

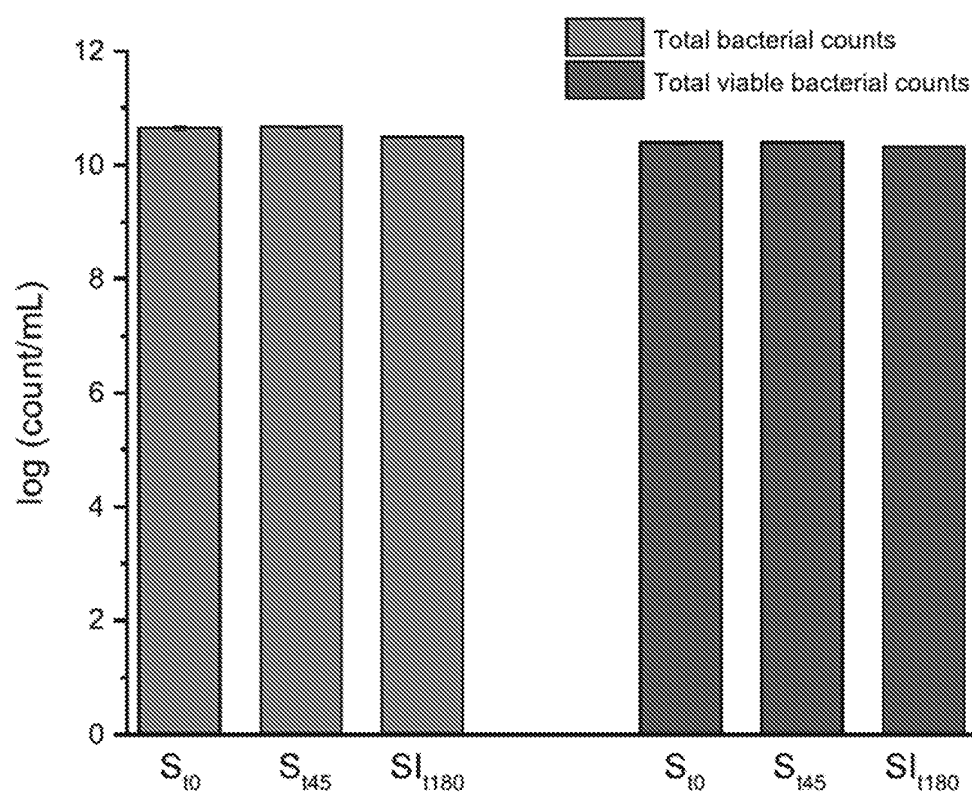


Figure 1

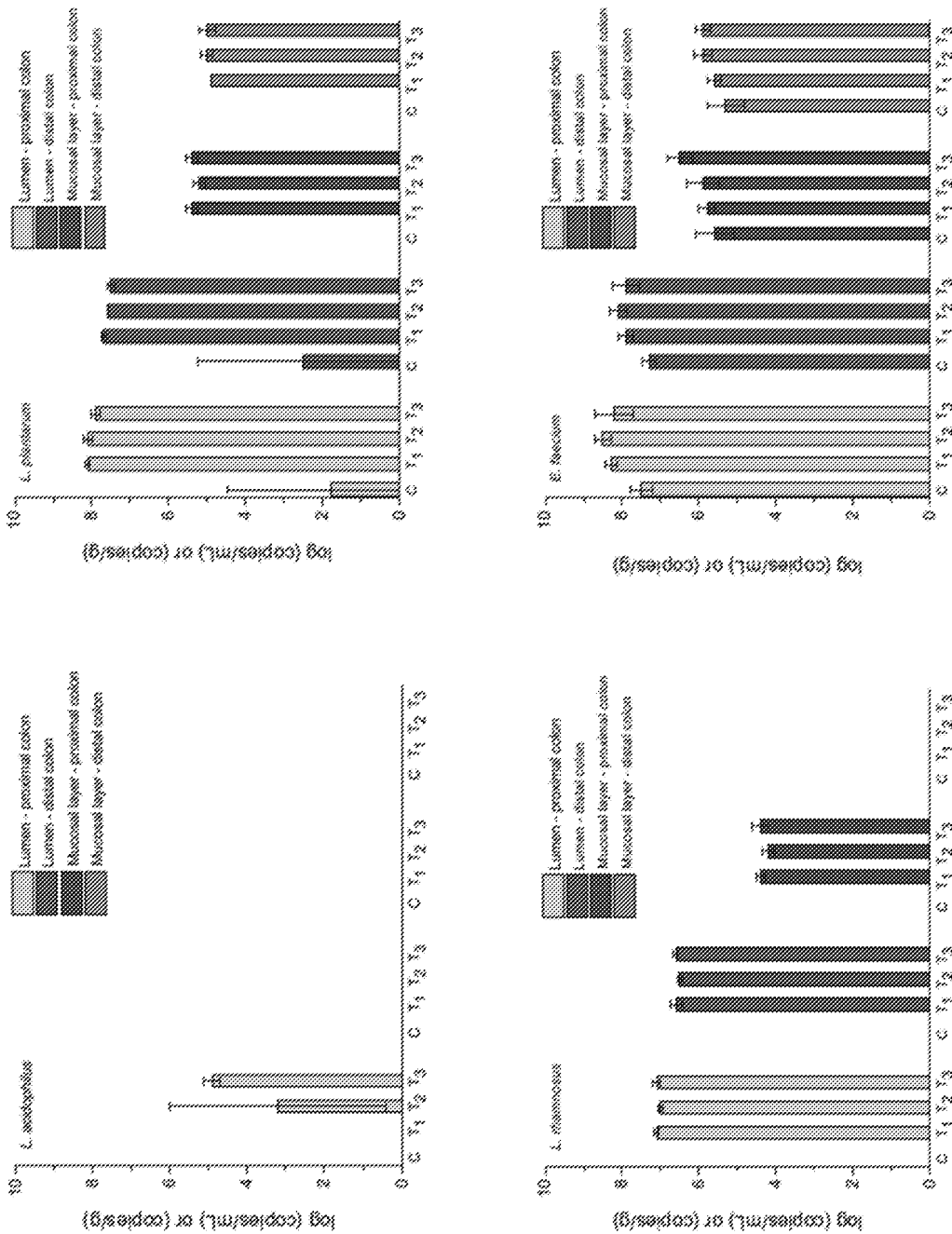


Figure 2

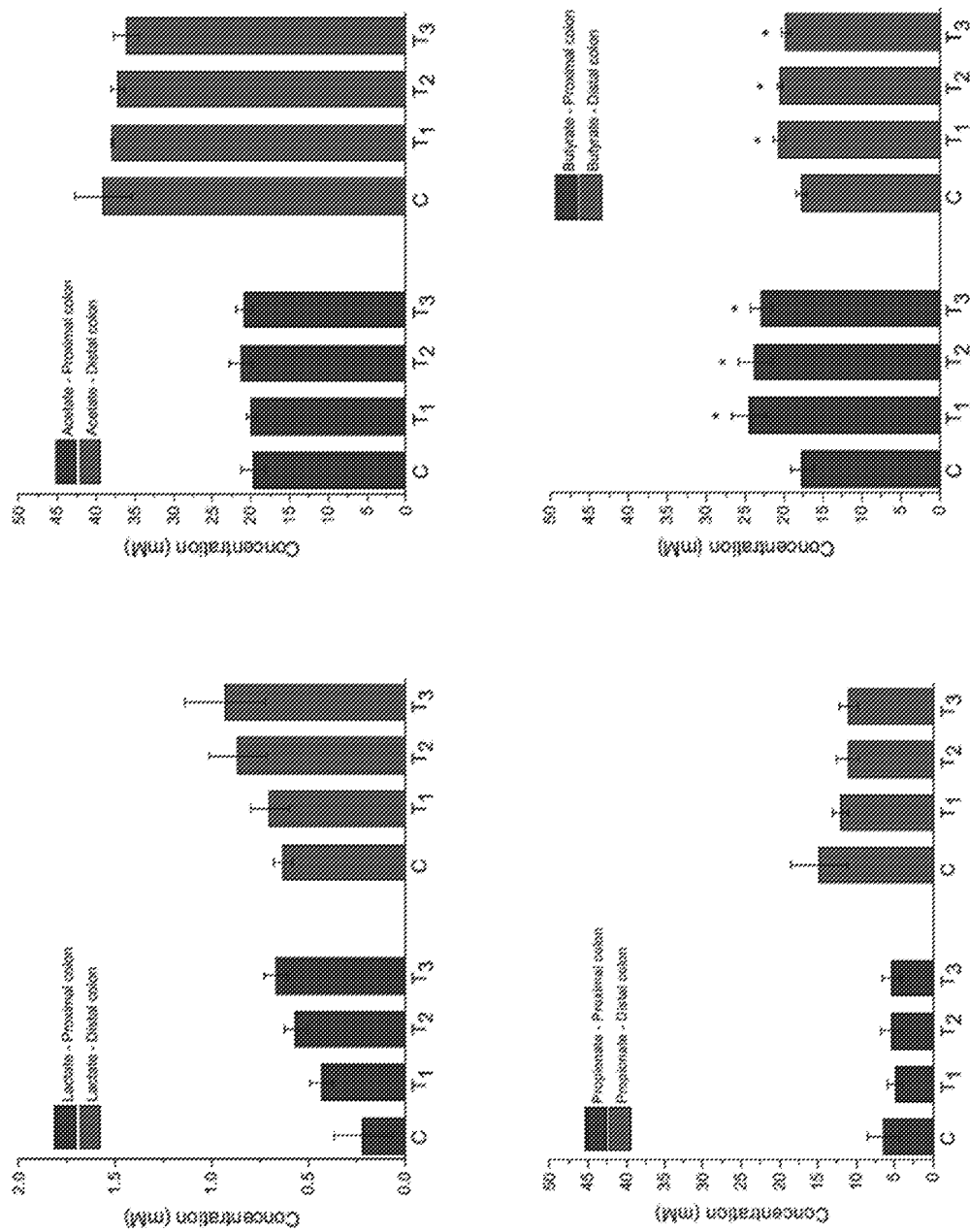


Figure 3

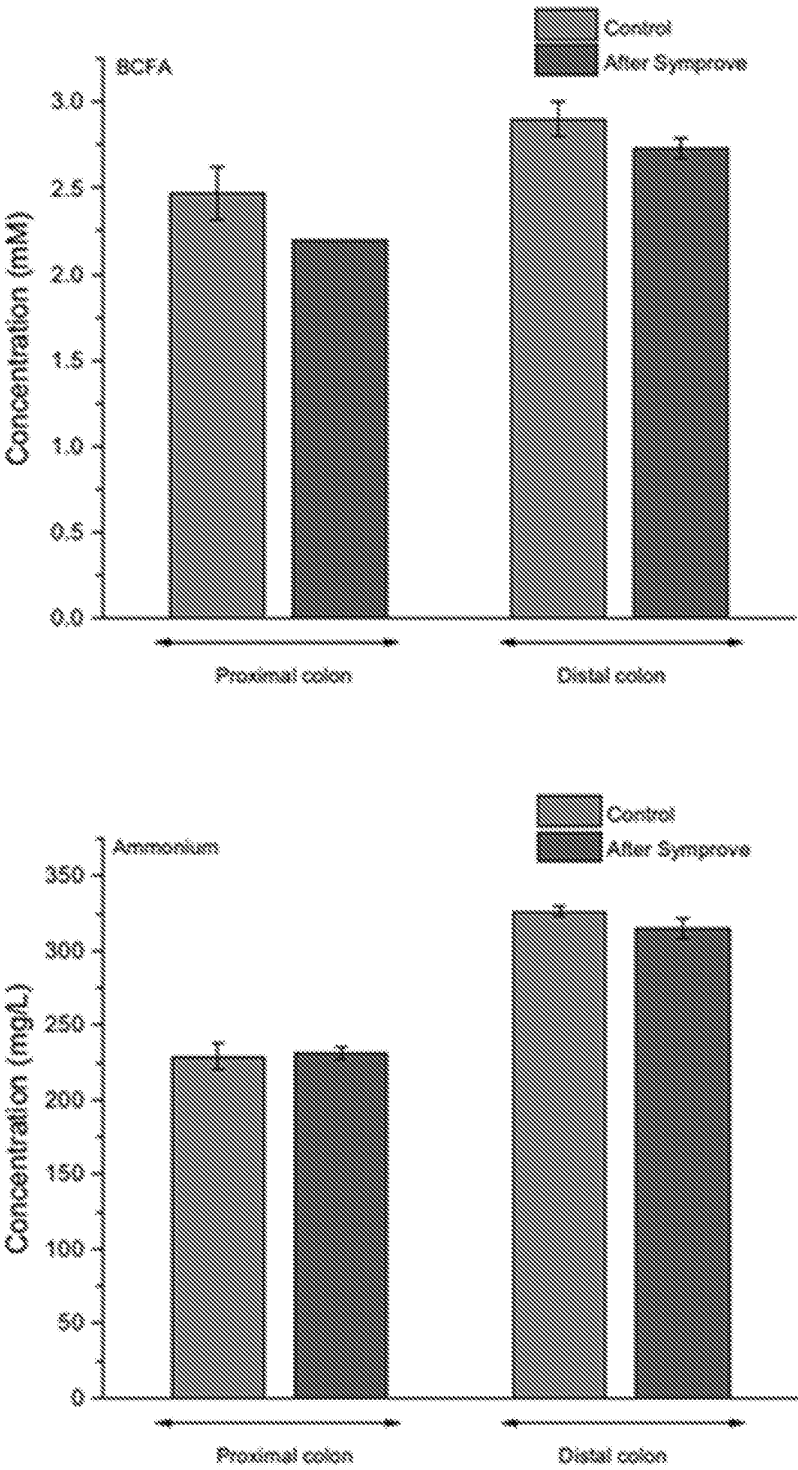


Figure 4

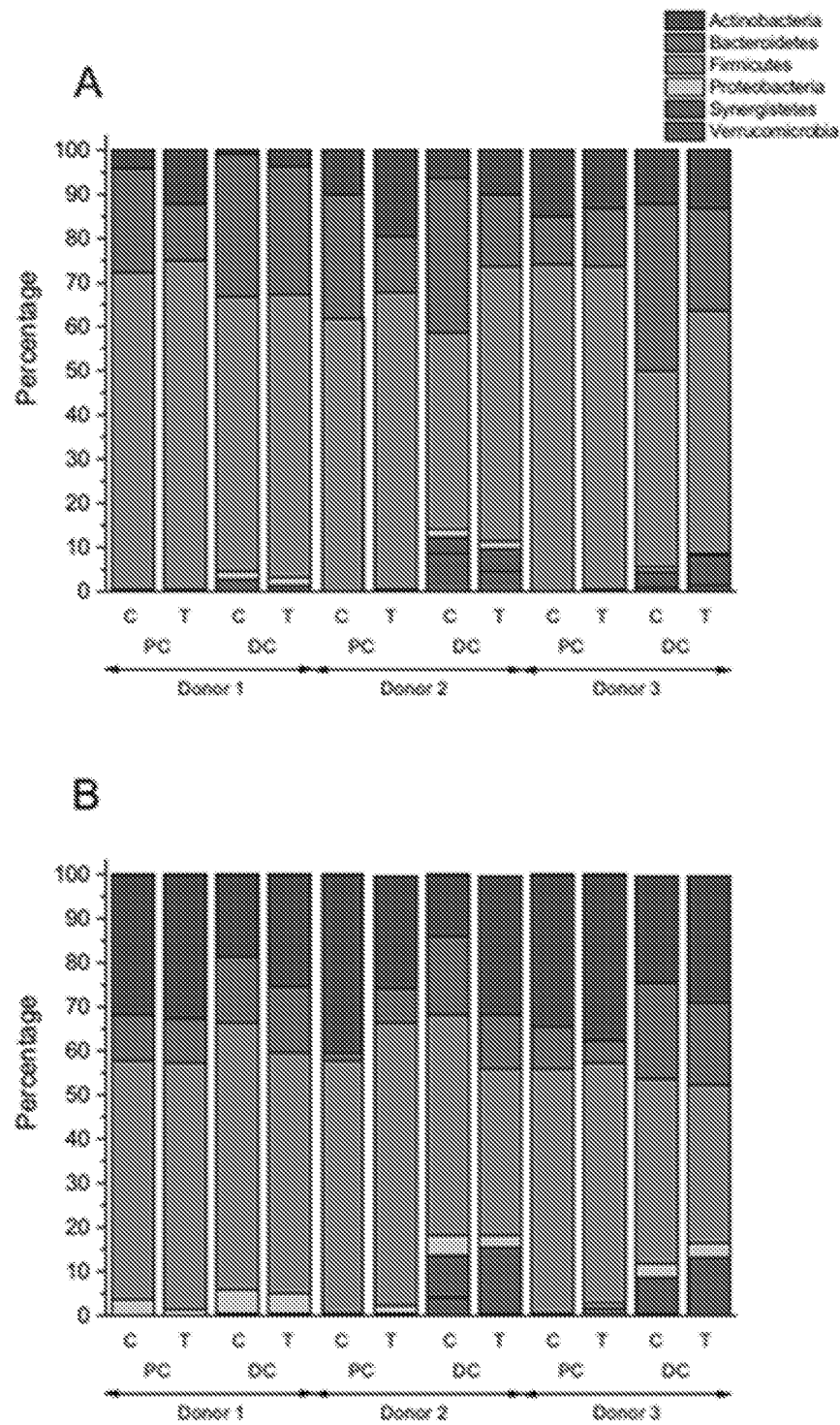


Figure 5

Phylum	Family	Lumen											
		Donor A				Donor B				Donor C			
		Proximal colon		Distal colon		Proximal colon		Distal colon		Proximal colon		Distal colon	
		C	TR	C	TR	C	TR	C	TR	C	TR	C	TR
Actinobacteria	Blifidobacteriaceae	3.0	10.3	0.6	2.7	8.9	19.0	5.6	9.2	14.3	12.2	11.6	12.3
	Coriobacteriaceae	0.0	0.1	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1
	Eggerthellaceae	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Microbacteriaceae	0.8	1.5	0.2	0.9	0.8	0.2	0.5	0.4	0.6	0.4	0.5	0.5
Bacteroidetes	Bacteroidaceae	23.2	12.5	31.0	28.0	28.3	12.5	32.2	14.9	11.0	12.8	31.6	20.4
	Barnesiellaceae	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Marinifilaceae	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
	Prevotellaceae	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5
	Rikenellaceae	0.0	0.0	0.1	0.1	0.0	0.0	0.3	0.2	0.0	0.0	0.3	0.4
	Tannerellaceae	0.6	0.5	0.9	0.9	0.0	0.5	2.2	1.5	0.0	0.6	5.7	1.9
	Acidaminococcaceae	3.4	3.4	8.6	6.2	2.3	3.7	3.7	5.0	2.6	4.9	3.5	3.1
