### H.pylori Rhesus Microbiome Analysis

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#### Data used in analysis

#### Library

```
suppressPackageStartupMessages({
  library(sjPlot)
  library(readxl)
  library(phyloseq)
  library(microbiome)
  library(DESeq2)
  library(qiime2R)
  library(tidyverse)
  library(tidyMicro)
  library(kableExtra)
  library(magrittr)
  library(ggpubr)
  library(microeco)
  library(tidytree)
  library(RColorBrewer)
  library(questionr)
  library(rmarkdown)
  library(stringr)
})
```

ASV counts the taxa table are linked below:

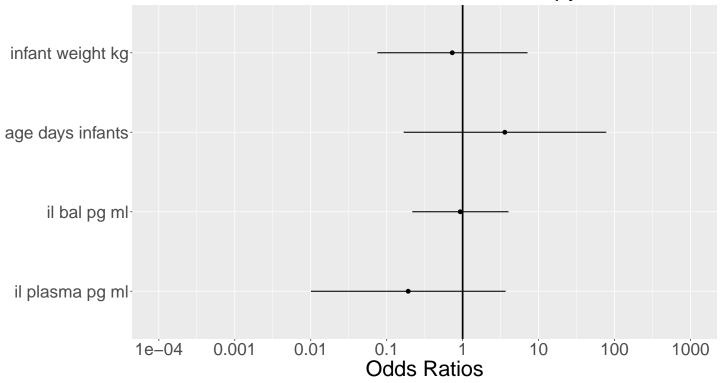
**ASV** counts

Taxa table

Table 1: H.pylori Metadata

SampleID	Treatment	site	Site_status	sex	log10_cfu.gm	IL8_Lavage	IL8_Plasma
LMiller_00458.BAL	H.pylori_(-)	BAL	H.pylori_(-)_BAL	Female	0.00	NA	463.376
LMiller_00458.Swab	H.pylori_(-)	Swab	H.pylori_(-)_Swab	Female	0.00	NA	463.376
LMiller_00459.BAL	H.pylori_(-)	BAL	H.pylori_(-)_BAL	Female	0.00	NA	258.416
LMiller_00459.Swab	H.pylori_(-)	Swab	H.pylori_(-)_Swab	Female	0.00	NA	258.416
$LMiller\_00461.BAL$	$H.pylori_(+)$	BAL	$H.pylori_(+)_BAL$	Female	7.66	NA	704.550
$LMiller\_00461.Swab$	$H.pylori_(+)$	Swab	$H.pylori_(+)_Swab$	Female	7.66	NA	704.550
$LMiller\_00462.BAL$	H.pylori_(-)	BAL	H.pylori_(-)_BAL	Female	0.00	19.104	1075.626
$LMiller\_00462.Swab$	H.pylori_(-)	Swab	H.pylori_(-)_Swab	Female	0.00	19.104	1075.626
$LMiller\_00463.BAL$	H.pylori_(-)	BAL	H.pylori_(-)_BAL	Female	0.00	11.590	423.590
$LMiller\_00466.BAL$	$H.pylori_(+)$	BAL	$H.pylori_(+)_BAL$	Female	3.81	11.201	642.148
$LMiller\_00466.Swab$	H.pylori_(+)	Swab	H.pylori_(+)_Swab	Female	3.81	11.201	642.148
$LMiller\_00467.BAL$	$H.pylori_(+)$	BAL	$H.pylori_(+)_BAL$	Female	6.09	15.511	425.782
$LMiller\_00467.Swab$	$H.pylori_(+)$	Swab	$H.pylori_(+)_Swab$	Female	6.09	15.511	425.782
$LMiller\_00468.BAL$	H.pylori_(-)	BAL	H.pylori_(-)_BAL	Female	0.00	15.511	660.911
$LMiller\_00468.Swab$	$H.pylori_{-}(-)$	Swab	H.pylori_(-)_Swab	Female	0.00	15.511	660.911
$LMiller\_00469.BAL$	$H.pylori_(+)$	BAL	$H.pylori_(+)_BAL$	Female	6.38	NA	1279.789
$LMiller\_00469.Swab$	$H.pylori_(+)$	Swab	$H.pylori_(+)_Swab$	Female	6.38	NA	1279.789
$LMiller\_00473.BAL$	H.pylori_(-)	BAL	H.pylori_(-)_BAL	Female	0.00	20.100	608.508
$LMiller\_00473.Swab$	H.pylori_(-)	Swab	H.pylori_(-)_Swab	Female	0.00	20.100	608.508
$LMiller\_00474.BAL$	H.pylori_(-)	BAL	H.pylori_(-)_BAL	Female	0.00	44.699	443.989
$LMiller\_00476.BAL$	H.pylori_(+)	BAL	H.pylori_(+)_BAL	Female	5.48	NA	476.431
LMiller 00476.Swab	$H.pylori_(+)$	Swab	H.pylori_(+)_Swab	Female	5.48	NA	476.431
$LMiller\_00477.BAL$	$H.pylori_(+)$	BAL	H.pylori_(+)_BAL	Female	5.81	NA	715.056
LMiller_00477.Swab	$H.pylori_(+)$	Swab	H.pylori_(+)_Swab	Female	5.81	NA	715.056
$LMiller\_00481.BAL$	H.pylori_(-)	BAL	H.pylori_(-)_BAL	Female	0.00	17.622	NA
$LMiller\_00481.Swab$	H.pylori_(-)	Swab	${\rm H.pylori}\_(\text{-})\_{\rm Swab}$	Female	0.00	17.622	NA

# Odds ratios of variables based on H. pylori status



	OR	2.5~%	97.5~%	p
(Intercept)	0.018	0.000	110.146	0.410
$infant\_weight\_kg$	0.243	0.000	7254.525	0.786
$age\_days\_infants$	1.042	0.955	1.177	0.413
$il\_bal\_pg.ml$	0.993	0.852	1.158	0.921
$il\_plasma\_pg.ml$	0.996	0.985	1.001	0.271

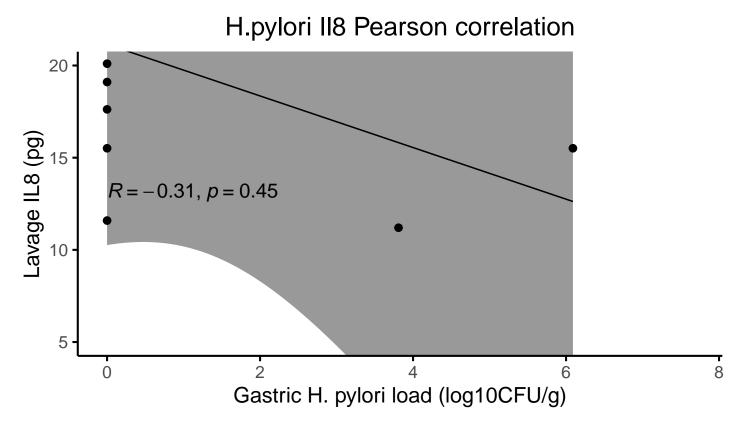


Figure 1: This plot only includes animals that had material sequenced and not all 25 animals from the study

