```
k Bacteria;p Acidobacteria;c Blastocatellia;o Blastocatellales;f NA;q Pyrinomonas
                          k Bacteria;p Actinobacteria;c Actinobacteria;o Bifidobacteriales;f Bifidobacteriaceae;g Bifidobacterium
  k_Bacteria;p_Actinobacteria;c_Actinobacteria;o_Corynebacteriales;f_Corynebacteriaceae;g_Corynebacterium
                        k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Corynebacteriales; f\_Corynebacteriaceae; g\_NA
                           k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Corynebacteriales; f\_Nocardiaceae; g\_Rhodococcus
                          k Bacteria;p Actinobacteria;c Actinobacteria;o Micrococcales;f Microbacteriaceae;g Microbacterium
                        k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Propionibacteriales; f\_Propionibacteriaceae; g\_Propionibacterium
  k_Bacteria;p_Actinobacteria;c_Coriobacteriia;o_Coriobacteriales;f_Coriobacteriaceae;g_Eggerthella
                          k\_Bacteroidates; c\_Bacteroidai; o\_Bacteroidales; f\_Bacteroidaceae; g\_Bacteroides
  k_Bacteria;p_Bacteroidetes;c_Bacteroidia;o_Bacteroidales;f_Porphyromonadaceae;g_Dysgonomonas
                          k\_Bacteria; p\_Bacteroidetes; c\_Bacteroidia; o\_Bacteroidales; f\_Porphyromonadaceae; g\_Odoribacter
                          k\_Bacteria; p\_Bacteroidates; c\_Bacteroidais; o\_Bacteroidales; f\_Porphyromonadaceae; g\_Parabacteroides
   k_Bacteria;p_Bacteroidetes;c_Bacteroidia;o_Bacteroidales;f_Rikenellaceae;g_Alistipes
                          k\_Bacteria; p\_Cyanobacteria; c\_Chloroplast; o\_NA; f\_NA; g\_Sugarcane
   k_Bacteria;p_Firmicutes;c_Bacilli;o_Bacillales;f_Planococcaceae;g_Kurthia
                        {\tt k\_Bacteria;p\_Firmicutes;c\_Bacilli;o\_Lactobacillales;f\_Carnobacteriaceae;g\_Dolosigranulum}
                           {\tt k\_Bacteria;p\_Firmicutes;c\_Bacilli;o\_Lactobacillales;f\_Enterococcaceae;g\_Enterococcus}
                        k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Lactobacillales; f\_Lactobacillaceae; g\_Lactobacillus and the substitution of the subs
                        k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Lactobacillales; f\_Streptococcaceae; g\_Lactococcus
  k_Bacteria;p_Firmicutes;c_Bacilli;o_Lactobacillales;f_Streptococcaceae;g_Streptococcus
                        \label{lem:k_Bacteria} $$k\_Bacteria; p\_Firmicutes; c\_Clostridia; o\_Clostridiales; f\_Lachnospiraceae; g\_Blautia
                        \label{lem:k_Bacteria} $$k\_Bacteria; p\_Firmicutes; c\_Clostridia; o\_Clostridiales; f\_Lachnospiraceae; g\_Hungatellander and the substitution of th
                        {\tt k\_Bacteria;p\_Firmicutes;c\_Clostridia;o\_Clostridiales;f\_Lachnospiraceae;g\_Lachnoclostridium}
                        k\_Bacteria; p\_Firmicutes; c\_Clostridia; o\_Clostridiales; f\_Lachnospiraceae; g\_Marvinbryantia
   k_Bacteria;p_Firmicutes;c_Clostridia;o_Clostridiales;f_Lachnospiraceae;g_NA
                          k\_Bacteria; p\_Firmicutes; c\_Clostridia; o\_Clostridiales; f\_Lachnospiraceae; g\_Robinsoniella
                        k_Bacteria;p_Firmicutes;c_Clostridia;o_Clostridiales;f_Lachnospiraceae;g_Roseburia
                        k_Bacteria;p_Firmicutes;c_Clostridia;o_Clostridiales;f_Lachnospiraceae;g_Tyzzerella
                          k_Bacteria;p_Firmicutes;c_Clostridia;o_Clostridiales;f_Peptostreptococcaceae;g_Romboutsia
k_Bacteria;p_Firmicutes;c_Clostridia;o_Clostridiales;f_Ruminococcaceae;g_*Soleaferrea
                         k\_Bacteria; p\_Firmicutes; c\_Clostridia; o\_Clostridiales; f\_Ruminococcaceae; g\_Anaerotruncus
  k_Bacteria;p_Firmicutes;c_Clostridia;o_Clostridiales;f_Ruminococcaceae;g_Flavonifractor
                        k_Bacteria;p_Firmicutes;c_Clostridia;o_Clostridiales;f_Ruminococcaceae;g_NA
                           {\tt k\_Bacteria;p\_Firmicutes;c\_Clostridia;o\_Clostridiales;f\_Ruminococcaceae;g\_Oscillibacter}
                          k Bacteria;p Firmicutes;c Clostridia;o Clostridiales;f Ruminococcaceae;g Subdoligranulum
  k_Bacteria;p_Firmicutes;c_Erysipelotrichia;o_Erysipelotrichales;f_Erysipelotrichaceae;g_Coprobacillus
k_Bacteria;p_Firmicutes;c_Erysipelotrichia;o_Erysipelotrichales;f_Erysipelotrichaceae;g_Erysipelatoclostridium
