Supplementary Table S5. Tissue penetration and PK/PD index of some quinolones.

Quinolone/PK	Tissue Penetration *(PRu)*	PK/PD Index	References
Ciprofloxacin	Muscle – 1.23 ± 0.24 Subcutaneous tissue 0.89 ± 0.16	Primary: *f*AUC_{0-24}/MIC ≥ 90-100 (Gram-negative bacteria) *f*AUC_{0-24}/MIC = 30-50 (Gram-positive bacteria) Secondary (prevention of resistance): C_{max}/MIC ≥ 8-10	[1-3]
Gemifloxacin	Muscle – 1.7 ± 0.7 Adipose tissue – 2.4 ± 1.0	*f*AUC_{0-24}/MIC around 30 based on results from in vitro and animal models of infection *f*AUC_{0-24}/MIC_{90} 99.3–132.3 *(S. pneumoniae* in healthy subjects after multiple doses)	[4]
Levofloxacin	Adipose tissue: 1.1 ± 0.6 healthy 1.2 ± 1.0 inflamed	*f*AUC_{0-24}/MIC ≥ 87-100 (Gram-negative bacteria) fAUC_{0-24}/MIC ≥ 30 *S. pneumoniae* in the lungs	[5-7]
Moxifloxacin	Muscle – 0.86 ± 0.17 Subcutaneous tissue 0.81 ± 0.19 Subcutaneous adipose tissue*: Non-diabetic patient: Healthy tissue – 0.5 ± 0.3 Inflamed tissue – 1.2 ± 0.8 Diabetic patient: Healthy tissue - 0.9 ± 0.6 Inflamed tissue – 0.5 ± 0.4	Primary: *f*AUC_{0-24}/MIC = 100 - 125 (Gram-negative bacteria) *f*AUC_{0-24}/MIC = 30 - 50 (Gram-positive bacteria) Secondary (prevention of resistance) C_{max}/MIC ≥12.2 *f*AUC_{0-24}/MIC >192 for *S. pneumoniae* C_{max}/MIC = 18 for *S. pneumoniae* C_{max}/MIC ≥ 75 for *H. influenzae* and *M. catarrhalis*.	[8-11]
Ofloxacin	Subcutaneous tissue – 0.716 ± 0.185	*f*AUC_{0-24}/MIC > 100 – 125	[9, 12, 13]

Pazufloxacin		Primary *f*AUC_{0-24}/MIC > 100.8 Secondary *f*C_{max}/MIC = 10.8	[14]
Tosufloxacin		*f*AUC_{0-24}/MIC 138 and 193 for *S. pneumoniae* Secondary *f*C_{max}/MIC > 10 *(S. pneumoniae)*	[15]

PRu = Tissue penetration ratio (AUC of ISFu to AUC of unbound plasma concentration)
ISFu = unbound interstitial fluid concentrations
*f*AUC = area under the unbound plasma concentration curve
*f*Cmax – unbound peak concentration in plasma
*No statistical differences among all groups

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