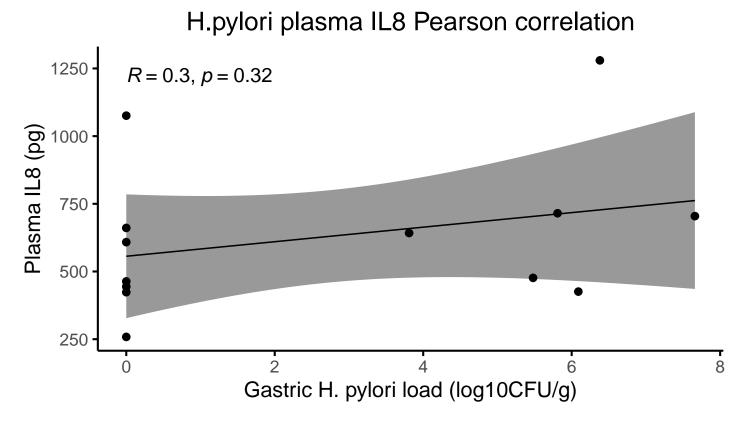
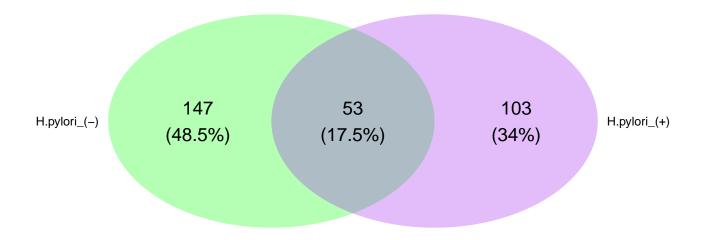
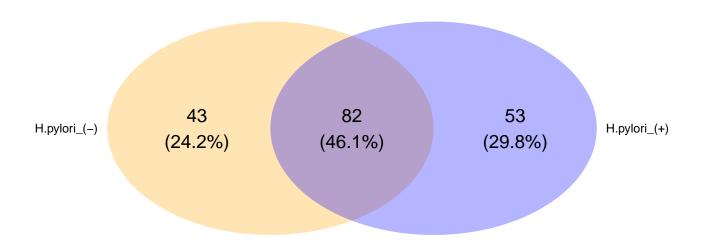


Figure 2: This plot only includes animals that had material sequenced and not all 25 animals from the study

# Overlapping taxa between H. pylori (+) and (-) in lavage

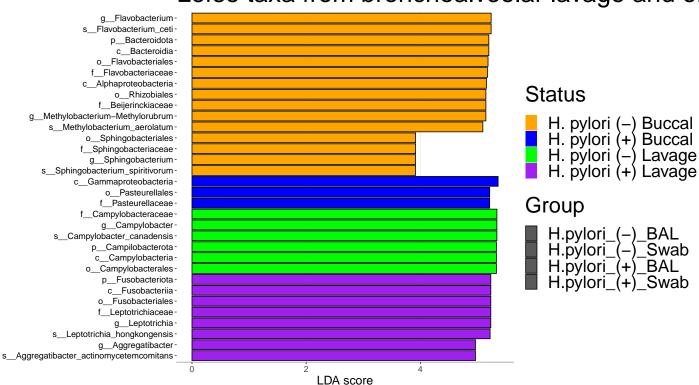


## Overlapping taxa between H. pylori (+) and (-) in buccal cavity

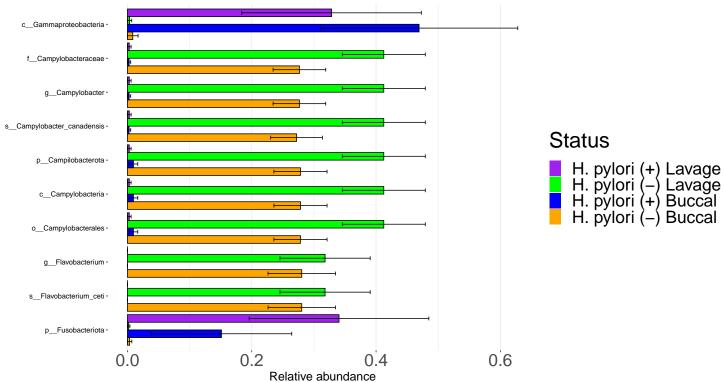


Lefse analysis and differential abundance for both sites

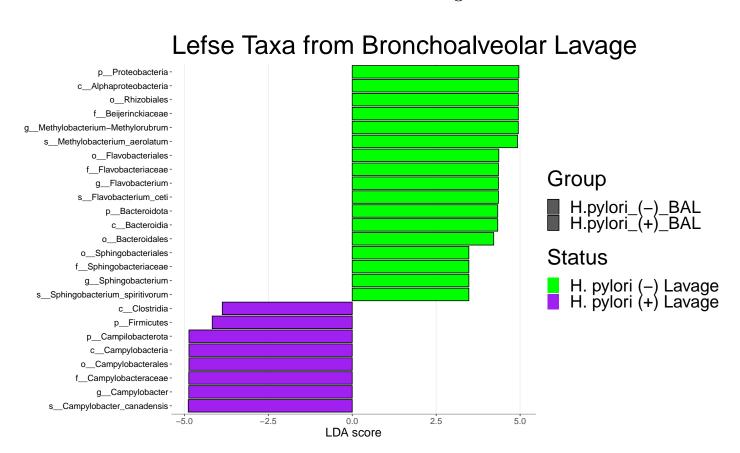
### Lefse taxa from bronchoalveolar lavage and or



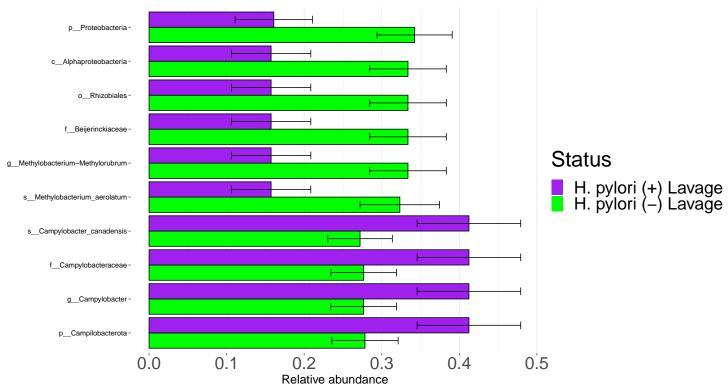
## Lefse relative abundance from bronchoalveolar lavage



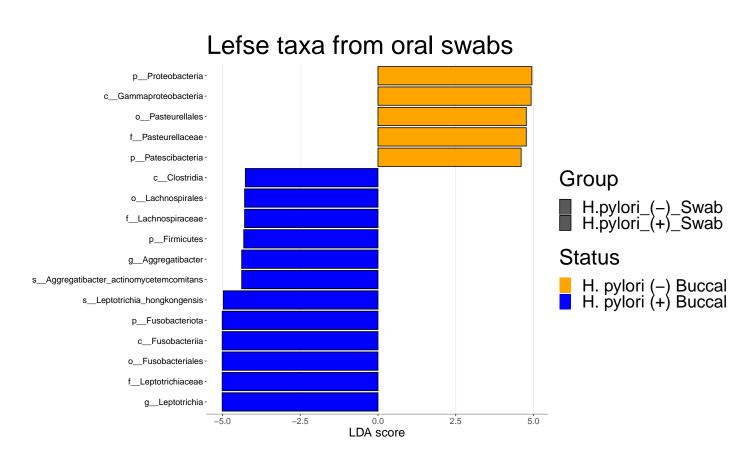
Lefse and differential abundance for bronchoalveolar lavage



