

## SUPPLEMENTARY TABLES

**Supplementary Table 1. All samples were collected from 3 oral sites: GCF, SAL and TB.**

### GCF

Groups	A_GCF	B_GCF	C_GCF	D_GCF	E_GCF
Number of people	14	20	12	7	7
Age	11:15	18:20	28:32	38:45	>50
Part	GCF	GCF	GCF	GCF	GCF
Gender	M:2;F:12	M:10;F:10	M:3;F:9	M:0;F:7	M:0;F:7

### SAL

Groups	A_SAL	B_SAL	C_SAL	D_SAL	E_SAL
Number of people	14	20	12	7	6
Age	11:15	18:20	28:32	38:45	>50
Part	SAL	SAL	SAL	SAL	SAL
Gender	M:2;F:12	M:4;F:16	M:3;F:9	M:0;F:7	M:0;F:6

### TB

Groups	A_TB	B_TB	C_TB	D_TB	E_TB
Number of people	14	20	12	7	7
Age	11:15	18:20	28:32	38:45	>50
Part	TB	TB	TB	TB	TB
Gender	M:2;F:12	M:4;F:16	M:3;F:9	M:0;F:7	M:0;F:7

**Supplementary Table 4. STEM obtained modules in the three oral sites.**

Module 1 of GCF			
OTU45	Firmicutes	Solobacterium	<i>Solobacterium_moorei</i>
OTU71	Firmicutes	Eubacterium	<i>Eubacterium_sulci</i>
OTU72	Firmicutes	Stomatobaculum	<i>Stomatobaculum_longum</i>
OTU102	Firmicutes	NA	NA
OTU121	Bacteroidetes	Alloprevotella	<i>Alloprevotella_rava</i>
OTU143	Firmicutes	NA	NA
OTU161	Proteobacteria	Haemophilus	NA
OTU243	Bacteroidetes	Prevotella	NA
OTU803	Firmicutes	Streptococcus	NA
OTU1545	Bacteroidetes	Prevotella	NA
OTU2142	Fusobacteria	Leptotrichia	NA
OTU2143	Fusobacteria	Leptotrichia	NA
Module 2 of GCF			
OTU43	Bacteroidetes	Porphyromonas	<i>Porphyromonas_gingivalis</i>
OTU52	Firmicutes	Filifactor	NA

OTU54	Firmicutes	Abiotrophia	<i>Abiotrophia_defectiva</i>
OTU56	Bacteroidetes	Porphyromonas	<i>Porphyromonas_endodontalis</i>
OTU66	Firmicutes	Parvimonas	<i>Parvimonas_micra</i>
OTU75	Fusobacteria	Leptotrichia	<i>Leptotrichia_goodfellowii</i>
OTU86	Bacteroidetes	Prevotella	NA
OTU116	Firmicutes	NA	NA
OTU123	Firmicutes	NA	NA
OTU124	Firmicutes	Dialister	<i>Dialister_pneumosintes</i>
OTU172	Actinobacteria	NA	NA
<b>Module 3 of GCF</b>			
OTU215	Firmicutes	Lactobacillus	NA
OTU20	Proteobacteria	Aggregatibacter	NA
OTU21	Proteobacteria	NA	NA
OTU49	Proteobacteria	NA	NA
OTU88	Proteobacteria	NA	NA
OTU134	Fusobacteria	Leptotrichia	<i>Leptotrichia_goodfellowii</i>
OTU746	Proteobacteria	NA	NA
<b>Module of SAL</b>			
OTU52	Firmicutes	Filifactor	NA
OTU69	Bacteroidetes	Tannerella	<i>Tannerella_forsythia</i>
OTU79	Spirochaetes	Treponema	<i>Treponema_medium</i>
OTU120	Spirochaetes	Treponema	NA
OTU124	Firmicutes	Dialister	<i>Dialister_pneumosintes</i>
OTU128	Bacteroidetes	NA	NA
OTU136	Candidatus_Saccharibacteria	NA	NA
OTU212	Firmicutes	Eubacterium	NA
OTU226	Bacteroidetes	Prevotella	NA
OTU500	Actinobacteria	Slackia	<i>Slackia_exigua</i>
OTU546	Proteobacteria	NA	NA
OTU1693	Firmicutes	NA	NA
<b>Module of TB</b>			
OTU86	Bacteroidetes	Prevotella	NA
OTU91	Bacteroidetes	NA	NA
OTU121	Bacteroidetes	Alloprevotella	<i>Alloprevotella_rava</i>
OTU272	Bacteroidetes	NA	NA
OTU546	Proteobacteria	NA	NA

OTU590	Firmicutes	Veillonella	NA
OTU770	Proteobacteria	NA	NA
OTU1693	Firmicutes	NA	NA
OTU1767	Proteobacteria	Neisseria	NA

**Supplementary Table 5. Genera and species with significant difference in content between age groups. The bold names were the differential genera or species that shared by two sites.**

**Genus level:**

<b>GCF</b>	<b>SAL</b>	<b>TB</b>
Acinetobacter	Bosea	Bacillus
Anaeroglobus	<b>Delftia</b>	<b>Bradyrhizobium</b>
Aquabacterium	<b>Escherichia-shigella</b>	<b>Brevundimonas</b>
Arthrobacter	Feacalibacterium	Filifactor
Bacteroides	<b>Herbaspirillum</b>	<b>Pelmonas</b>
Bifidobacterium	<b>Rothia</b>	<b>Serratia</b>
<b>Bradyrhizobium</b>		Tannerella
<b>Brevundimonas</b>		
Buchera		
Burkholderia		
Caulobacter		
Clostridium		
Curvibacter		
<b>Delftia</b>		
Desulfovibrio		
Erythrobacter		
<b>Escherichia-shigella</b>		
Gemmiger		
<b>Herbaspirillum</b>		
Intestinibacter		
Lachnoanaerobaculum		
Methyloversatilis		
Oscilibacter		
Paracoccus		
<b>Pelmonas</b>		
Peptostreptococcaceae_		
Incertae_sedis		
Propionibacterium		
Romboutsia		
Roseburia		
Ruminococcus		
<b>Serratia</b>		
Sphingomonas		
Stenotrophomonas		
Neisseria		
Oribacterium		
<b>Rothia</b>		

Solobacterium  
Stomatobaculum  
Streptococcus

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**Species level:**

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GCF	SAL	TB
<i>Acinetobacter_junii</i>	<b><i>Feacalibacterium_prausnitzii</i></b>	<i>Eubacterium_sulci</i>
<i>Acinetobacter_schindler</i>	<i>Fusobacterium_mortiferum</i>	<b><i>Feacalibacterium_prausnitzii</i></b>
<i>Actinalmyces_gerencseriae</i>		<i>Porphyromonas_gingivalis</i>
<i>Actinalmyces_massiliensis</i>		<i>Tannerella_forsythia</i>
<i>Anaeroglobus_geminatus</i>		
<i>Bifidobacterium_longum_Subsp._infantis</i>		
<i>Propionibacterium_acnes</i>		
<i>Pseudomonas_beteli</i>		
<i>Sphingomonas_xenophagum</i>		
<i>Treponema_maltophilum</i>		
<i>Oribacterium_sinus</i>		
<i>Prevotella_nanceiensis</i>		
<i>Solobacterium_moorei</i>		
<i>Stomatobaculum_longum</i>		

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