Firmicutes	Clostridiaceae	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Enterococcaceae	2.0	9.5	0.4	2.7	3.3	2.6	0.6	1.8	0.6	1.3	0.2	0.8
	Erysipelotrichaceae	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0
	Lachnospiraceae	8.2	11.4	21.5	24.8	9.6	6.0	15.0	16.3	3.8	4.8	18.7	13.0
	Lactobacillaceae	0.0	0.9	0.0	0.5	0.0	0.7	0.0	0.5	0.0	0.7	0.0	0.5
	Paenibacillaceae	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Ruminococcaceae	0.0	0.1	1.0	2.0	0.0	0.3	0.4	1.2	0.0	0.1	0.3	2.7
	Streptococcaceae	0.0	1.3	0.0	1.2	0.0	0.5	0.0	0.8	0.0	0.5	0.0	0.6
	Veillonellaceae	58.3	48.1	30.9	26.5	46.5	53.3	24.8	36.2	67.0	61.0	21.8	34.1
	Burkholderiaceae	0.0	0.1	0.1	0.3	0.0	0.0	0.3	0.2	0.0	0.1	0.1	0.1
Proteobacteria	Desulfovibrionaceae	0.2	0.2	0.8	0.4	0.0	0.0	0.4	0.5	0.0	0.0	0.5	0.2
	Enterobacteriaceae	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Pseudomonadaceae	0.0	0.0	0.3	0.4	0.0	0.0	0.4	0.5	0.0	0.0	0.2	0.3
	Uncultured	0.0	0.0	0.3	0.4	0.0	0.2	0.8	0.3	0.0	0.0	0.0	0.1
	Xanthomonadaceae	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0
Synergistetes	Synergistaceae	0.0	0.0	0.0	0.0	0.0	0.0	3.6	5.3	0.0	0.3	3.8	6.8
Verrucomicrobia	Akkermansiaceae	0.0	0.0	3.0	1.6	0.0	0.0	8.9	4.5	0.0	0.0	0.8	1.3