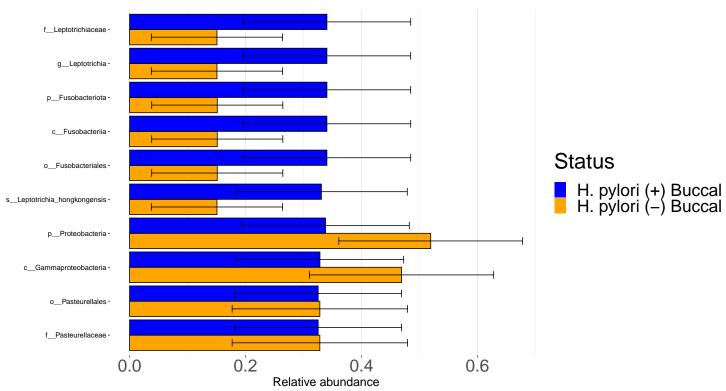




Lefse and differential abundance for oral swabs



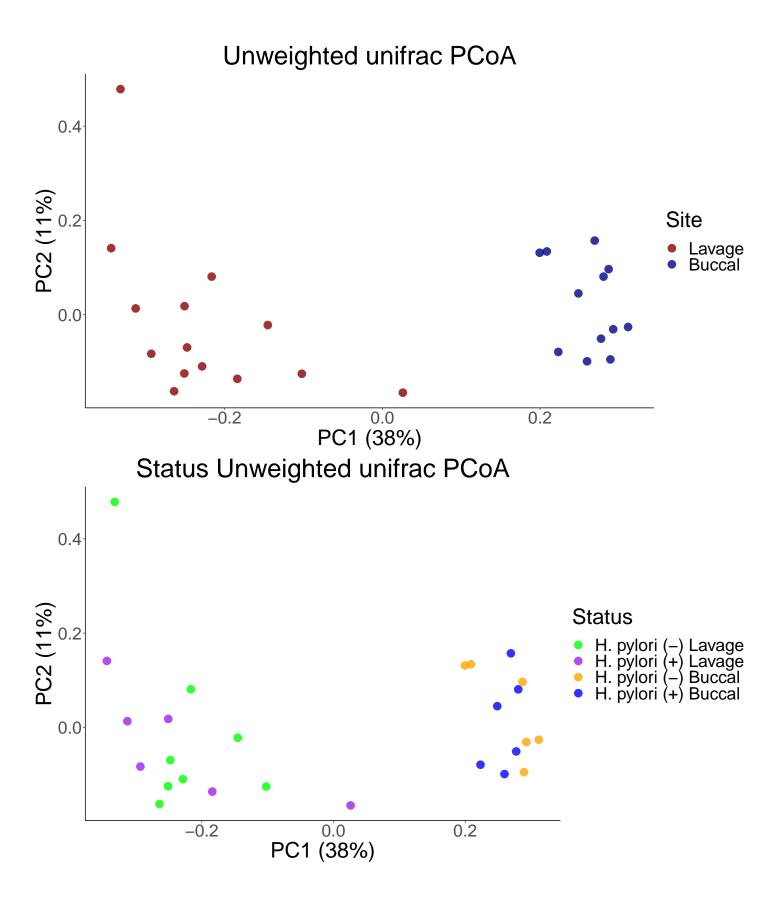
### Lefse relative abundance from oral swabs

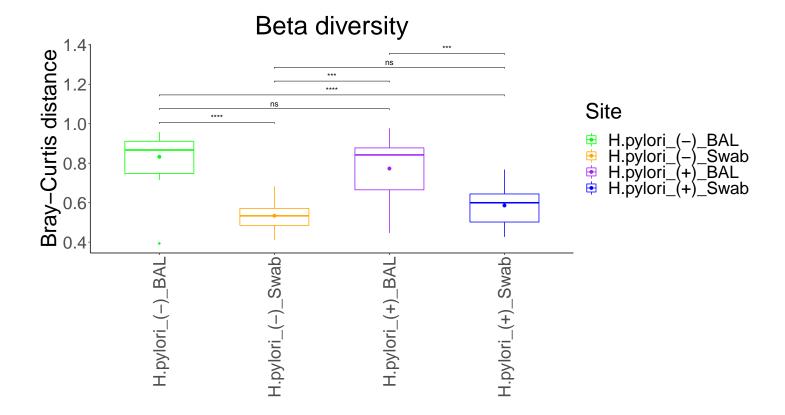


#### Beta diversity

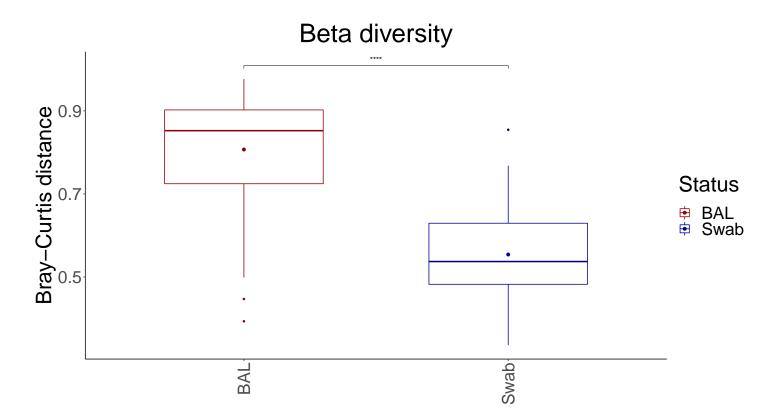
#### Unweighted unifrac PCoA plots

```
PC1
                   PC2
                              PC3
                                         PC4
                                                     PC5
                                                                PC6
                                                                           PC7
## 1 0.38311 0.1122317 0.08255574 0.05624649 0.04518453 0.04178459 0.03697168
            PC8
                      PC9
                               PC10
                                          PC11
                                                     PC12
                                                                PC13
## 1 0.03441675 0.0305229 0.0292508 0.02395872 0.0227312 0.01881898 0.01538496
          PC15
                     PC16
                                PC17
                                            PC18
                                                         PC19
                                                                     PC20
##
## 1 0.0140825 0.01226748 0.01155323 0.008776171 0.007488221 0.004824027
                        PC22
                                    PC23 PC24 PC25 PC26
##
            PC21
## 1 0.003528799 0.002630896 0.001679594
                                            0
```



