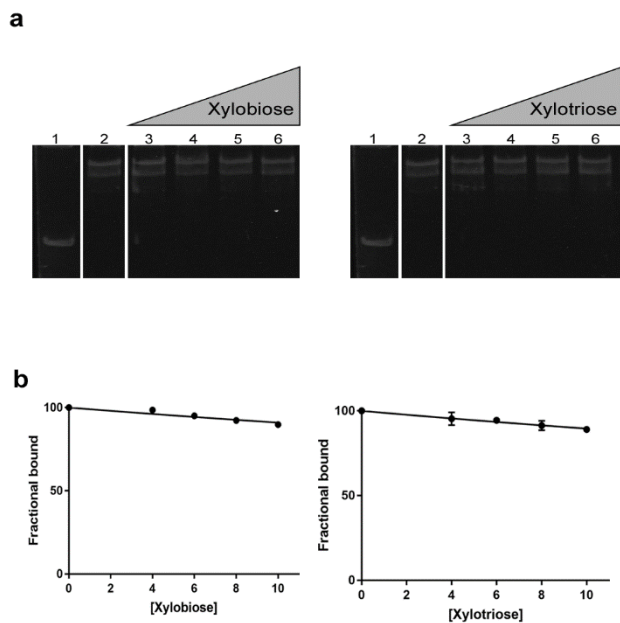


Figure S2. Binding of xylooligosaccharides towards MxyR. **a:** Challenging MxyR-*mxyO* complex with increasing concentrations of xylooligosaccharides xylobiose and xylotriose. First lane of each gel represents the free DNA, the second lane represents fifty percentage of MxyR-*mxyO* complex in equilibrium condition and the rest of the lanes are MxyR-*mxyO* complex in the presence of increasing concentrations of xylooligosaccharides (4, 6, 8 and 10 $\mu\text{g}/\mu\text{l}$). **b:** MxyR-*mxyO* complex formation as a function of increasing xylooligosaccharide concentration. Error bars represents standard deviation (SD) of three independent experiments.