Figure 6

Phylum	Family	Mucosal layer											
		Donor A				Donor B				Donor C			
		Proximal colon		Distal colon		Proximal colon		Distal colon		Proximal colon		Distal colon	
		C	TR	C	TR	C	TR	C	TR	C	TR	C	TR
Actinobacteria	Bifidobacteriaceae	31.0	31.1	17.2	21.8	36.1	23.3	12.4	30.1	33.8	35.6	22.1	26.4
	Coriobacteriaceae	0.3	0.2	0.3	1.9	1.2	1.1	1.3	1.1	0.3	1.0	1.1	1.7
	Eggerthellaceae	0.0	0.0	0.8	0.4	0.0	0.0	0.2	0.1	0.0	0.0	0.7	0.2
	Microbacteriaceae	0.6	1.3	0.4	1.2	3.1	1.4	0.2	0.5	0.4	1.1	0.2	0.4
	Bacteroidaceae	8.4	8.1	11.7	10.8	2.0	6.1	11.7	8.6	9.6	4.3	18.5	13.2
Bacteroidetes	Barnesiellaceae	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
	Mariniflaccaceae	0.0	0.0	0.4	0.3	0.0	0.0	0.3	0.3	0.0	0.0	0.3	0.4
	Prevotellaceae	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.2	0.0
	Rikenellaceae	0.0	0.0	1.1	1.7	0.0	0.1	2.1	1.2	0.0	0.0	1.0	2.0
	Tannerellaceae	1.9	1.9	1.5	2.2	0.0	1.2	3.5	2.3	0.0	0.6	2.1	2.6
Firmicutes	Acidaminococcaceae	8.6	6.4	10.4	11.8	6.6	7.4	8.8	5.0	6.0	3.9	9.6	5.5
	Clostridiaceae	0.1	0.0	0.7	0.6	0.0	0.0	0.5	1.3	0.0	0.0	0.7	1.2
	Enterococcaceae	2.3	9.9	4.9	4.5	6.2	4.3	2.6	2.0	2.6	12.5	1.7	2.1
	Erysipelotrichaceae	0.0	0.0	0.3	0.3	0.0	0.0	0.5	2.2	0.0	0.0	0.8	0.2
	Lachnospiraceae	14.7	11.1	28.0	21.1	11.0	7.5	22.1	18.0	19.3	5.1	20.2	14.2
	Lactobacillaceae	0.0	0.2	0.0	0.6	0.0	0.2	0.0	0.4	0.0	0.2	0.0	0.5
	Paenibacillaceae	0.0	0.1	0.0	2.3	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
	Ruminococcaceae	0.1	0.2	5.1	3.4	0.0	1.0	2.7	2.7	0.0	1.5	3.9	3.7
	Streptococcaceae	0.0	0.2	0.0	1.1	0.0	0.2	0.0	0.3	0.0	0.2	0.0	0.3
	Veillonellaceae	28.5	27.6	10.4	8.6	33.5	43.2	12.0	5.1	27.2	31.3	4.1	8.1
Proteobacteria	Burkholderiaceae	0.4	0.4	1.6	3.1	0.1	0.4	2.4	1.1	0.4	0.4	1.9	1.3
	Desulfosporobiontaceae	3.0	1.1	1.8	0.6	0.1	1.0	1.1	1.0	0.2	0.0	0.9	1.0
	Enterobacteriaceae	0.0	0.0	0.1	0.1	0.0	0.2	0.0	0.1	0.1	0.1	0.2	0.2
	Pseudomonadaceae	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
	Uncultured	0.0	0.0	1.8	0.5	0.0	0.3	1.1	0.5	0.0	0.0	0.4	0.4
Synergistetes	Xanthomonadaceae	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
	Synergistaceae	0.0	0.0	0.0	0.0	0.0	0.3	9.4	15.2	0.0	2.0	8.1	13.3
	Verrucomicrobia	0.0	0.0	0.7	0.4	0.0	0.2	4.3	0.5	0.0	0.0	0.7	0.1

