

**Online suppl. material S3.** BAL genera prevalently or exclusively found in BAL samples

Genus	Phylum/class	BAL $\bar{x}$ <sup>1</sup>	NSW $\bar{x}$	PHS $\bar{x}$	BAL $\bar{x}$ <sup>2</sup>	NSW $\bar{x}$	PHS $\bar{x}$	ND <sup>3</sup> -BAL (%)	ND-NSW (%)	ND-PHS (%)
<i>Alloprevotella</i>	Bacteroidetes	1.79	0.04	0.82	0.92	0.003	0.16	0	37	13
<i>Acinetobacter</i>	$\gamma$ -proteobacteria	1.62	0.14	-	0.16	0.02		3	16	100
<i>Stenotrophomonas</i>	$\beta$ -proteobacteria	0.30	0.01	-	0.08	-	-	5	66	100
<i>Cupriavidus</i>	$\beta$ -proteobacteria	0.27	-	-	0.07	-	-	5	74	100
<i>Solobacterium</i>	Firmicutes	0.03	-	0.01	0.02	-	0.01	11	68	26
<i>Serratia</i>	$\gamma$ -proteobacteria	0.14	-	0.00	0.05	-	-	11	71	100
Unclassified Enterobacteriaceae	$\gamma$ -proteobacteria	0.15	0.03	-	0.04	-	0.001	13	55	100
<i>Tannerella</i>	Bacteroidetes	0.12	-	0.09	0.07	-	0.01	13	68	26
<i>Treponema</i>	Spirochaetae	0.18	-	0.06	0.08	-	0.01	18	76	32
<i>Fretibacterium</i>	Bacteroidetes	0.16	-	0.03	0.07	-	-	21	68	47
Unclassified Comamonadaceae	$\beta$ -proteobacteria	0.11	-	-	0.03	-	-	21	68	92
<i>Parabacteroides</i>	Bacteroidetes	0.45	-	-	0.08	-	-	21	74	100

<sup>1</sup> Mean genus relative abundance. <sup>2</sup>Median genus relative abundance. <sup>3</sup>ND=not detected: Percentage of samples in which the genus is absent. For comparison, data is based on samples that were available for nasal cavity (NSW), oropharynx (PHS) and BAL(n=38).