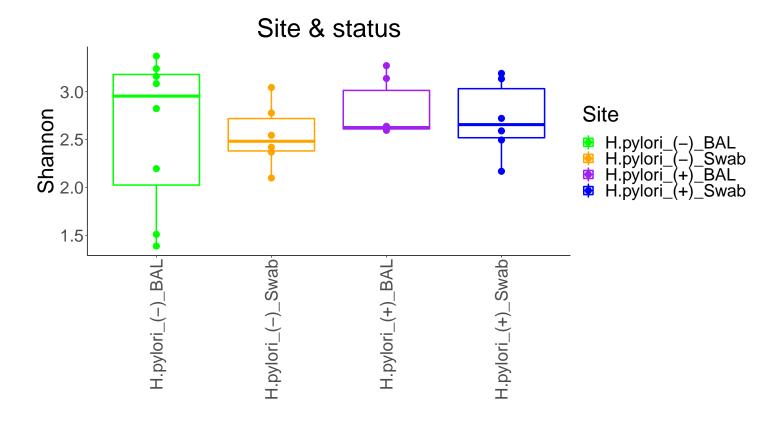


#### **Bray-Curtis**



#### Alpha Diversity

Shannon index by site and H. pylori status



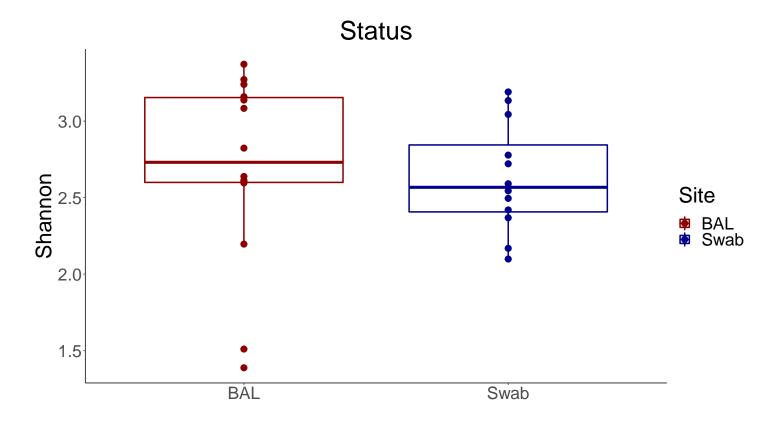
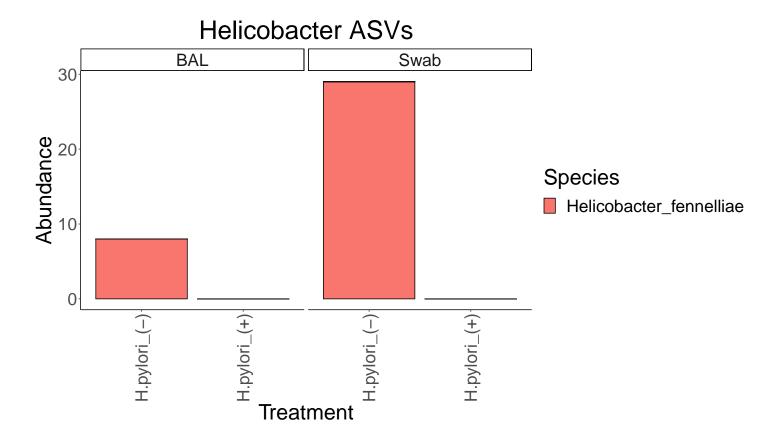


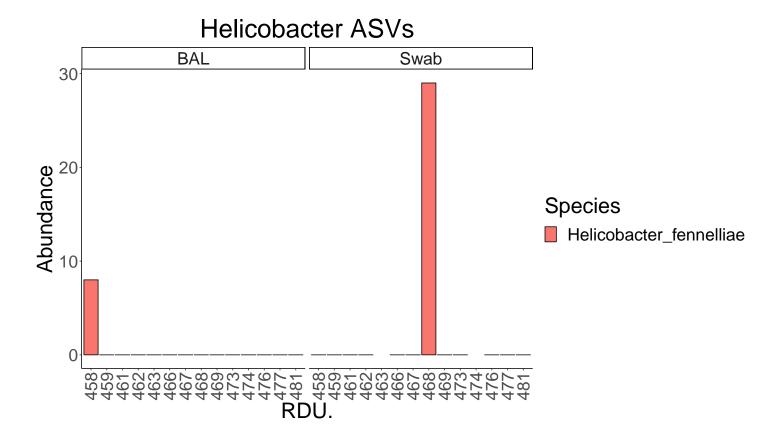
Table 2: All alpha diversity measurees

Groups	Measure	Test method	p.value	Significance
H.pylori_(-)_BAL vs H.pylori_(-)_Swab H.pylori_(-)_BAL vs H.pylori_(+)_BAL H.pylori_(-)_BAL vs H.pylori_(+)_Swab H.pylori_(-)_Swab vs H.pylori_(+)_BAL H.pylori_(-)_Swab vs H.pylori_(+)_Swab	Observed Observed Observed Observed	KW KW KW KW	0.220 0.651 0.081 0.262 0.520	
H.pylori_(+)_BAL vs H.pylori_(+)_Swab H.pylori_(-)_BAL vs H.pylori_(-)_Swab vs H.pylori_(+)_BAL vs H.pylori_(+)_Swab H.pylori_(-)_BAL vs H.pylori_(-)_Swab H.pylori_(-)_BAL vs H.pylori_(+)_BAL H.pylori_(-)_BAL vs H.pylori_(+)_Swab	Observed Observed Chao1 Chao1 Chao1	KW KW KW KW	0.109 0.202 0.220 0.651 0.081	
H.pylori_(-)_Swab vs H.pylori_(+)_BAL H.pylori_(-)_Swab vs H.pylori_(+)_Swab H.pylori_(+)_BAL vs H.pylori_(+)_Swab H.pylori_(-)_BAL vs H.pylori_(-)_Swab vs H.pylori_(+)_BAL vs H.pylori_(+)_Swab H.pylori_(-)_BAL vs H.pylori_(-)_Swab	Chao1 Chao1 Chao1 Chao1 ACE	KW KW KW KW	0.262 0.520 0.109 0.202 0.220	
H.pylori_(-)_BAL vs H.pylori_(+)_BAL H.pylori_(-)_BAL vs H.pylori_(+)_Swab H.pylori_(-)_Swab vs H.pylori_(+)_BAL H.pylori_(-)_Swab vs H.pylori_(+)_Swab H.pylori_(+)_BAL vs H.pylori_(+)_Swab	ACE ACE ACE ACE	KW KW KW KW	0.651 0.081 0.262 0.520 0.109	
H.pylori_(-)_BAL vs H.pylori_(-)_Swab vs H.pylori_(+)_BAL vs H.pylori_(+)_Swab H.pylori_(-)_BAL vs H.pylori_(-)_Swab H.pylori_(-)_BAL vs H.pylori_(+)_BAL H.pylori_(-)_BAL vs H.pylori_(+)_Swab H.pylori_(-)_Swab vs H.pylori_(+)_BAL	ACE Shannon Shannon Shannon Shannon	KW KW KW KW	0.202 0.439 1.000 0.796 0.109	
H.pylori_(-)_Swab vs H.pylori_(+)_Swab H.pylori_(+)_BAL vs H.pylori_(+)_Swab H.pylori_(-)_BAL vs H.pylori_(-)_Swab vs H.pylori_(+)_BAL vs H.pylori_(+)_Swab H.pylori_(-)_BAL vs H.pylori_(-)_Swab H.pylori_(-)_BAL vs H.pylori_(+)_BAL	Shannon Shannon Shannon Simpson Simpson	KW KW KW KW	0.337 0.423 0.540 0.519 0.699	
H.pylori_(-)_BAL vs H.pylori_(+)_Swab H.pylori_(-)_Swab vs H.pylori_(+)_BAL H.pylori_(-)_Swab vs H.pylori_(+)_Swab H.pylori_(+)_BAL vs H.pylori_(+)_Swab H.pylori_(-)_BAL vs H.pylori_(-)_Swab vs H.pylori_(+)_BAL vs H.pylori_(+)_Swab	Simpson Simpson Simpson Simpson	KW KW KW KW	0.699 0.109 0.423 0.262 0.493	
H.pylori_(-)_BAL vs H.pylori_(-)_Swab H.pylori_(-)_BAL vs H.pylori_(+)_BAL H.pylori_(-)_BAL vs H.pylori_(+)_Swab H.pylori_(-)_Swab vs H.pylori_(+)_BAL H.pylori_(-)_Swab vs H.pylori_(+)_Swab	InvSimpson InvSimpson InvSimpson InvSimpson InvSimpson	KW KW KW KW	0.519 0.699 0.699 0.109 0.423	
H.pylori_(+)_BAL vs H.pylori_(+)_Swab H.pylori_(-)_BAL vs H.pylori_(-)_Swab vs H.pylori_(+)_BAL vs H.pylori_(+)_Swab H.pylori_(-)_BAL vs H.pylori_(-)_Swab H.pylori_(-)_BAL vs H.pylori_(+)_BAL H.pylori_(-)_BAL vs H.pylori_(+)_Swab	InvSimpson InvSimpson Fisher Fisher Fisher	KW KW KW KW	0.262 0.493 0.606 0.699 0.796	
H.pylori_(-)_Swab vs H.pylori_(+)_BAL H.pylori_(-)_Swab vs H.pylori_(+)_Swab H.pylori_(+)_BAL vs H.pylori_(+)_Swab H.pylori_(-)_BAL vs H.pylori_(-)_Swab vs H.pylori_(+)_BAL vs H.pylori_(+)_Swab H.pylori_(-)_BAL vs H.pylori_(-)_Swab	Fisher Fisher Fisher Coverage	KW KW KW KW	0.631 0.631 1.000 0.927 NaN	NA
H.pylori_(-)_BAL vs H.pylori_(+)_BAL H.pylori_(-)_BAL vs H.pylori_(+)_Swab H.pylori_(-)_Swab vs H.pylori_(+)_BAL H.pylori_(-)_Swab vs H.pylori_(+)_Swab H.pylori_(+)_BAL vs H.pylori_(+)_Swab	Coverage Coverage Coverage Coverage	KW KW KW KW	NaN NaN NaN NaN NaN	NA NA NA NA
H.pylori_(-)_BAL vs H.pylori_(-)_Swab vs H.pylori_(+)_BAL vs H.pylori_(+)_Swab H.pylori_(-)_BAL vs H.pylori_(-)_Swab H.pylori_(-)_BAL vs H.pylori_(+)_BAL H.pylori_(-)_BAL vs H.pylori_(+)_Swab H.pylori_(-)_Swab vs H.pylori_(+)_BAL	Coverage PD PD PD PD	KW KW KW KW	NaN 0.366 0.699 0.439 0.631	NA
H.pylori_(-)_Swab vs H.pylori_(+)_Swab H.pylori_(+)_BAL vs H.pylori_(+)_Swab H.pylori_(-)_BAL vs H.pylori_(-)_Swab vs H.pylori_(+)_BAL vs H.pylori_(+)_Swab	PD PD PD	KW KW KW	0.749 $0.631$ $0.777$	