Figure 7

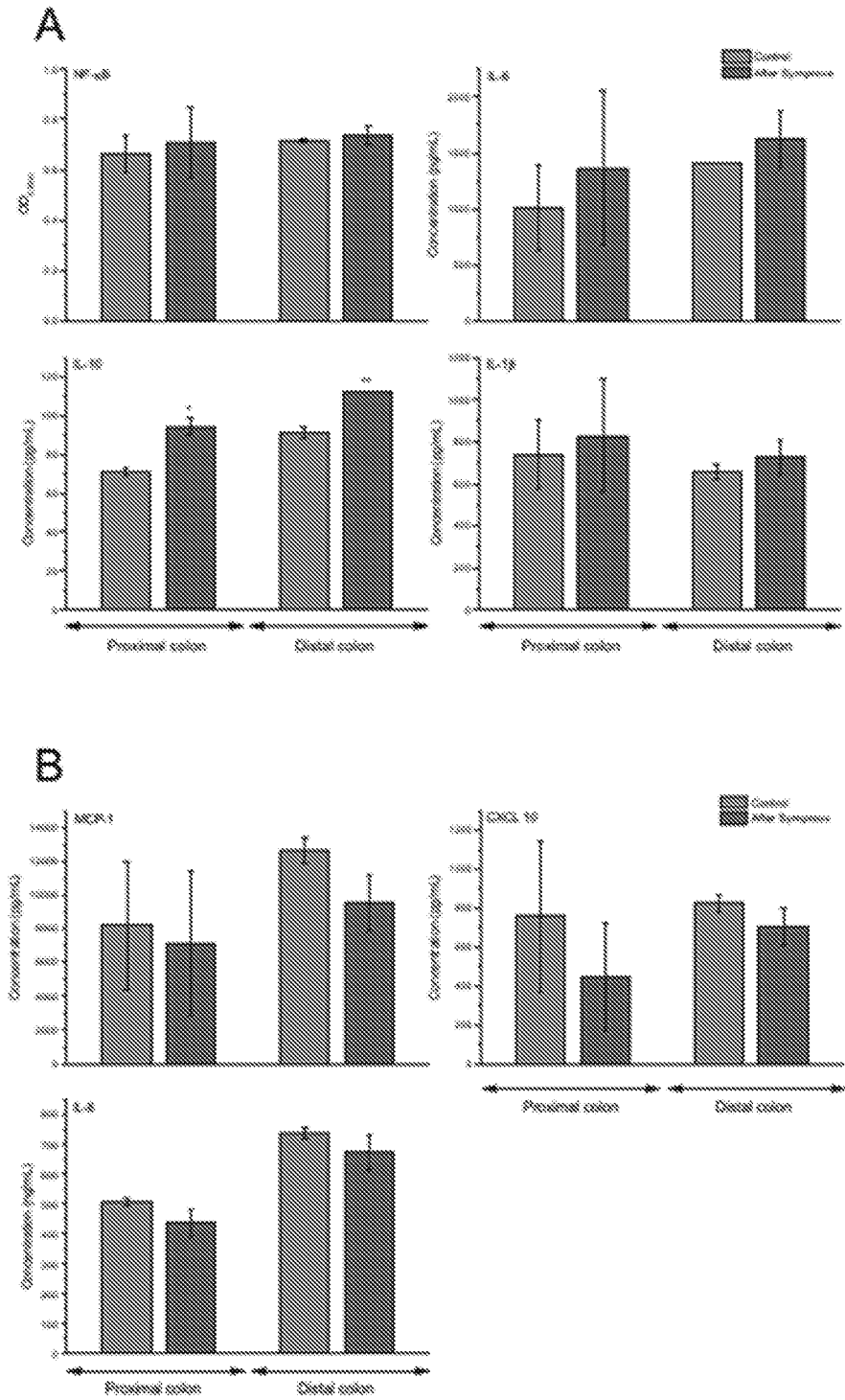


Figure 8

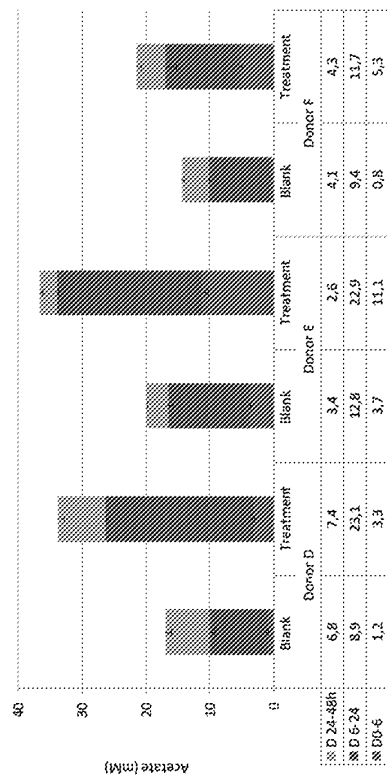


Figure 9B

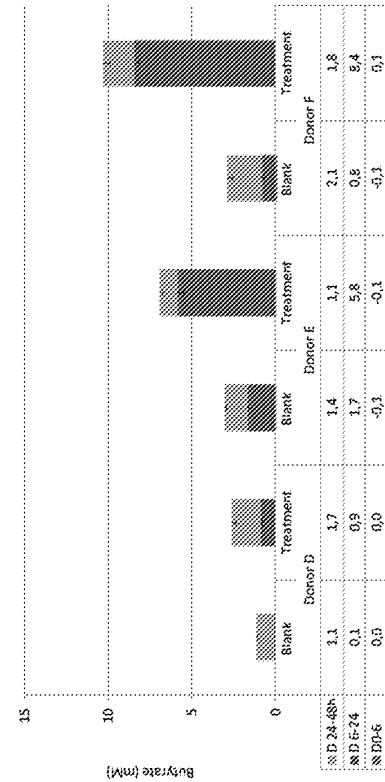


Figure 9D

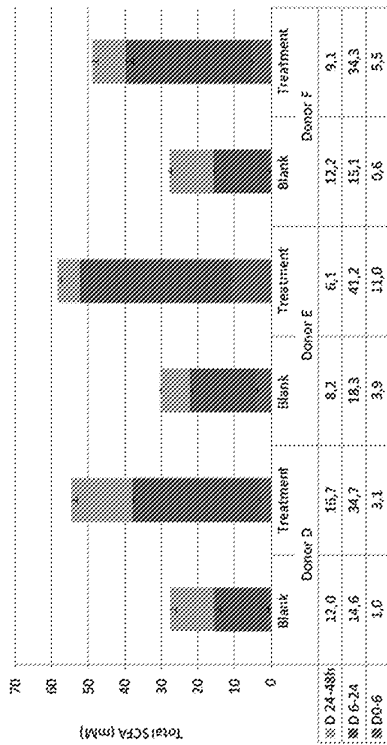


Figure 9A

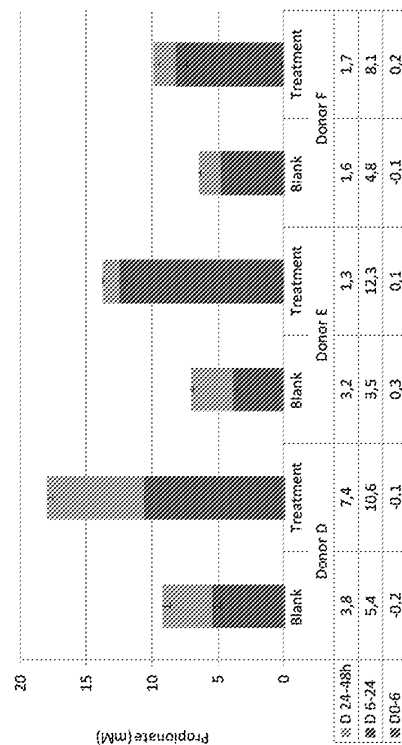


Figure 9C

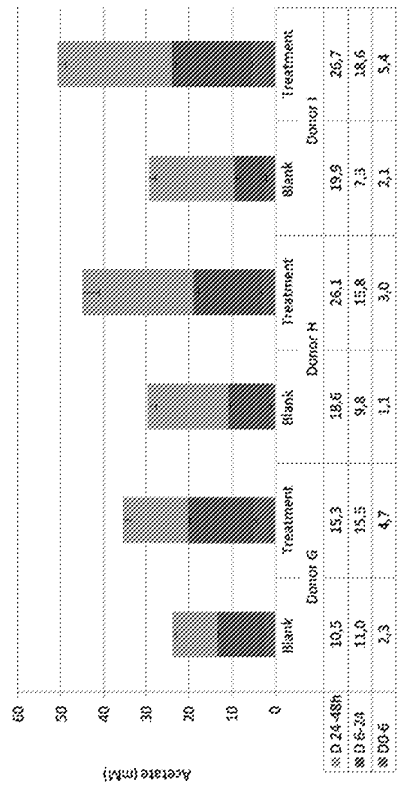


Figure 10A

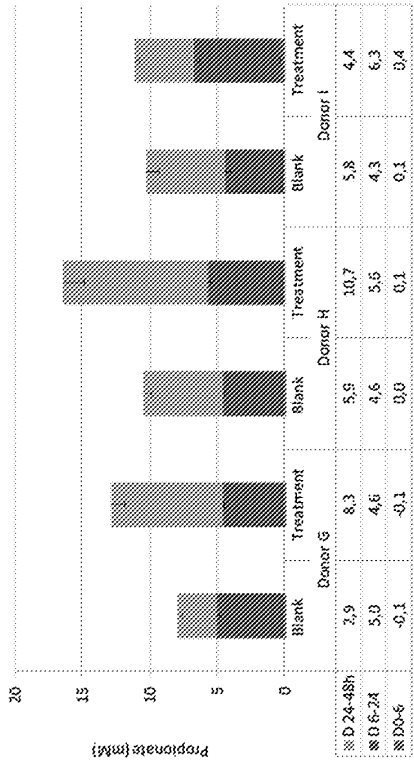


Figure 10C

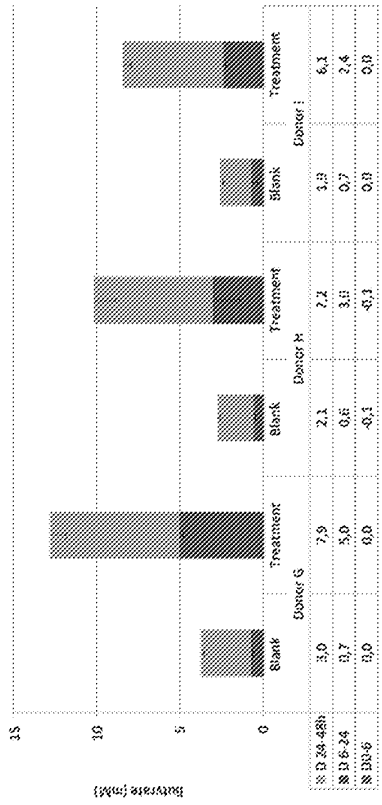


Figure 10D

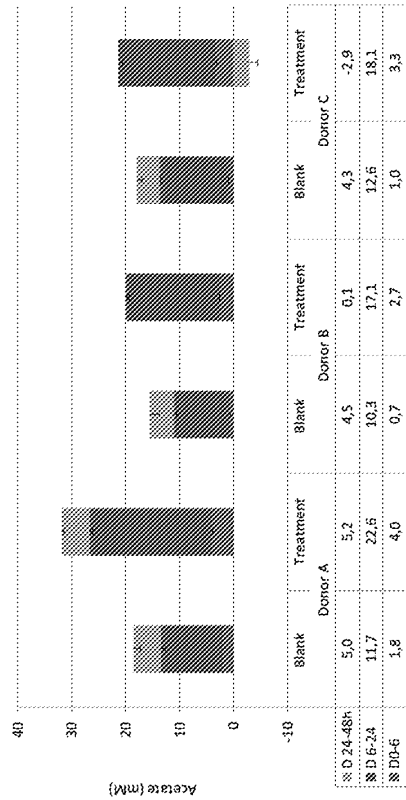


Figure 11A

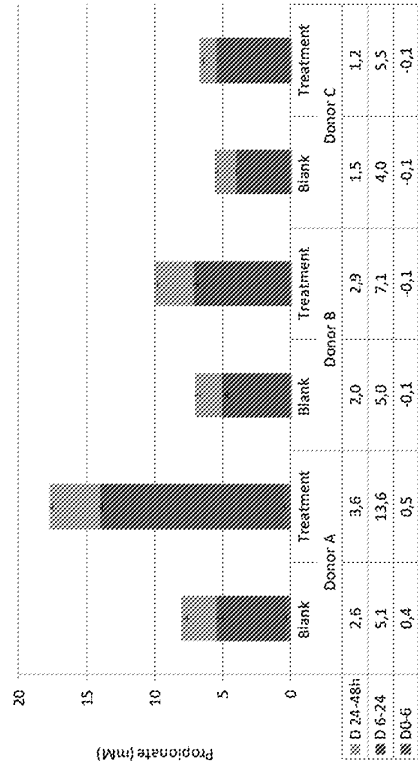


Figure 11B

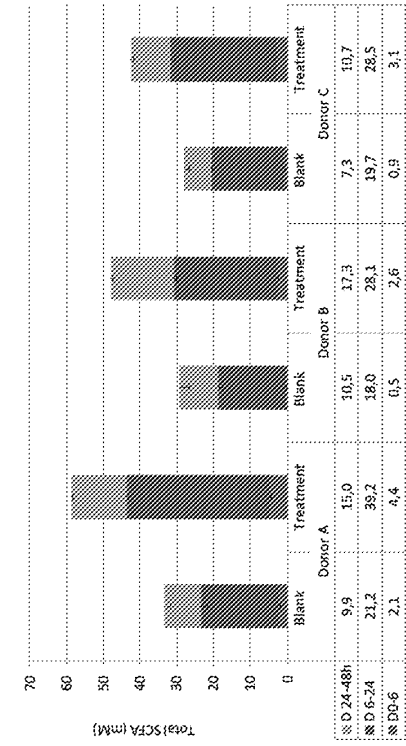


Figure 11C

OTU	Closely related genus	Closely related species	Liver distal											
			Lumen						Mucus					
			Donor D	Donor E	Donor F	T-test	Donor D	Donor E	Donor F	T-test	Donor D	Donor E	Donor F	T-test
1	<i>Escherichia-Shigella</i> (100)	<i>E. coli</i>	-0.5%	-12.5%	-10.9%	0.004	0.0%	3.3%	-2.1%	0.720	0.0%	3.3%	-2.1%	0.720
2	<i>Bacteroides</i> (100)	<i>B. fragilis</i>	-0.1%	-9.5%	1.3%	0.155	-2.2%	-21.2%	-9.0%	0.006	-2.2%	-21.2%	-9.0%	0.006
3	<i>Bacteroides</i> (100)	<i>B. thetaetaomicron</i>	-0.9%	0.0%	-6.3%	0.041	0.3%	0.0%	-1.6%	0.752	0.3%	0.0%	-1.6%	0.752
4	<i>Bacteroides</i> (100)	<i>B. dorei</i>	-1.5%	-2.5%	-3.3%	0.001	0.1%	0.4%	-0.7%	0.778	0.1%	0.4%	-0.7%	0.778
5	<i>Bifidobacterium</i> (100)	<i>B. longum</i>	0.4%	0.4%	1.1%	0.001	-0.4%	5.3%	2.0%	0.028	-0.4%	5.3%	2.0%	0.028
6	<i>Akkermansia</i> (100)	<i>A. muciniphila</i>	-5.2%	-1.0%	0.0%	0.065	-4.3%	0.0%	0.0%	0.171	-4.3%	0.0%	0.0%	0.171
7	<i>Veillonella</i> (100)	<i>V. parvula/dispar</i>	18.0%	1.8%	-1.3%	0.087	12.9%	-0.4%	-4.7%	0.357	12.9%	-0.4%	-4.7%	0.357
8	<i>Clostridium sensu stricto</i> (100)	<i>C. tertium</i>	0.0%	-0.5%	-1.5%	0.033	0.7%	-16.9%	-29.5%	0.008	0.7%	-16.9%	-29.5%	0.008
9	<i>Bifidobacterium</i> (100)	<i>B. bifidum</i>	0.0%	-0.2%	0.0%	0.134	0.0%	10.6%	0.0%	0.125	0.0%	10.6%	0.0%	0.125
10	<i>Bacteroides</i> (100)	<i>B. uniformis</i>	1.1%	5.8%	-0.3%	0.061	-0.3%	0.3%	0.0%	0.974	-0.3%	0.3%	0.0%	0.974
11	<i>Clostridium XIVa</i> [99]	undear	0.0%	0.0%	2.0%	0.088	3.1%	0.0%	0.9%	0.037	3.1%	0.0%	0.9%	0.037
12	<i>Clostridium XIVa</i> (100)	undear	-0.4%	-0.1%	-0.8%	0.036	2.7%	1.9%	0.1%	0.004	2.7%	1.9%	0.1%	0.004
15	<i>Bifidobacterium</i> (100)	<i>B. pseudocatenulatum</i>	0.3%	3.7%	0.0%	0.086	0.0%	2.9%	0.0%	0.093	0.0%	2.9%	0.0%	0.093
16	<i>Collinsella</i> (100)	<i>C. serofaciens</i>	0.0%	-0.1%	0.4%	0.138	0.1%	2.6%	0.1%	0.097	0.1%	2.6%	0.1%	0.097
17	<i>Lactococcus</i> (100)	<i>L. garvieae</i>	-5.8%	0.0%	0.0%	0.117	-3.4%	0.0%	0.0%	0.107	-3.4%	0.0%	0.0%	0.107
18	<i>Clostridium XIVa</i> (100)	<i>C. symbiosum</i>	-1.3%	-1.1%	-0.3%	0.021	-0.1%	0.0%	0.0%	0.692	-0.1%	0.0%	0.0%	0.692
23	<i>Bacteroides</i> (100)	<i>B. thetaetaomicron</i>	-4.1%	-0.9%	-0.1%	0.065	-2.4%	0.3%	0.0%	0.127	-2.4%	0.3%	0.0%	0.127
28	<i>Veillonella</i> (100)	undear	0.0%	13.7%	2.6%	0.029	0.0%	0.4%	-0.1%	0.229	0.0%	0.4%	-0.1%	0.229
30	<i>Bifidobacterium</i> (100)	<i>B. adolescentis</i>	1.0%	0.0%	4.3%	0.084	0.3%	0.0%	0.1%	0.037	0.3%	0.0%	0.1%	0.037
31	<i>Streptococcus</i> (100)	<i>S. pasteurianus/macedonicus/galloxyticus</i>	0.0%	0.0%	13.9%	0.087	0.1%	0.0%	4.7%	0.207	0.1%	0.0%	4.7%	0.207
