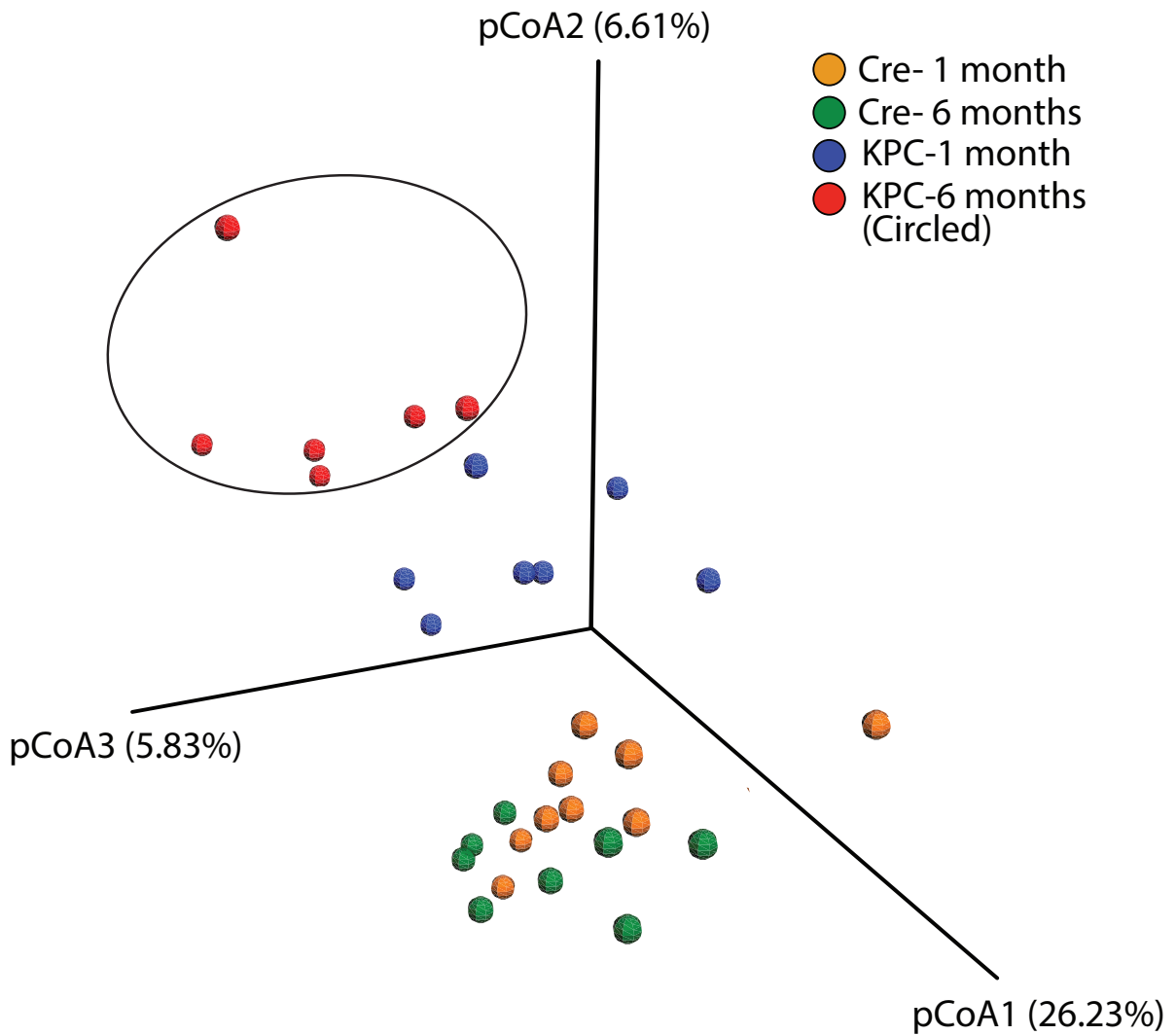
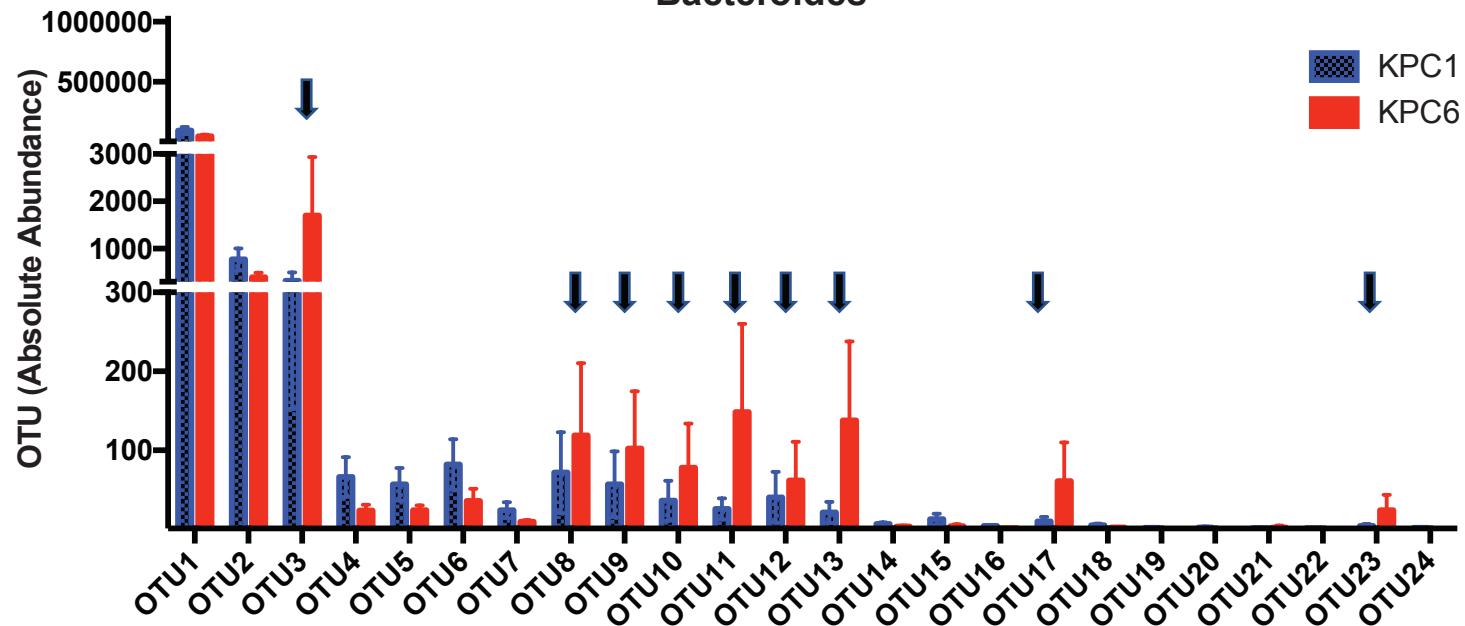


## A Bray-Curtis: All four groups

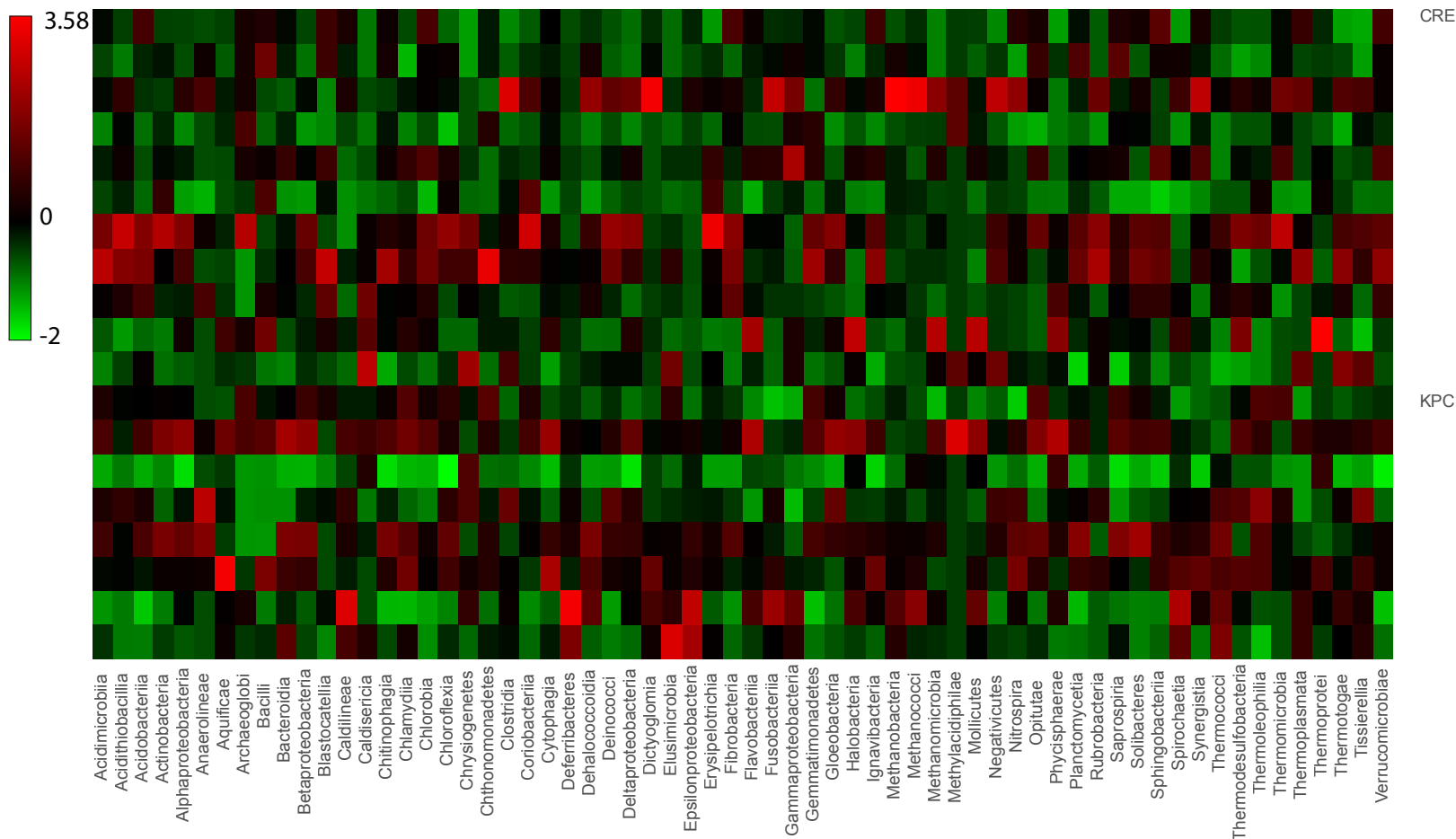


## B

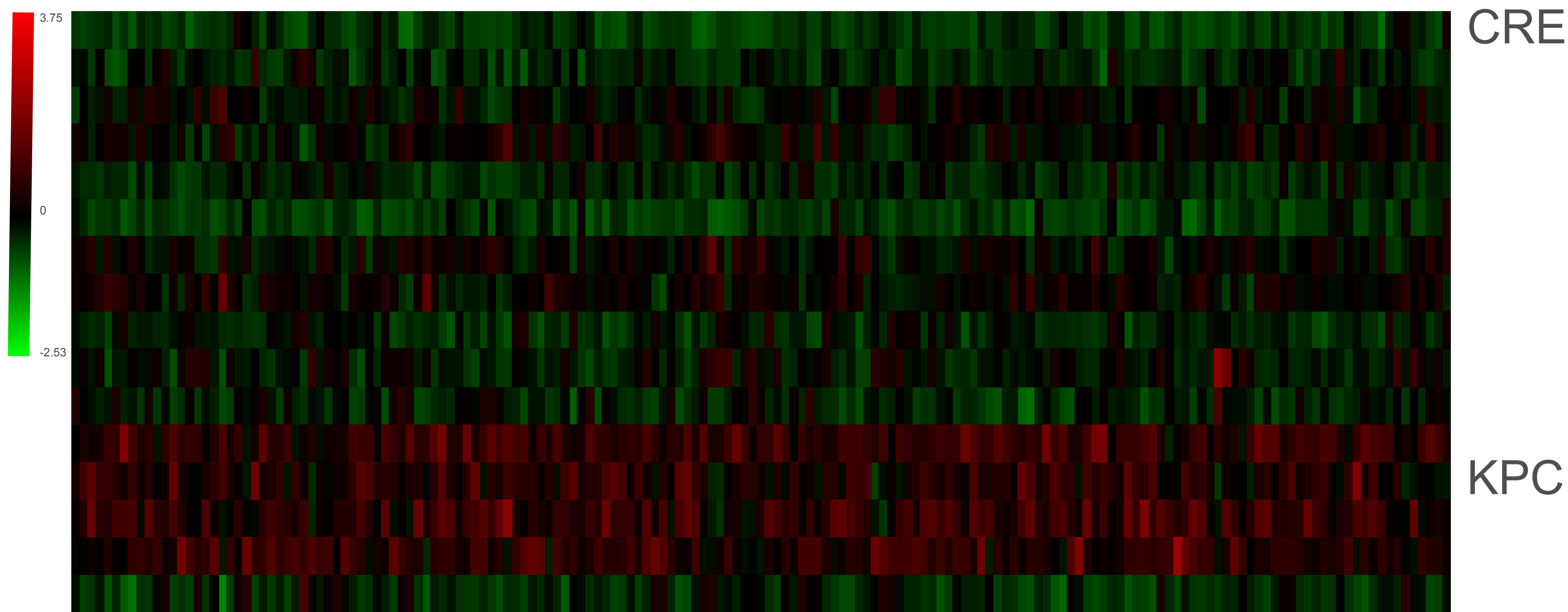
### Bacteroides



**Supplementary Figure 1: (A)** All four groups, genotypes Cre and KPC and ages 1 and 6 months depicted together in a Bray-Curtis pCoA plot. As shown in Figure 1 E-F, there is no perceptible change in Cre microbiome 1 and 6 months, KPC microbiome clusters separately for the age-groups. **(B)** Several OTUs mapping to the genus *Bacteroides* showing increased or decreased relative abundance between 1 and 6 months old KPC microbiome. Overall output shows "no change". Hence, deeper analysis of microbial species, with higher species-level identification is the only way to decipher the actual role of microbiota in host health and disease.



**Supplementary Figure 2:** Heatmap of bacterial classes at two months age in 'Cre' and 'KPC' gut microbiome. There is an even spread of the classes within the two genotypes.



*Acaryochloris marina* .. *Acidipropionibacterium acidipropionici*  
*Acidithiobacillus caldus* .. *Actinobacillus pleuropneumoniae*  
*Actinobacillus succinogenes* .. *Aggregatibacter aphrophilus*  