                          k\_Bacteria; p\_Firmicutes; c\_Erysipelotrichia; o\_Erysipelotrichales; f\_Erysipelotrichaceae; g\_Holdemania
\verb| k_Bacteria;p_Firmicutes;c_Erysipelotrichia;o_Erysipelotrichales;f_Erysipelotrichaceae;g_NA|
                        {\tt k\_Bacteria;p\_Firmicutes;c\_Erysipelotrichia;o\_Erysipelotrichales;f\_Erysipelotrichaceae;g\_Turicibacter}
                        k\_Bacteria; p\_Fusobacteria; c\_Fusobacteria; o\_Fusobacteriales; f\_Fusobacteriaceae; g\_Fusobacterium
  k_Bacteria;p_Proteobacteria;c_Alphaproteobacteria;o_Rhizobiales;f_Methylobacteriaceae;g_Methylobacterium
                          k\_Bacteria; p\_Proteobacteria; c\_Alphaproteobacteria; o\_Rhizobiales; f\_Phyllobacteriaceae; g\_Phyllobacterium for the proteobacteria and 
   k_Bacteria;p_Proteobacteria;c_Alphaproteobacteria;o_Rhodospirillales;f_Rhodospirillaceae;g_Elstera
  k_Bacteria;p_Proteobacteria;c_Alphaproteobacteria;o_Rickettsiales;f_Mitochondria;g_Arundo-Oryza meyeriana
                           \verb|k_Bacteria|; p_Proteobacteria|; c_Alphaproteobacteria|; o_Rickettsiales|; f_Rickettsiaceae|; g_Rickettsiales|; f_Rickettsiaceae|; g_Rickettsiaceae|; g_Ric
                        k\_Bacteria; p\_Proteobacteria; c\_Alphaproteobacteria; o\_Sphingomonadales; f\_NA; g\_NA
                        k\_Bacteria; p\_Proteobacteria; c\_Alphaproteobacteria; o\_Sphingomonadales; f\_Sphingomonadaceae; g\_Blastomonas
                        k\_Bacteria; p\_Proteobacteria; c\_Alphaproteobacteria; o\_Sphingomonadales; f\_Sphingomonadaceae; g\_Sphingomonadaceae; g\_Sphingomonaceae; g\_Sphingomonaceae; g
                          k\_Bacteria; p\_Proteobacteria; c\_Betaproteobacteria; o\_Burkholderiales; f\_Comamonadaceae; g\_Aquabacterium and access and
                          k\_Bacteria; p\_Proteobacteria; c\_Betaproteobacteria; o\_Burkholderiales; f\_Comamonadaceae; g\_Comamonadaceae; g\_Comamonae; g\_Comamonadaceae; g\_Comamonae; g\_Comamonae; g\_Comamonae; g\_Comamonae; g\_Comamonae; g\_Comamonae; g\_Comamonae; g\_Comamonae; g\_
                          k\_Bacteria; p\_Proteobacteria; c\_Betaproteobacteria; o\_Burkholderiales; f\_Comamonadaceae; g\_Delftiable for the common of the co
                        k\_Bacteria; p\_Proteobacteria; c\_Betaproteobacteria; o\_Burkholderiales; f\_Oxalobacteraceae; g\_Noviherbaspirillum
                        k\_Bacteria; p\_Proteobacteria; c\_Betaproteobacteria; o\_Burkholderiales; f\_Oxalobacteraceae; g\_Undibacterium and the proteobacteria and t
                          k\_Bacteria; p\_Proteobacteria; c\_Betaproteobacteria; o\_Rhodocyclales; f\_Rhodocyclaceae; g\_Dechloromonas
                        k\_Bacteria; p\_Proteobacteria; c\_Gammaproteobacteria; o\_Aeromonadales; f\_Succinivibrionaceae; g\_Anaerobios pirillum proteobacteria; p\_Proteobacteria; p\_Pro
                          k\_Bacteria; p\_Proteobacteria; c\_Gamma proteobacteria; o\_Enterobacteriales; f\_Enterobacteriaceae; g\_Enterobacteriales; f\_Enterobacteriaceae; g\_Enterobacteriales; f\_Enterobacteriales; f\_Enterobacter
                          k\_Bacteria; p\_Proteobacteria; c\_Gamma proteobacteria; o\_Enterobacteriales; f\_Enterobacteriaceae; g\_Escherichia
                          k\_Bacteria; p\_Proteobacteria; c\_Gamma proteobacteria; o\_Pseudomonadales; f\_Moraxellaceae; g\_Acinetobacteria; o\_Pseudomonadales; f\_Acinetobacteria; f\_Acinetobacteria; f\_Acinetobacteria; f\_Acinetobacteria; f\_Acinetobacteria; f\_Acinetobacteria; f\_Acin
                          k Bacteria;p Proteobacteria;c Gammaproteobacteria;o Pseudomonadales;f Moraxellaceae;g Enhydrobacter-Moraxella
  k_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Pseudomonadales;f_Pseudomonadaceae;g_Pseudomonas
                       k_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Xanthomonadales;f_NA;g_Acidibacter
                         k\_Bacteria; p\_Proteobacteria; c\_Gamma proteobacteria; o\_Xanthomonadales; f\_Xanthomonadaceae; g\_Stenotrophomonasaceae; g
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k_Bacteria;p_Tenericutes;c_Mollicutes;o_Entomoplasmatales;f_Spiroplasmataceae;g_Spiroplasma

 $\verb| k_Bacteria; p_Verrucomic robia; c_Verrucomic robiae; o_Verrucomic robiales; f_Verrucomic robiaceae; g_Akkermansia | verrucomic robiae; o_Verrucomic rob$

None;Other;Other;Other;Other