33	<i>Parabacteroides</i> (100)	<i>P. merdae</i>	0.0%	0.0%	-2.8%	0.104	-0.7%	0.0%	-4.4%	0.059	-0.7%	0.0%	-4.4%	0.059
39	<i>Prevotella</i> (100)	<i>P. copri</i>	0.0%	0.0%	0.0%	0.110	0.0%	0.0%	0.9%	0.194	0.0%	0.0%	0.9%	0.194
40	<i>Holdemanella</i> (100)	<i>H. bififormis</i>	0.0%	0.0%	2.8%	0.096	0.7%	0.0%	15.4%	0.076	0.7%	0.0%	15.4%	0.076
41	<i>Succinivibrio</i> (100)	<i>S. dextrinosolvens</i>	0.0%	0.0%	0.0%	0.215	0.1%	0.0%	23.1%	0.082	0.1%	0.0%	23.1%	0.082
54	<i>Megasphaera</i> (100)	<i>M. elsdenii</i>	0.0%	0.1%	2.1%	0.147	0.0%	0.0%	2.7%	0.112	0.0%	0.0%	2.7%	0.112

Figure 12

Phylum	Family	Liver cirrhosis							
		Lumen				Mucus			
		Donor D	Donor E	Donor F	T-test	Donor D	Donor E	Donor F	T-test
Actinobacteria	Atopobiaceae	0.0%	0.0%	0.1%	0.138	0.0%	0.0%	0.1%	0.100
	Bifidobacteriaceae	2.8%	8.6%	5.4%	0.000	0.0%	23.2%	2.2%	0.052
	Coriobacteriaceae	0.0%	-0.1%	0.4%	0.129	0.1%	2.6%	0.1%	0.095
	Eggerthellaceae	0.0%	-0.3%	-0.1%	0.042	0.0%	0.0%	0.0%	0.647
	Propionibacteriaceae	0.0%	0.0%	0.0%	0.744	0.0%	0.0%	0.0%	0.347
Bacteroidetes	Bacteroidaceae	-6.9%	-7.3%	-10.6%	0.002	-5.7%	-20.6%	-13.0%	0.000
	Bacteroidales_unclassified	0.0%	0.0%	0.0%	0.532	0.0%	0.0%	0.0%	0.030
	Bacteroidia_unclassified	0.0%	0.0%	0.0%	NA	0.0%	0.0%	0.0%	NA
	Marinifilaceae	0.1%	-0.2%	0.0%	0.448	0.0%	0.0%	0.0%	0.727
	Muribaculaceae	0.0%	0.0%	0.0%	NA	0.0%	0.0%	0.0%	NA
	Prevotellaceae	0.0%	0.0%	0.0%	0.106	0.0%	0.0%	1.0%	0.293
	Rikenellaceae	0.1%	-0.4%	0.0%	0.221	-0.1%	0.1%	0.0%	0.874
	Tannerellaceae	-0.2%	1.1%	-3.2%	0.311	-0.8%	0.4%	-6.5%	0.072
	Family_XI	0.0%	0.0%	0.0%	0.004	0.0%	0.0%	0.0%	0.069
Firmicutes	Acidaminococcaceae	-3.5%	0.0%	-4.4%	0.086	-3.9%	0.0%	-0.8%	0.050
	Bacillaceae	0.0%	0.0%	0.0%	0.467	0.0%	0.0%	0.0%	NA
	Christensenellaceae	0.0%	0.0%	0.0%	0.100	0.0%	0.0%	0.0%	NA
	Clostridiaceae_1	0.0%	-0.6%	-1.7%	0.023	0.2%	-14.8%	-26.7%	0.008
	Clostridiales_unclassified	0.0%	0.0%	0.0%	0.898	0.0%	0.0%	0.0%	NA
	Enterococcaceae	-0.8%	-1.5%	-0.3%	0.001	-6.2%	0.1%	-0.3%	0.071
	Erysipelotrichaceae	0.1%	0.0%	3.3%	0.080	0.7%	0.2%	16.2%	0.073
	Eubacteriaceae	0.0%	0.0%	0.0%	0.470	0.0%	0.0%	0.0%	NA
	Family_XI	0.0%	0.0%	0.0%	0.004	0.0%	0.0%	0.0%	0.069
	Family_XIII	0.0%	0.0%	0.0%	0.064	0.0%	0.0%	0.0%	0.347
	Lachnospiraceae	-0.9%	1.2%	-0.9%	0.743	16.0%	4.0%	2.9%	0.010
	Lactobacillaceae	9.7%	6.2%	3.5%	0.000	1.5%	1.2%	1.1%	0.000
	Paenibacillaceae	0.0%	0.0%	0.0%	NA	0.0%	0.0%	0.0%	NA
	Peptostreptococcaceae	0.0%	0.0%	0.0%	0.086	0.0%	0.0%	0.0%	0.678
	Ruminococcaceae	0.1%	-0.1%	0.1%	0.117	0.0%	0.9%	0.2%	0.071
	Streptococcaceae	-5.7%	0.0%	14.9%	0.360	-4.4%	0.2%	6.8%	0.684
	Veillonellaceae	19.3%	13.7%	4.1%	0.001	13.7%	0.2%	-1.9%	0.143
Fusobacteria	Fusobacteriaceae	0.0%	0.0%	0.0%	0.137	0.0%	0.0%	0.0%	0.065
Proteobacteria	Aeromonadaceae	0.0%	0.0%	0.0%	NA	0.0%	0.0%	-0.1%	0.982
	Burkholderiaceae	0.1%	0.0%	0.1%	0.074	0.0%	0.1%	0.0%	0.259
	Desulfovibrionaceae	-0.1%	0.0%	0.1%	0.990	0.0%	0.0%	0.0%	0.484
	Enterobacteriaceae	-8.0%	-15.3%	-11.1%	0.000	-4.8%	2.6%	-2.1%	0.346
	Succinivibrionaceae	0.0%	0.0%	0.0%	0.210	0.1%	0.0%	23.1%	0.082
Synergistetes	Synergistaceae	0.0%	0.0%	0.0%	0.347	0.0%	0.0%	0.0%	NA
Verrucomicrobia	Akkermansiaceae	-6.3%	-1.0%	0.0%	0.044	-4.3%	0.0%	0.0%	0.173

