

Table of Contents

Section	Pages
Abstract	2
Introduction: Drug tolerance is an important barrier to shortening TB treatment	3-4
Actively-growing intracellular mycobacteria exhibit multidrug tolerance mediated by macrophage-induced bacterial efflux pumps	5-7
Macrophage-induced <i>Mycobacterium tuberculosis</i> efflux pumps are virulence determinants	7-9
<i>Mycobacterium tuberculosis</i> macrophage-induced efflux pumps: signals and substrates	9-12
Function and regulation of macrophage-induced efflux: a teleological perspective	12-13
Therapeutic implications for drug tolerance	13-15
Efflux pump inhibition for drug-resistant TB	15-17
Conclusions	17
Acknowledgements	17-18
Table 1: Macrophage-induced <i>Mycobacterium tuberculosis</i> efflux pumps	19-21
Table 2: Bacterial efflux pumps associated with virulence	22-25
Table 3: Mycobacterial Species with Homologs of <i>Mycobacterium tuberculosis</i> Macrophage-Induced Pumps	26-27
Figure 1: Model for Efflux Pump Inhibitor Action in <i>Mycobacterium tuberculosis</i>	28
References	29-44