*Agrobacterium fabrum* .. *Alkaliphilus oremlandii*  
*Allochromatium vinosum* .. *Anaeromyxobacter* sp. K  
*Anaplasma centrale* .. *Aster yellows* witches'-broom phytoplasma  
*Asticcacaulis excentricus* .. *Bacillus coagulans*  
*Bacillus cytotoxicus* .. *Bacteroides helcogenes*  
*Bacteroides salanitronis* .. *Bernardetia litoralis*  
*Beutenbergia cavemae* .. *Blattabacterium* sp. (*Mastotermes darwiniensis*)  
*Blattabacterium* sp. (*Nauphoeta cinerea*) .. *Borrelia garinii*  
*Borreliella valaisiana* .. *Brucella melitensis*  
*Buchnera aphidicola* .. *Burkholderia* sp. Y123  
*Burkholderia thailandensis* .. *Calothrix* sp. PCC 7507  
*Calyptogena okutanii* thioautotrophic gill symbiont .. *Candidatus Blochmannia floridanus*  
*Candidatus Blochmannia pennsylvanicus* .. *Candidatus Methanomassiliicoccus intestinalis*  
*Candidatus Methanomethylophilus alvus* .. *Candidatus Ruthia magnifica*  
*Candidatus Solibacter usitatus* .. *Cellulomonas gilvus*  
*Cellulophaga algicola* .. *Chlorobaculum parvum*  
*Chlorobaculum tepidum* .. *Clostridium acetobutylicum*  
*Clostridium autoethanogenum* .. *Colwellia psychrerythraea*  
*Comamonas testasteroni* .. *Corynebacterium maris*  
*Corynebacterium pseudotuberculosis* .. *Cupriavidus taiwanensis*  
*Cutibacterium acnes* .. *Dechloromonas aromatica*  