#### Helicobacter positive respiratory samples

Helicobacter positive samples separated by site





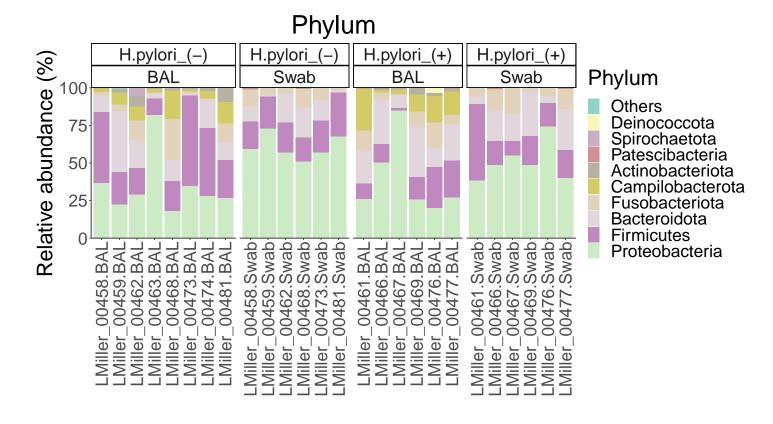


Figure 3: Microbiota Composition at Phylum level.

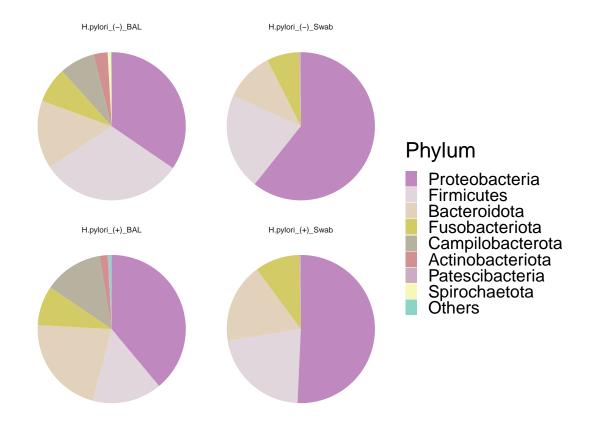


Figure 4: Microbiota Composition at Phylum level.

 Table 3: Phylum Average Relative Abundance

Taxonomy	Sample	Average Percent Abundance
Acidobacteriota Actinobacteriota Actinobacteriota Actinobacteriota Actinobacteriota	H.pylori_(+)_BAL H.pylori_(-)_BAL H.pylori_(+)_BAL H.pylori_(+)_Swab H.pylori_(-)_Swab	0.1% 3.1% 1.8% 0.1% 0%
Bacteroidota Bacteroidota Bacteroidota Bacteroidota Campilobacterota	H.pylori_(+)_BAL H.pylori_(+)_Swab H.pylori_(-)_BAL H.pylori_(-)_Swab H.pylori_(+)_BAL	21.7% $17.4%$ $14.9%$ $10.8%$ $12.9%$
Campilobacterota Campilobacterota Deinococcota Desulfobacterota Firmicutes	H.pylori_(-)_BAL H.pylori_(-)_Swab H.pylori_(+)_BAL H.pylori_(-)_BAL H.pylori_(-)_BAL	7.7% $0%$ $0.6%$ $0.1%$ $31.1%$
Firmicutes Firmicutes Firmicutes Fusobacteriota Fusobacteriota	H.pylori_(+)_Swab H.pylori_(-)_Swab H.pylori_(+)_BAL H.pylori_(+)_Swab H.pylori_(+)_BAL	21.7% $21%$ $15.2%$ $9.8%$ $8.6%$
Fusobacteriota Fusobacteriota Latescibacterota Patescibacteria Patescibacteria	H.pylori_(-)_BAL H.pylori_(-)_Swab H.pylori_(-)_BAL H.pylori_(-)_Swab H.pylori_(+)_Swab	7.8% $7%$ $0%$ $0.4%$ $0.3%$
Patescibacteria Patescibacteria Proteobacteria Proteobacteria Proteobacteria	H.pylori_(+)_BAL H.pylori_(-)_BAL H.pylori_(-)_Swab H.pylori_(+)_Swab H.pylori_(+)_BAL	0.3% $0%$ $60.7%$ $50.7%$ $38.9%$
Proteobacteria Spirochaetota	H.pylori_(-)_BAL H.pylori_(-)_BAL	$34.5\% \ 0.7\%$

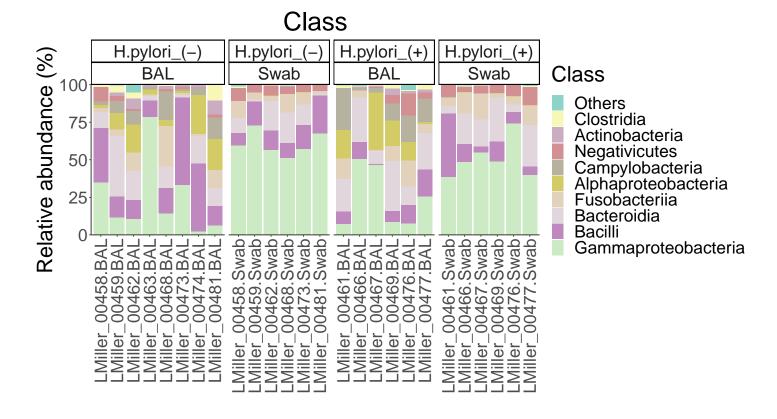


Figure 5: Microbiota Composition at Class level.

