

# Activity of Solithromycin and comparators against Streptococci isolated from Respiratory Samples Collected in Europe in 2012

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Abstract 704

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**Background:** Solithromycin is a fourth-generation oral and intravenous macrolide, the first fluoroketolide, that is currently undergoing Phase III clinical development for the treatment of community-acquired bacterial pneumonia. This study evaluated the *in vitro* activity of solithromycin against respiratory isolates of *Streptococcus pneumoniae* (SPN) and *S. pyogenes* (SPY) collected in Europe during 2012.

**Methods:** Hospitals in Belgium (N=3), Czech Republic (3), Denmark (1), France (5), Germany (7), Greece (2), Hungary (1), Italy (7), Netherlands (1), Portugal (2), Russia (4), Spain (6), Sweden (2) & Turkey (3) provided a total of 501 respiratory isolates. These were re-identified in a central laboratory with MIC and susceptibility for solithromycin and comparators determined according to CLSI broth microdilution methodology and breakpoints (except a susceptible breakpoint of  $\leq 0.25$   $\mu\text{g/ml}$  was used for tigecycline).

**Results:** Summary MIC ( $\mu\text{g/ml}$ ) and percent susceptible (%S) data are shown in the Table:

	SPN (418)			SPY (83)		
	MIC <sub>50</sub>	MIC <sub>90</sub>	%S	MIC <sub>50</sub>	MIC <sub>90</sub>	%S
Solithromycin	0.008	0.06	NA	0.015	0.03	NA
Telithromycin	0.008	0.12	99.8	0.015	0.06	NA
Erythromycin	$\leq 0.06$	$> 0.5$	72.5	$\leq 0.06$	0.25	90.4
Azithromycin	0.12	$> 1$	71.5	0.12	1	89.2
Clindamycin	0.03	$> 0.5$	77.3	0.06	0.06	96.4
Amox-clav	0.03	2	90.2	$\leq 0.015$	0.03	NA
Ceftriaxone	0.03	1	91.1	0.03	0.03	100
Penicillin	$\leq 0.06$	2	62.9	$\leq 0.06$	$\leq 0.06$	100
Vancomycin	0.25	0.5	100.0	0.25	0.5	100
Levofloxacin	1	2	97.4	1	2	100
Moxifloxacin	0.12	0.25	98.3	0.12	0.25	NA
Tigecycline	0.03	0.06	100	0.06	0.06	100

NA=No breakpoint.

**Conclusions:** Solithromycin showed very good activity against SPN and SPY with MIC<sub>50</sub> of 0.008 and 0.015  $\mu\text{g/ml}$ , respectively, and MIC<sub>90</sub> of 0.06 and 0.03  $\mu\text{g/ml}$ , respectively. Solithromycin was considerably more active than the older macrolides. These data positively support the continued development of solithromycin for the treatment of respiratory infections caused by SPN and SPY.