*Deferribacter desulfuricans* .. *Desulfarculus baarsii*  
*Desulfatibacillum alkenivorans* .. *Desulfosporosinus orientis*  
*Desulfotalea psychrophila* .. *Desulfovibrio vulgaris*  
*Desulfurispirillum indicum* .. *Eggerthella lenta*  
*Eggerthella* sp. YY7918 .. *Enterococcus hirae*  
*Enterococcus mundtii* .. *Exiguobacterium* sp. MH3  
*Faecalitalea cylindroides* .. *Fluviicola taiffensis*  
*Francisella noatunensis* .. *Gemmatimonas aurantiaca*  
*Geobacillus genomsp. 3* .. *Glaciecola nitratireducens*  
*Glaciecola* sp. 4H-3-7+YE-5 .. *Granulicella tundricola*  
*Haemophilus influenzae* .. *Haloferax volcanii*  
*Halogeometricum borinquense* .. *Helicobacter cinaedi*  
*Helicobacter felis* .. *Hyphomicrobium denitrificans*  
*Hypomicrobium nitrativorans* .. *Kineococcus radiotolerans*  
*Kinetoplastibacterium blastocirithidii* .. *Lactobacillus brevis*  
*Lactobacillus buchneri* .. *Lactobacillus salivarius*  
*Lactobacillus sanfranciscensis* .. *Leptospirillum ferrooxidans*  
*Leptothrix cholodnii* .. *Magnetococcus marinus*  
*Magnetospirillum gryphiswaldense* .. *Megaspheera elsdenii*  
*Meiothermus ruber* .. *Methanobrevibacter* sp. AbM4  
*Methanocaldococcus infernus* .. *Methanohalophilus mahii*  
*Methanocaldococcus* .. *Methanothermococcus okinawensis*  