Figure 13

OTU	Closely related genus	Closely related species	Parthinson									
			Lumen					Mucus				
			Donor G	Donor H	Donor I	T-test	Donor G	Donor H	Donor I	T-test	Donor G	T-test
1	Escherichia-Shigella(100)	E. coli	-0.6%	0.2%	-0.7%	0.734	0.3%	-3.1%	10.7%	0.273	0.3%	0.273
2	Bacteroides(100)	B. fragilis	0.0%	0.1%	-3.0%	0.094	0.0%	1.6%	-17.3%	0.125	0.0%	0.125
3	Bacteroides(100)	B. thetaiotaomicron	-1.5%	8.5%	-9.6%	0.760	0.1%	12.7%	-0.7%	0.108	0.1%	0.108
4	Bacteroides(100)	B. dorei	0.0%	-7.6%	-1.9%	0.036	0.3%	-13.0%	-0.3%	0.096	0.3%	0.096
5	Bifidobacterium(100)	B. longum	2.3%	0.1%	1.0%	0.008	10.5%	2.8%	8.3%	0.001	10.5%	0.001
6	Akkermansia(100)	A. muciniphila	-3.9%	-25.1%	-0.2%	0.049	-5.4%	-3.5%	0.0%	0.062	-5.4%	0.062
7	Veillonella(100)	V. parvula/dispar	19.6%	9.3%	2.7%	0.003	0.7%	5.7%	0.3%	0.046	0.7%	0.046
8	Clostridium sensu stricto(100)	C. tertium	-0.4%	0.0%	-1.9%	0.027	-4.7%	-3.3%	-12.2%	0.003	-4.7%	0.003
10	Bacteroides(100)	B. uniformis	3.5%	0.0%	-0.3%	0.142	0.1%	-0.1%	-0.1%	0.537	0.1%	0.537
11	Clostridium XIVa (99)	unclear	0.0%	2.9%	0.7%	0.026	0.7%	23.4%	3.4%	0.036	0.7%	0.036
12	Clostridium XIVa(100)	unclear	0.1%	0.5%	1.4%	0.016	0.1%	0.8%	2.2%	0.017	0.1%	0.017
13	Roseburia(100)	unclear	-0.1%	0.0%	0.0%	0.112	0.0%	0.0%	0.0%	0.186	0.0%	0.186
17	Lactococcus(100)	L. garvieae	3.6%	0.0%	0.0%	0.098	0.3%	0.0%	0.0%	0.116	0.3%	0.116
19	Bacteroides(100)	B. caccae	-2.6%	0.3%	-1.0%	0.034	-13.4%	1.1%	-0.7%	0.103	-13.4%	0.103
20	Lactobacillus(100)	L. plantarum	6.8%	3.4%	3.1%	0.000	0.4%	0.7%	0.3%	0.000	0.4%	0.000
21	Lactobacillus(100)	L. rhamnosus	1.4%	4.3%	7.8%	0.001	0.1%	0.3%	0.3%	0.000	0.1%	0.000
22	Enterococcus(99)	E. faecium	-0.4%	-1.1%	3.0%	0.429	-0.1%	-3.6%	1.2%	0.341	-0.1%	0.341
25	Clostridium sensu stricto 1(100)	C. butyricum	0.2%	0.0%	0.0%	0.091	3.0%	-22.2%	0.0%	0.159	3.0%	0.159
26	Phascolarctobacterium(100)	P. faecium	0.0%	-1.2%	-3.0%	0.035	0.0%	-0.7%	-2.0%	0.034	0.0%	0.034
29	Faecalibacterium(100)	F. prausnitzii	0.0%	0.0%	0.0%	0.051	0.0%	0.0%	0.0%	0.085	0.0%	0.085
43	Unclassified Porphyromonadaceae(91)	unclear	0.0%	0.0%	0.0%	0.125	0.0%	0.0%	0.0%	0.251	0.0%	0.251
46	Citrobacter(77)	C. freundii	-0.1%	-2.0%	-0.1%	0.057	-0.1%	-5.8%	0.0%	0.077	-0.1%	0.077
48	Romboutsia(100)	unclear	-0.1%	-0.1%	0.0%	0.006	0.0%	-0.2%	0.0%	0.171	0.0%	0.171
49	Parabacteroides(100)	P. goldsteinii	-0.6%	0.4%	0.0%	0.809	-2.0%	-0.2%	0.0%	0.072	-2.0%	0.072
53	Lactococcus(100)	L. lactis	0.0%	1.9%	0.0%	0.148	0.0%	0.0%	0.0%	0.757	0.0%	0.757

Figure 14

Phylum	Family	Parkinson							
		Lumen				Mucus			
		Donor G	Donor H	Donor I	T-test	Donor G	Donor H	Donor I	T-test
Actinobacteria	Atopobiaceae	0.0%	0.0%	0.0%	0.667	0.0%	0.0%	0.0%	NA
	Bifidobacteriaceae	4.7%	0.2%	3.8%	0.004	12.6%	2.8%	10.2%	0.002
	Coriobacteriaceae	0.1%	0.0%	0.0%	0.074	0.3%	0.6%	0.0%	0.073
	Eggerthellaceae	0.1%	0.0%	-0.1%	0.745	0.0%	0.0%	0.0%	0.850
	Propionibacteriaceae	0.0%	0.0%	0.0%	0.187	0.0%	0.0%	0.0%	0.295
Bacteroidetes	Bacteroidaceae	-1.3%	1.0%	-17.2%	0.115	-13.8%	1.2%	-19.2%	0.012
	Barteroidales unclassified	0.0%	0.0%	0.0%	0.852	0.1%	0.0%	0.0%	0.201
	Bacteroidia unclassified	0.0%	0.0%	0.0%	0.456	0.0%	0.0%	0.0%	0.930
	Marinifilaceae	0.0%	0.0%	-0.2%	0.083	0.0%	-0.2%	0.0%	0.061
	Muribaculaceae	0.0%	0.0%	0.0%	0.121	0.0%	0.0%	0.0%	0.251
	Prevotellaceae	0.0%	0.0%	0.0%	0.099	0.0%	0.0%	0.0%	0.099
	Rikenellaceae	0.4%	0.0%	0.0%	0.084	0.1%	0.0%	0.0%	0.221
	Tannerellaceae	-1.4%	1.1%	-0.4%	0.650	-4.2%	0.4%	0.1%	0.227
	Acidaminococcaceae	-0.1%	-1.2%	-3.0%	0.032	-0.1%	-0.7%	-2.1%	0.023
	Bacillaceae	0.0%	0.0%	0.0%	NA	0.0%	0.0%	0.0%	0.347
Firmicutes	Christensenellaceae	0.0%	0.0%	0.0%	0.307	0.0%	0.0%	0.0%	0.078
	Clostridiaceae_1	-6.8%	-0.4%	-1.9%	0.018	1.3%	-25.7%	-12.2%	0.019
	Clostridiales unclassified	0.0%	0.0%	0.2%	0.303	0.0%	0.0%	-0.3%	0.188
	Enterococcaceae	-22.7%	-1.1%	3.0%	0.105	-3.6%	-4.0%	1.2%	0.091
	Erysipelotrichaceae	0.8%	0.0%	0.0%	0.111	5.5%	0.4%	0.8%	0.062
	Eubacteriaceae	0.0%	1.7%	2.5%	0.019	0.0%	0.2%	0.1%	0.016
	Family_XI	0.3%	-0.2%	-0.1%	0.972	0.0%	-0.1%	0.0%	0.124
	Family_XII	0.0%	0.1%	0.0%	0.146	0.0%	0.0%	0.0%	0.164
	Lachnospiraceae	0.7%	4.3%	2.4%	0.007	5.5%	27.2%	10.0%	0.003
	Lactobacillaceae	7.9%	7.7%	10.9%	0.000	0.6%	0.9%	0.7%	0.000
	Paenibacillaceae	0.0%	0.0%	0.0%	NA	0.0%	0.0%	0.0%	NA
	Peptostreptococcaceae	-0.6%	-0.1%	-1.1%	0.010	-0.6%	-0.1%	-0.3%	0.014
	Ruminococcaceae	0.3%	0.0%	0.1%	0.079	0.3%	0.1%	0.1%	0.082
	Streptococcaceae	3.9%	4.2%	0.0%	0.008	0.8%	2.8%	0.1%	0.016
	Veillonellaceae	20.1%	12.9%	3.4%	0.001	0.0%	7.1%	0.4%	0.050
	Fusobacteriaceae	-1.1%	0.0%	0.0%	0.097	-0.2%	0.0%	0.0%	0.093
Proteobacteria	Aeromonadaceae	0.0%	0.0%	0.0%	NA	0.0%	0.0%	0.0%	NA
	Burkholderiaceae	0.0%	0.0%	-0.2%	0.098	0.0%	0.0%	-0.1%	0.135
	Desulfovibrionaceae	-0.1%	0.0%	0.0%	0.350	0.0%	0.0%	0.0%	0.444
	Enterobacteriaceae	-0.6%	-3.5%	-1.0%	0.155	0.3%	-9.3%	10.9%	0.850
	Succinivibrionaceae	0.0%	0.0%	0.0%	NA	0.0%	0.0%	0.0%	0.347
Synergistetes	Synergistaceae	-0.6%	-0.8%	-0.8%	0.000	0.0%	-0.2%	0.0%	0.053
Verrucomicrobia	Akkermansiaceae	-3.9%	-25.2%	-0.7%	0.040	-5.4%	-3.6%	0.0%	0.062

Figure 15

OTU	Closely related genus	Closely related species	IBD									
			Lumen					Mucus				
			Donor A	Donor B	Donor C	T-test	Donor A	Donor B	Donor C	T-test	Donor A	Donor B
1	Escherichia-Shigella(100)	<i>E. coli</i>	-7.4%	-2.5%	-1.9%	0.003	1.4%	4.3%	-0.1%	0.039	4.3%	-0.1%
2	Bacteroides(100)	<i>B. fragilis</i>	5.0%	7.8%	-0.5%	0.014	-10.1%	-1.1%	-2.1%	0.064	-1.1%	-2.1%
3	Bacteroides(100)	<i>B. thetaiotaomicron</i>	-6.6%	3.5%	0.0%	0.513	-1.1%	-2.1%	0.0%	0.062	-2.1%	0.0%
4	Bacteroides(100)	<i>B. dorei</i>	-1.6%	0.0%	-3.1%	0.161	0.1%	0.0%	-2.6%	0.098	0.0%	-2.6%
5	Bifidobacterium(100)	<i>B. longum</i>	0.0%	0.0%	14.1%	0.086	0.0%	0.0%	-3.7%	0.730	0.0%	-3.7%
6	Akkermansia(100)	<i>A. muciniphila</i>	0.0%	-11.6%	0.0%	0.102	0.0%	-1.6%	0.0%	0.104	0.0%	-1.6%
9	Bifidobacterium(100)	<i>B. bifidum</i>	0.0%	0.0%	-1.6%	0.081	0.0%	0.0%	0.3%	0.972	0.0%	0.3%
10	Bacteroides(100)	<i>B. uniformis</i>	-0.2%	-0.2%	2.0%	0.463	0.0%	0.0%	-0.3%	0.456	0.0%	-0.3%
11	Clostridium XIVa (99)	unclear	-1.7%	-0.1%	-2.7%	0.013	0.7%	-3.7%	-1.0%	0.116	0.7%	-1.0%
12	Clostridium XIVa(100)	unclear	-2.5%	-0.4%	-2.6%	0.004	-4.9%	-4.3%	-0.1%	0.004	-4.3%	-0.1%
13	Roseburia(100)	unclear	0.1%	0.1%	-0.2%	0.587	6.9%	18.5%	0.0%	0.020	6.9%	18.5%
16	Collinsella(100)	<i>C. aerofaciens</i>	0.0%	-0.1%	0.0%	0.094	0.0%	-9.9%	0.0%	0.087	0.0%	-9.9%
18	Clostridium XIVa(100)	<i>C. symbiosum</i>	-5.1%	-0.8%	-7.9%	0.005	-0.5%	-0.7%	-0.2%	0.012	-0.5%	-0.2%
20	Lactobacillus(100)	<i>L. plantarum</i>	3.0%	7.4%	11.6%	0.001	0.4%	2.1%	6.1%	0.035	0.4%	2.1%
21	Lactobacillus(100)	<i>L. rhamnosus</i>	1.7%	5.5%	11.2%	0.003	0.1%	0.5%	0.9%	0.035	0.1%	0.5%
24	Ruminococcus(100)	unclear	-1.8%	0.0%	0.0%	0.084	-13.2%	-1.0%	0.0%	0.061	-1.0%	0.0%
27	Parabacteroides(100)	<i>P. distasonis</i>	-1.0%	0.0%	0.0%	0.387	0.1%	0.0%	0.0%	0.306	0.1%	0.0%
28	Veillonella(100)	unclear	15.8%	0.1%	0.0%	0.082	1.3%	0.0%	0.0%	0.075	1.3%	0.0%
32	Blautia(100)	unclear	4.1%	0.0%	0.4%	0.062	10.8%	0.0%	0.5%	0.070	10.8%	0.0%
42	Lachnospiraceae incertae sedis(100)	unclear	0.4%	0.0%	4.0%	0.058	0.7%	0.0%	1.9%	0.051	0.7%	0.0%
44	Roseburia(100)	<i>R. inulinivorans</i>	0.0%	0.0%	0.0%	0.109	0.0%	0.0%	0.0%	0.217	0.0%	0.0%
50	Streptococcus(100)	<i>S. salivarius</i>	-0.2%	0.0%	0.0%	0.239	0.1%	0.0%	0.0%	0.169	0.1%	0.0%
51	Clostridium XVIII(100)	<i>C. ramosum</i>	0.0%	0.1%	-7.8%	0.108	0.0%	-0.5%	-0.7%	0.013	0.0%	-0.7%
56	Bifidobacterium(100)	<i>B. pseudolongum</i>	0.0%	5.5%	0.0%	0.085	0.0%	1.0%	0.0%	0.178	0.0%	1.0%
69	Fermentella(100)	unclear	0.0%	0.0%	0.0%	0.347	-0.1%	-7.1%	-3.7%	0.076	-0.1%	-3.7%

