



# Defining optimal fluoroquinolone exposure against *Mycobacterium tuberculosis*: contribution of murine studies

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**The proportion of TB patients attaining the fluoroquinolone target exposure, as defined by *in vitro* models, is very low in clinical practice; however, it would be even smaller if the target AUC/MIC ratios were calculated in murine models of tuberculosis** <https://bit.ly/2Wg8K8H>

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We read with interest the research letter published by DAVIES FORSMAN *et al.* [1] in the *European Respiratory Journal*. The authors determined the proportion of multidrug-resistant tuberculosis patients treated with moxifloxacin or levofloxacin who attained an optimal exposure for these drugs. The target exposure corresponded to the area under the curve (AUC<sub>0-24h</sub>)/minimal inhibitory concentration (MIC) ratio generating the optimal bactericidal activity. The authors based their calculations on the AUC<sub>0-24h</sub>/MIC ratio measured in a preclinical model called Hollow Fiber System (HFS), an *in vitro* model used to assess anti-tuberculosis activity of candidate drugs. Based on this model, they reported that the target ratio was reached in only half of patients receiving moxifloxacin, and in none of those receiving levofloxacin.