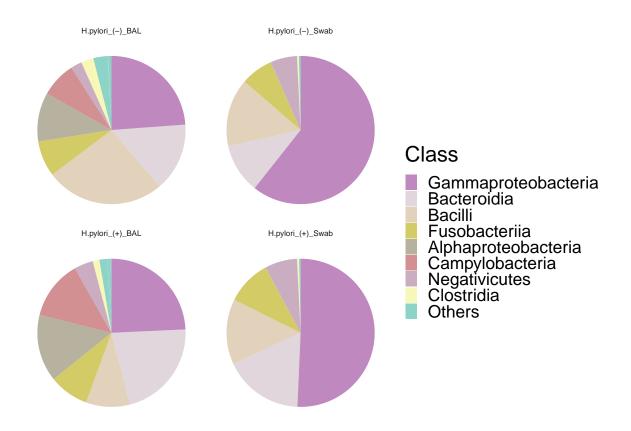


Figure 6: Microbiota Composition at Class level.

 Table 4: Class Average Relative Abundance

Taxonomy	Sample	Average Percent Abundance
Actinobacteria Actinobacteria Alphaproteobacteria Alphaproteobacteria Bacilli	H.pylori_(-)_BAL H.pylori_(+)_BAL H.pylori_(+)_BAL H.pylori_(-)_BAL H.pylori_(-)_BAL	3.1% 1.7% 14.7% 10.7% 26%
Bacilli Bacilli Bacilli Bacteroidia Bacteroidia	H.pylori_(-)_Swab H.pylori_(+)_Swab H.pylori_(+)_BAL H.pylori_(+)_BAL H.pylori_(+)_Swab	14.9% $14.2%$ $9.6%$ $21.7%$ $17.4%$
Bacteroidia Bacteroidia Campylobacteria Campylobacteria Clostridia	H.pylori_(-)_BAL H.pylori_(-)_Swab H.pylori_(+)_BAL H.pylori_(-)_BAL H.pylori_(-)_BAL	14.9% 10.8% 12.9% 7.7% 2.7%
Clostridia Clostridia Clostridia Deinococci Fusobacteriia	H.pylori_(+)_BAL H.pylori_(+)_Swab H.pylori_(-)_Swab H.pylori_(+)_BAL H.pylori_(+)_Swab	1.5% 0.4% 0.4% 0.6% 9.8%
Fusobacteriia Fusobacteriia Fusobacteriia Gammaproteobacteria Gammaproteobacteria	H.pylori_(+)_BAL H.pylori_(-)_BAL H.pylori_(-)_Swab H.pylori_(-)_Swab H.pylori_(+)_Swab	8.6% 7.8% 7% 60.7% 50.7%
Gammaproteobacteria Gammaproteobacteria Negativicutes Negativicutes Negativicutes	H.pylori_(+)_BAL H.pylori_(-)_BAL H.pylori_(+)_Swab H.pylori_(-)_Swab H.pylori_(+)_BAL	24.3% $23.8%$ $7.1%$ $5.8%$ $4.1%$
Negativicutes Spirochaetia	H.pylori_(-)_BAL H.pylori_(-)_BAL	2.4% 0.7%

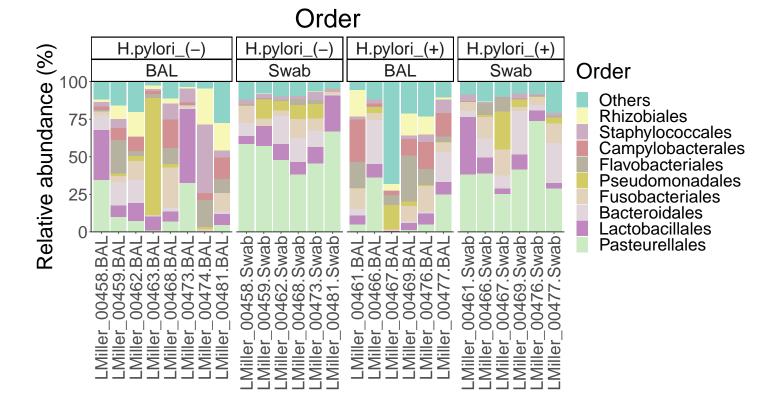


Figure 7: Microbiota Composition at Order level.

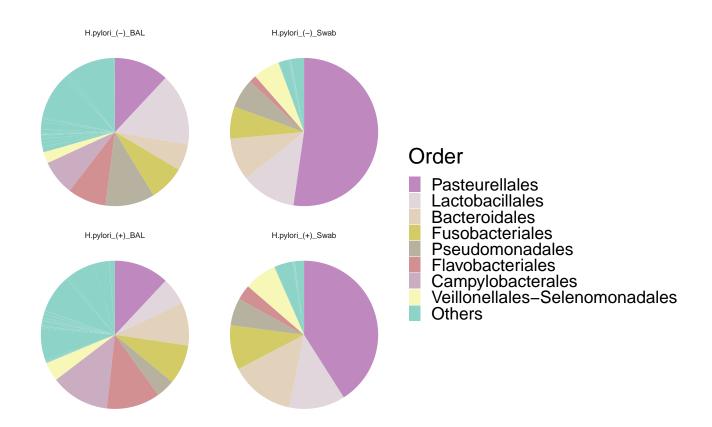


Figure 8: Microbiota Composition at Order level.

 Table 5: Order Average Relative Abundance

Taxonomy	Sample	Average Percent Abundance
Bacteroidales Bacteroidales Bacteroidales Bacteroidales Burkholderiales	H.pylori_(+)_Swab H.pylori_(+)_BAL H.pylori_(-)_Swab H.pylori_(-)_BAL H.pylori_(+)_BAL	14.1% 9.4% 9.3% 5.8% 6.8%
Campylobacterales Campylobacterales Flavobacteriales Flavobacteriales Fusobacteriales	H.pylori_(+)_BAL H.pylori_(-)_BAL H.pylori_(+)_BAL H.pylori_(-)_BAL H.pylori_(+)_Swab	12.9% 7.7% 11.7% 8.4% 9.8%
Fusobacteriales Fusobacteriales Fusobacteriales Lactobacillales Lactobacillales	H.pylori_(+)_BAL H.pylori_(-)_BAL H.pylori_(-)_Swab H.pylori_(-)_BAL H.pylori_(+)_Swab	8.6% $7.8%$ $15.7%$ $12.2%$
Lactobacillales Lactobacillales Pasteurellales Pasteurellales Pasteurellales	H.pylori_(-)_Swab H.pylori_(+)_BAL H.pylori_(-)_Swab H.pylori_(+)_Swab H.pylori_(+)_BAL	12% $6%$ $52.3%$ $41%$ $12%$
Pasteurellales Pseudomonadales Pseudomonadales Pseudomonadales Pseudomonadales	H.pylori_(-)_BAL H.pylori_(-)_BAL H.pylori_(-)_Swab H.pylori_(+)_Swab H.pylori_(+)_BAL	12% 10.8% 6.4% 5.9% 4.1%
Rhizobiales Rhizobiales Sphingomonadales Staphylococcales Veillonellales-Selenomonadales	H.pylori_(-)_BAL H.pylori_(+)_BAL H.pylori_(+)_BAL H.pylori_(-)_BAL H.pylori_(+)_Swab	9.6% 8.3% 5.8% 10.1% 7.1%
Veillonellales-Selenomonadales Veillonellales-Selenomonadales	H.pylori_(-)_Swab H.pylori_(+)_BAL	5.8% 4.1%

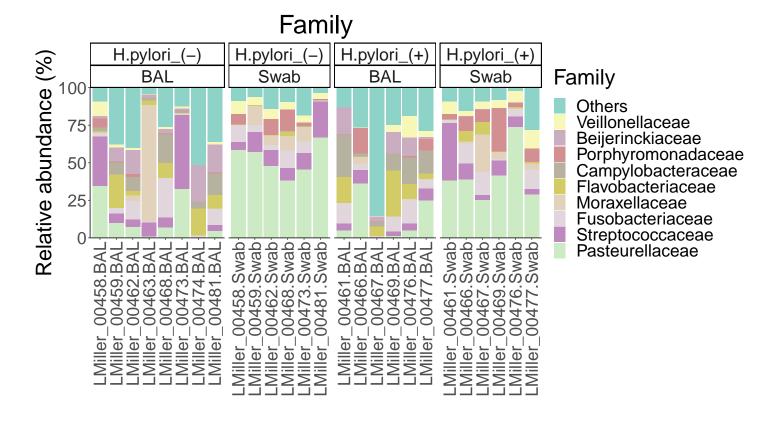


Figure 9: Microbiota Composition at Family level.