Figure 16

Phylum	Family	IBD							
		Lumen				Mucus			
		Donor A	Donor B	Donor C	T-test	Donor A	Donor B	Donor C	T-test
Actinobacteria	Atopobiaceae	0.0%	0.0%	0.0%	0.347	0.0%	0.0%	0.0%	0.157
	Bifidobacteriaceae	1.8%	5.8%	12.8%	0.005	0.2%	1.2%	-3.6%	0.509
	Coriobacteriaceae	-0.5%	-0.1%	0.0%	0.026	-0.4%	-9.9%	0.0%	0.076
	Eggerthellaceae	-0.3%	-0.5%	-1.0%	0.001	0.0%	0.0%	0.0%	0.053
	Propionibacteriaceae	0.0%	0.0%	0.0%	0.347	0.0%	0.0%	0.0%	NA
Bacteroidetes	Bacteroidaceae	-7.0%	12.0%	-4.5%	0.968	-11.7%	-3.7%	-9.9%	0.004
	Bacteroidales_unclassified	0.0%	0.0%	0.0%	0.370	0.0%	0.0%	0.0%	0.506
	Bacteroidia_unclassified	0.0%	0.0%	0.0%	NA	0.0%	0.0%	0.0%	NA
	Mariprofundaceae	0.0%	0.0%	0.0%	0.003	0.0%	0.0%	0.0%	0.053
	Mutibacteriaceae	0.0%	0.0%	0.0%	NA	0.0%	0.0%	0.0%	NA
	Prevotellaceae	0.0%	0.0%	0.0%	0.106	0.0%	0.0%	0.0%	0.380
	Rikenellaceae	-0.2%	0.0%	-0.1%	0.016	0.0%	0.0%	0.0%	0.931
	Tannerellaceae	-1.2%	0.0%	0.0%	0.391	0.1%	0.0%	0.0%	0.365
Firmicutes	Acidaminococcaceae	0.0%	0.0%	0.0%	0.188	0.0%	0.0%	0.0%	NA
	Bacillaceae	0.0%	0.0%	-0.1%	0.109	0.0%	0.0%	-1.4%	0.085
	Christensenellaceae	0.0%	0.0%	0.0%	0.189	0.0%	0.0%	0.0%	NA
	Clostridiaceae_1	0.0%	0.0%	0.0%	0.650	-1.1%	-6.9%	-3.7%	0.050
	Clostridiales_unclassified	0.0%	0.0%	0.0%	0.114	0.0%	0.0%	0.0%	0.153
	Enterococcaceae	-0.1%	-21.0%	0.1%	0.001	0.0%	-0.1%	0.0%	0.870
	Erysipelotrichaceae	-0.4%	0.1%	-7.8%	0.091	-0.1%	-0.5%	-0.8%	0.004
	Eubacteriaceae	0.0%	0.0%	0.0%	0.347	0.0%	0.0%	0.0%	NA
	Family_XI	0.0%	-0.3%	0.0%	0.119	0.0%	0.0%	0.0%	0.119
	Family_XIII	0.0%	0.0%	0.0%	0.010	0.0%	0.0%	0.0%	0.341
	Lachnospiraceae	-5.9%	1.7%	-13.8%	0.055	7.6%	11.6%	11.4%	0.004
	Lactobacillaceae	5.7%	16.8%	23.9%	0.000	1.4%	8.7%	7.1%	0.012
	Paenibacillaceae	0.0%	0.0%	0.0%	NA	0.0%	-0.2%	-0.1%	0.086
	Peptostreptococcaceae	-5.7%	0.0%	0.0%	0.084	-0.2%	0.1%	0.1%	0.837
	Ruminococcaceae	-1.6%	-0.2%	-0.6%	0.006	-0.2%	0.0%	0.0%	0.564
	Streptococcaceae	6.1%	0.0%	-0.3%	0.100	1.0%	0.1%	0.4%	0.035
	Veillonellaceae	17.5%	0.4%	0.1%	0.002	3.1%	1.1%	0.1%	0.007
Fusobacteria	Fusobacteriaceae	0.0%	0.0%	0.0%	NA	0.0%	0.0%	0.0%	NA
Proteobacteria	Aeromonadaceae	0.0%	0.0%	0.0%	NA	0.0%	0.0%	0.0%	NA
	Burkholderiaceae	0.0%	-0.2%	-5.4%	0.073	0.0%	0.1%	0.3%	0.035
	Desulfavibrionaceae	-0.1%	0.0%	0.0%	0.101	0.0%	0.0%	0.0%	0.347
	Enterobacteriaceae	-7.8%	-2.6%	-1.9%	0.003	1.3%	4.3%	-0.1%	0.031
	Succinivibrionaceae	0.0%	0.0%	0.0%	NA	0.0%	0.0%	0.0%	NA
Synergistetes	Synergistaceae	0.0%	0.0%	0.0%	NA	0.0%	0.0%	0.0%	NA
Verrucomicrobia	Akkermansiaceae	0.0%	-11.7%	0.0%	0.102	0.0%	-1.7%	0.0%	0.107