*Methanocaldococcus* .. *Methanothermococcus okinawensis*  
*Methanothermus fervidus* .. *Methylotenera mobilis*  
*Methylotenera versatilis* .. *Morganella morgani*  
*Muricauda ruestringensis* .. *Mycobacterium tuberculosis*  
*Mycobacterium vanbaalenii* .. *Mycoplasma hyopneumoniae*  
*Mycoplasma hyorhinis* .. *Myxococcus xanthus*  
*Nakamurella multipartita* .. *Niastella koreensis*  
*Nitratifactor salsuginis* .. *Nocardia farcinica*  
*Nocardioides* sp. JS614 .. *Octadecabacter arcticus*  
*Odoribacter splachnicus* .. *Paenibacillus polymyxa*  
*Paenibacillus* sp. JDR-2 .. *Paracoccus denitrificans*  
*Parageobacillus thermoglucosidans* .. *Pelodictyon luteolum*  
*Pelodictyon phaeoclathratiforme* .. *Polaribacter* sp. MED152  
*Polaromonas naphthalenivorans* .. *Prosthecochloris aestuarii*  
*Proteus mirabilis* .. *Pseudomonas mendocina*  
*Pseudomonas montelii* .. *Pseudothromotoga hypogea*  
*Pseudothromotoga lettingae* .. *Pyrobolus fumarii*  
*Rahnella aquatilis* .. *Rhodococcus jostii*  
*Rhodococcus opacus* .. *Rickettsia typhi*  
*Riemerella anatipestifer* .. *Ruminiclostridium thermocellum*  
*Ruminococcus albus* .. *Saprospira grandis*  
*Sebadella termitidis* .. *Shewanella oneidensis*  
*Shewanella pealeana* .. *Simidiua agarivorans*  