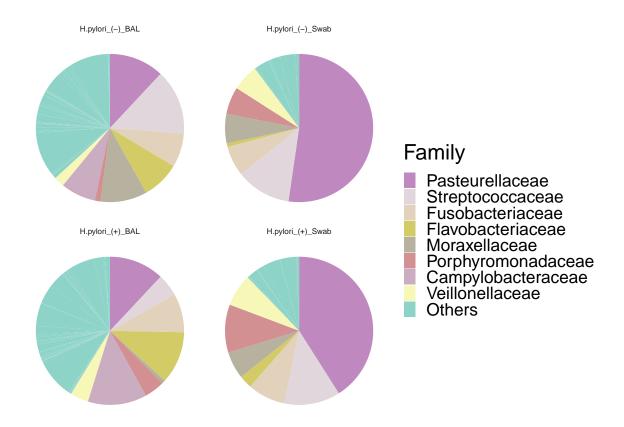


Figure 10: Microbiota Composition at Family level.

Table 6: Family Average Relative Abundance

Taxonomy	Sample	Average Percent Abundance
Beijerinckiaceae Beijerinckiaceae Campylobacteraceae Campylobacteraceae Flavobacteriaceae	H.pylori_(-)_BAL H.pylori_(+)_BAL H.pylori_(+)_BAL H.pylori_(-)_BAL H.pylori_(-)_BAL	9.5% 8.1% 12.9% 7.7% 11.5%
Flavobacteriaceae Fusobacteriaceae Fusobacteriaceae Fusobacteriaceae Fusobacteriaceae	H.pylori_(-)_BAL H.pylori_(+)_BAL H.pylori_(+)_Swab H.pylori_(-)_BAL H.pylori_(-)_Swab	8.3% 8.5% 8.2% 7.4% 6.6%
Moraxellaceae Moraxellaceae Moraxellaceae Oxalobacteraceae Pasteurellaceae	H.pylori_(-)_BAL H.pylori_(-)_Swab H.pylori_(+)_Swab H.pylori_(+)_BAL H.pylori_(-)_Swab	10.1% $6.4%$ $5.9%$ $5%$ $52.3%$
Pasteurellaceae Pasteurellaceae Pasteurellaceae Porphyromonadaceae Porphyromonadaceae	H.pylori_(+)_Swab H.pylori_(+)_BAL H.pylori_(-)_BAL H.pylori_(+)_Swab H.pylori_(-)_Swab	41% $12%$ $12%$ $10.5%$ $5.9%$
Porphyromonadaceae Prevotellaceae Prevotellaceae Sphingomonadaceae Staphylococcaceae	H.pylori_(+)_BAL H.pylori_(+)_BAL H.pylori_(-)_BAL H.pylori_(+)_BAL H.pylori_(-)_BAL	4.4% 4.3% 4.1% 5.8% 8.4%
Streptococcaceae Streptococcaceae Streptococcaceae Streptococcaceae Veillonellaceae	H.pylori_(-)_BAL H.pylori_(+)_Swab H.pylori_(-)_Swab H.pylori_(+)_BAL H.pylori_(+)_Swab	14.2% $12.2%$ $12%$ $4.9%$ $7%$
Veillonellaceae Veillonellaceae	H.pylori_(-)_Swab H.pylori_(+)_BAL	5.8% 4%

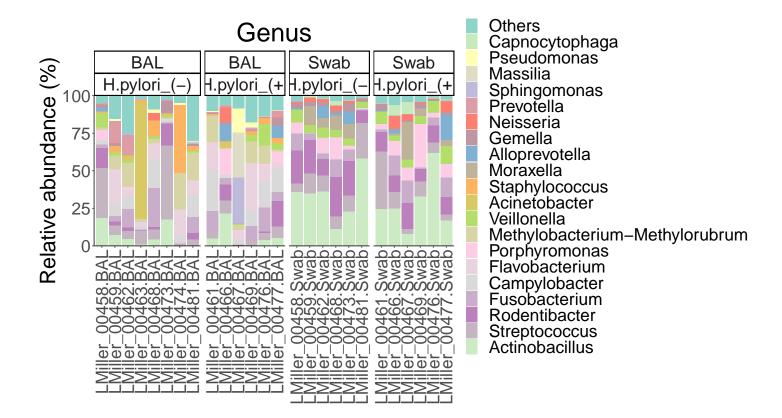


Figure 11: Microbiota Composition at Genus level.

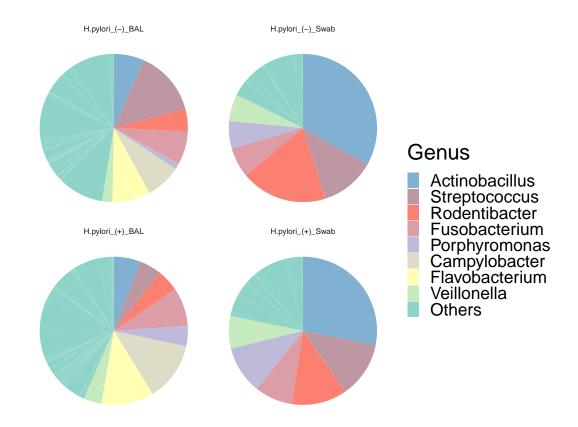


Figure 12: Microbiota Composition at Genus level.

 Table 7: Genus Average Relative Abundance

Taxonomy	Sample	Average Percent Abundance
Acinetobacter Actinobacillus Actinobacillus Actinobacillus Actinobacillus	H.pylori_(-)_BAL H.pylori_(-)_Swab H.pylori_(+)_Swab H.pylori_(-)_BAL H.pylori_(+)_BAL	10.1% 33.1% 28.1% 6.6% 5.9%
Campylobacter Campylobacter Flavobacterium Flavobacterium Fusobacterium	H.pylori_(+)_BAL H.pylori_(-)_BAL H.pylori_(+)_BAL H.pylori_(-)_BAL H.pylori_(+)_BAL	12.9% 7.7% 11.5% 8.3% 8.5%
Fusobacterium Fusobacterium Fusobacterium Massilia Methylobacterium-Methylorubrum	H.pylori_(+)_Swab H.pylori_(-)_BAL H.pylori_(-)_Swab H.pylori_(+)_BAL H.pylori_(-)_BAL	8.2% $7.4%$ $6.6%$ $4.9%$ $9.5%$
Methylobacterium-Methylorubrum	H.pylori_(+)_BAL	8.1%
Moraxella	H.pylori_(-)_Swab	6.4%
Moraxella	H.pylori_(+)_Swab	5.9%
Porphyromonas	H.pylori_(+)_Swab	10.5%
Porphyromonas	H.pylori_(-)_Swab	5.9%
Rodentibacter	H.pylori_(-)_Swab	18.9%
Rodentibacter	H.pylori_(+)_Swab	12.1%
Rodentibacter	H.pylori_(-)_BAL	4.9%
Rodentibacter	H.pylori_(+)_BAL	4.7%
Sphingomonas	H.pylori_(+)_BAL	5.4%
Staphylococcus	H.pylori_(-)_BAL	8.4%
Streptococcus	H.pylori_(-)_BAL	14.2%
Streptococcus	H.pylori_(+)_Swab	12.2%
Streptococcus	H.pylori_(-)_Swab	12%
Streptococcus	H.pylori_(+)_BAL	4.9%
Veillonella	H.pylori_(+)_Swab	7%
Veillonella	H.pylori_(-)_Swab	5.8%

