

Demographic feature	VAP	Non-VAP	<i>Mycoplasmataceae</i> +	<i>Mycoplasmataceae</i> -
Age, years (median, IQR)	62 (49-72)	58 (48-69)	55 (34-62)	62 (49-73)
% male	77%	66%	83%	64%
Admission APACHE II score (median, IQR)	20 (16-24)	20 (16-24)	18 (15-23)	21 (16-25)
ICU length of stay (median, IQR)	24 (17-34)	21 (12-31)	24 (14-34)	21 (13-32)
ICU mortality	20% (9-36%)	31% (20-40%)	9% (2-24%)	33% (25%-42%)

Table S1: Clinical and demographic features of patients (from both cohort 1 and 2) divided by those with and without VAP, and those with and without detectable *Mycoplasmataceae*. IQR, inter-quartile range.

Organism	<i>Myc</i> o +ve VAP ( $>10^4$ CFU/ml)	<i>Myc</i> o -ve VAP ( $>10^4$ CFU/ml)	<i>Myc</i> o +ve non- VAP ( $<10^4$ /CFU/ml)	<i>Myc</i> o -ve non-VAP ( $<10^4$ /CFU/ml)
<i>Escherichia coli</i>	4	3	0	0
<i>Enterobacter cloacae</i>	1	1	0	6
<i>Klebsiella pneumoniae</i>	1	1	1	5
<i>Proteus mirabilis</i>	1	1	0	
<i>Citrobacter koseri</i>	1	1	0	
<i>Pseudomonas aeruginosa</i>	1	3	1	4
Coliform (not further identified)	1	0	0	1
<i>Acinetobacter baumannii</i>	0	1	0	1
<i>Haemophilus parainfluenzae</i>	0	2	2	0
<i>Hafnia alvei</i>	0	0	0	1
<i>Moraxella catarrhalis</i>	0	1	0	
<i>Pantoea spp.</i>	0	0	0	1
<i>Serratia marcescens</i>	0	0	0	1
<i>Enterococcus faecium</i>	0	0	0	1
<i>Staphylococcus aureus</i>	9 (3 MRSA)	4 (0 MRSA)	3 (1 MRSA)	8 (4 MRSA)
Coagulase negative <i>Staphylococcus</i>	0	1	2	2
<i>Streptococcus spp.</i>	1	1	0	2
Anaerobes	0	0	1	0
<i>Aspergillus fumigatus</i>	0	1	0	0
<i>Candida spp.</i>	4	2	2	13
No growth	0	0	7	60

Table S2: Numbers of species identified in VAP and non-VAP patients with and without detectable *Mycoplasmataceae* (denoted by *Myc*o in top row). Some patients grew more than one organism. MRSA=methicillin-resistant *Staphylococcus aureus*.

Conditions/ Cytokine	Monos +control	Monos + low titre	Monos + moderate titre	P value by ANOVA
TNF- $\alpha$	396 (103)	5727 (614)	4737 (3804)	0.06
IL-6	16 (13)	23350 (947)***	4931 (2781)*	0.0001
IL-10	0 (0)	65 (56)	22 (19)	0.14
IL-8	28244 (9641)	6918 (1869)*	27885 (6853)	0.014

Table S3: Cytokine concentrations in supernatants from monocytes exposed to vehicle control, *Mycoplasma salivarium* (in low titre or medium titre) or LPS for 24 hours. Data shown as mean and standard deviation; all values are expressed in pg/ml. \*P<0.05, \*\*\*P<0.001 by Bonferroni's post-hoc test, for comparison with control conditions, where no p value indicated then P is >0.05

Conditions/ Cytokine	MDM +control	MDM + low titre	MDM + moderate titre	P value by ANOVA
TNF- $\alpha$	698 (309)	1857 (929)	2149 (825)	0.12
IL-6	0(0)	348 (339)	4363 (2515)*	0.02
IL-10	0 (0)	0 (0)	88 (32)**	0.002
IL-8	677 (144)	8377 (6363)	19551 (14360)	0.18

Table S4: Cytokine concentrations in supernatants from MDM exposed to vehicle control, *Mycoplasma salivarium* (in low titre or medium titre) or LPS for 24 hours. Data shown as mean and standard deviation; all values are expressed in pg/ml. \*P<0.05, \*\* P<0.01, by Bonferroni's post-hoc test, for comparison with control conditions, where no p value indicated then P is >0.05