*Simkania negevensis* .. *Sphingobium chlorophenolicum*  
*Sphingobium japonicum* .. *Stanieria cyanosphaera*  
*Staphylococcus argenteus* .. *Streptococcus agalactiae*  
*Streptococcus anginosus* .. *Streptococcus parauberis*  
*Streptococcus pasteurianus* .. *Streptomyces collinus*  
*Streptomyces davawensis* .. *Sulfuricurvum kujiense*  
*Sulfurhydrogenibium azorense* .. *Synechococcus* sp. PCC 7002  
*Synechococcus* sp. PCC 7502 .. *Terriglobus saanensis*  
*Tetragenococcus halophilus* .. *Thermobispora bispora*  
*Thermococcus cleftensis* .. *Thermomicrobium roseum*  
*Thermomonospora curvata* .. *Thermus thermophilus*  
*Thioalkalimicrobium cyclicum* .. *Treponema pallidum*  
*Treponema pedis* .. *Vibrio anguillarum*  
*Vibrio antiquarius* .. *Wolbachia endosymbiont of Drosophila simulans*  
*Wolbachia endosymbiont of Onchocerca ochengi* .. *Yersinia pestis*  
*Yersinia pseudotuberculosis* .. *alpha proteobacterium HIMB5*  
*alpha proteobacterium HIMB59* .. *uncultured Termite group 1 bacterium*

**Supplementary Figure 3:** Heatmap of bacterial species in 4 months old 'Cre' and 'KPC' mice with major changes (both up and down) in many species. The differences have been further elaborated in other figures and the manuscript text.