## Lavage Genus Abundance

Grouped by H. pylori status

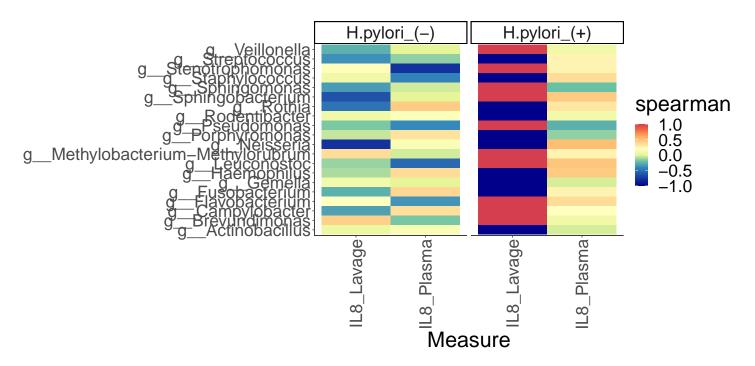


Figure 13: IL8 and lavage genus abundance Spearman correlations separated by H. pylori status

## Lavage Genus Abundance

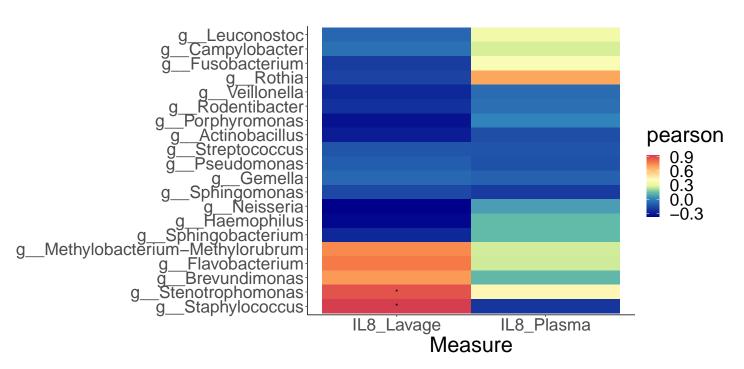


Figure 14: IL8 and lavage genus abundance Spearman correlations independent of H. pylori status

# Lavage Alpha Diversity

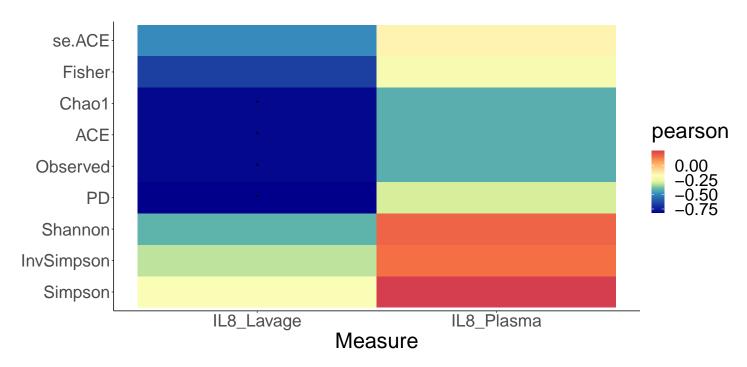


Figure 15: IL8 and lavage alpha diversity Spearman correlations inpendent of H. pylori status.

## **Buccal Cavity Genus Abundance**

Grouped by H. pylori status

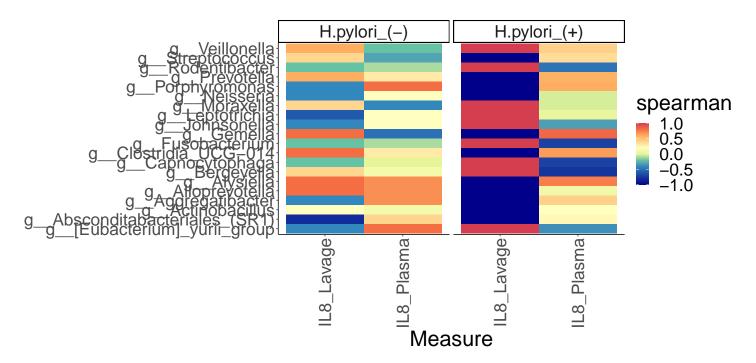


Figure 16: IL8 and Buccal genus abundance Spearman correlations separated by H. pylori status

## **Buccal Cavity Genus Abundance**

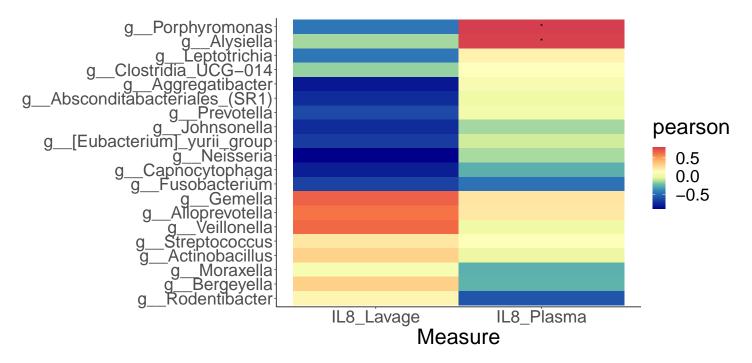


Figure 17: IL8 and Buccal genus abundance Spearman correlations independent of H. pylori status

# **Buccal Cavity Alpha Diversity**

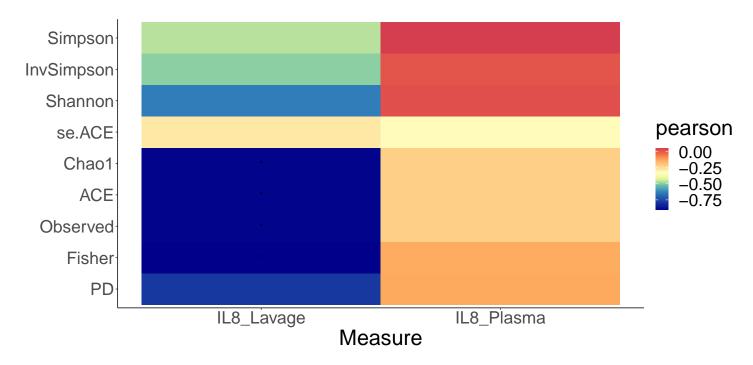


Figure 18: IL8 and Buccal alpha diversity Spearman correlations independent of H. pylori status

#### Record session information

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## Running under: Ubuntu 18.04.6 LTS
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## Matrix products: default
## BLAS/LAPACK: /srv/conda/envs/notebook/lib/libopenblasp-r0.3.20.so
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                                   LC TELEPHONE=C
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                           graphics grDevices utils
                                                          datasets methods
## [8] base
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## other attached packages:
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                                     questionr_0.7.7
## [3] RColorBrewer_1.1-3
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## [5] microeco_0.3.2
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