Figure 17

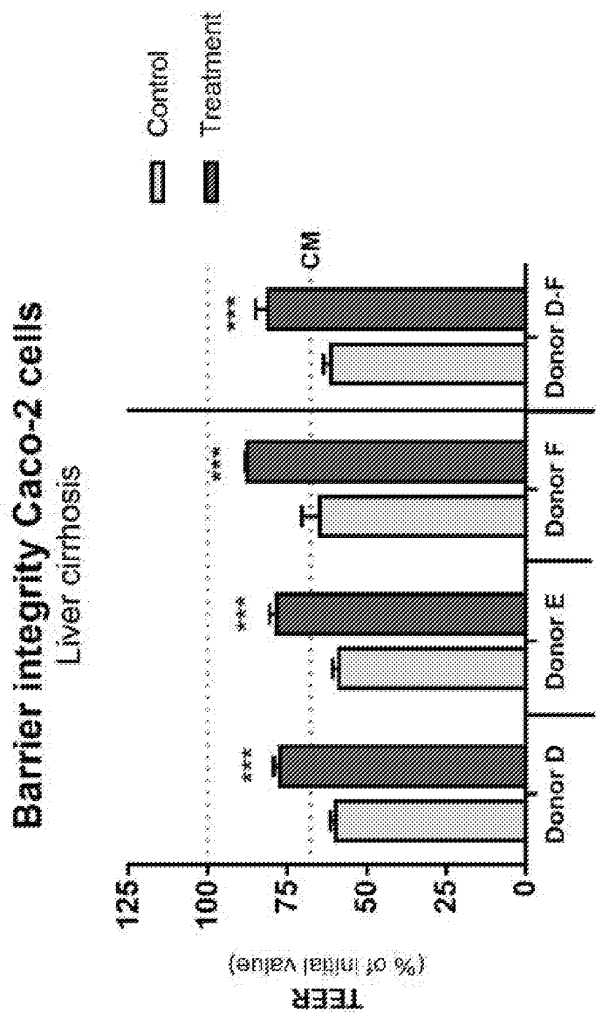


Figure 18

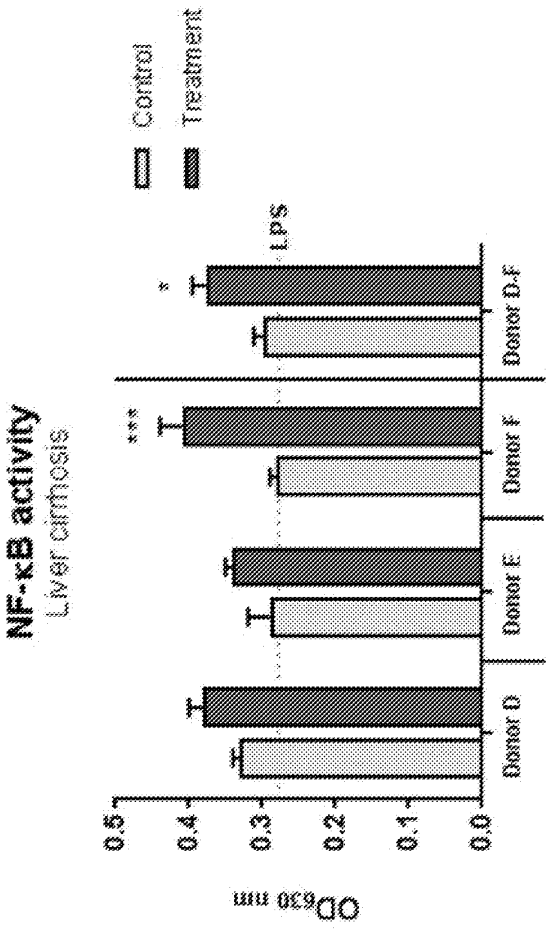


Figure 19

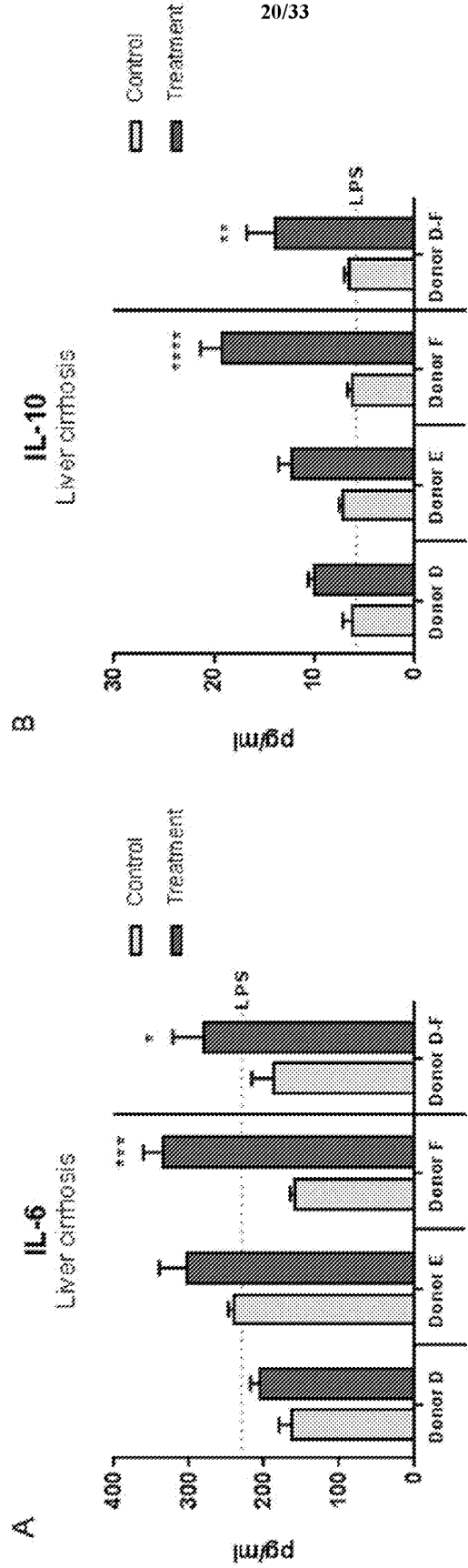


Figure 20

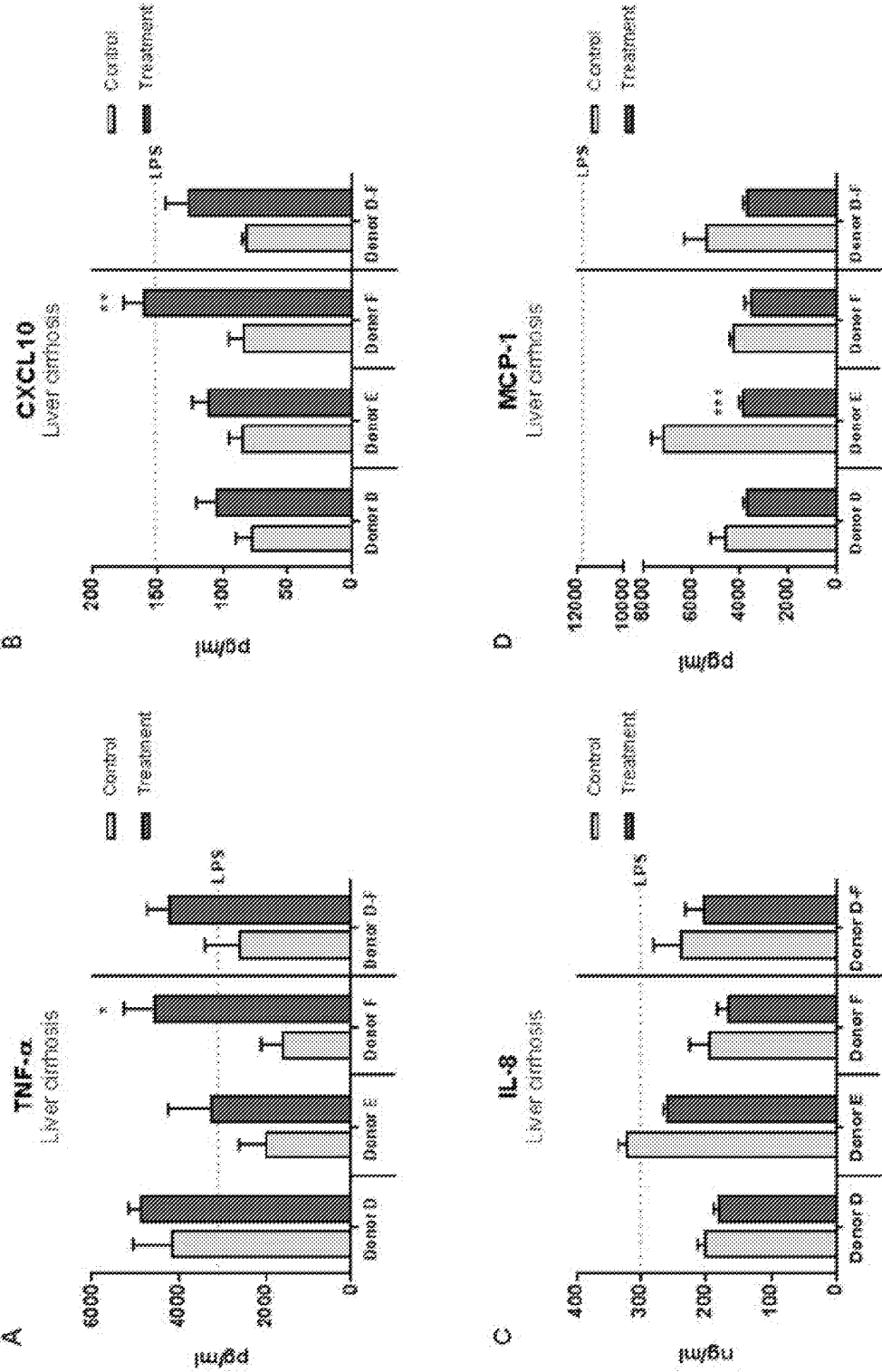


Figure 21

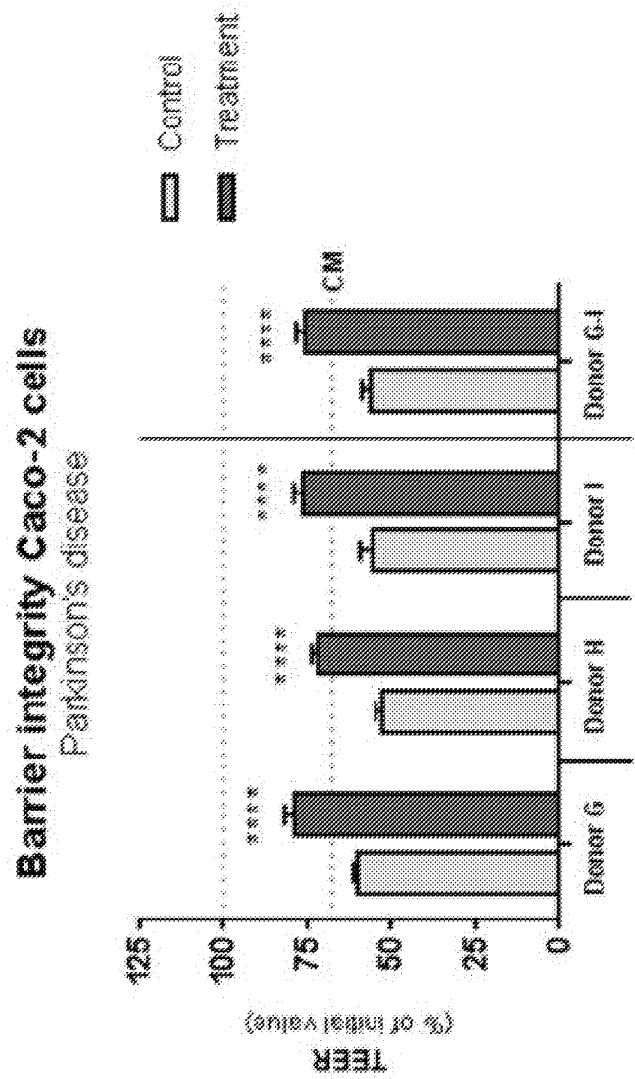


Figure 22

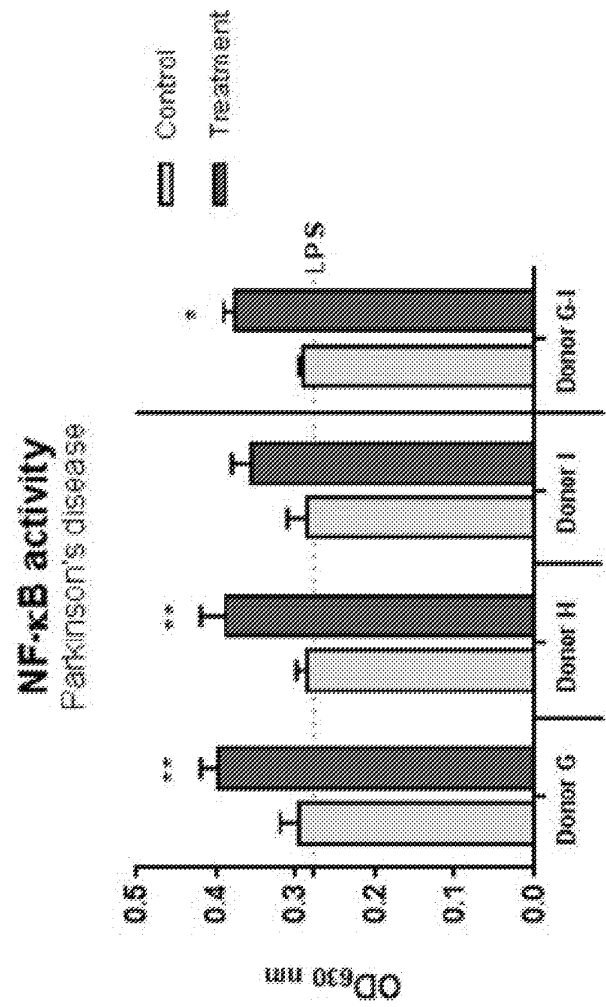


Figure 23

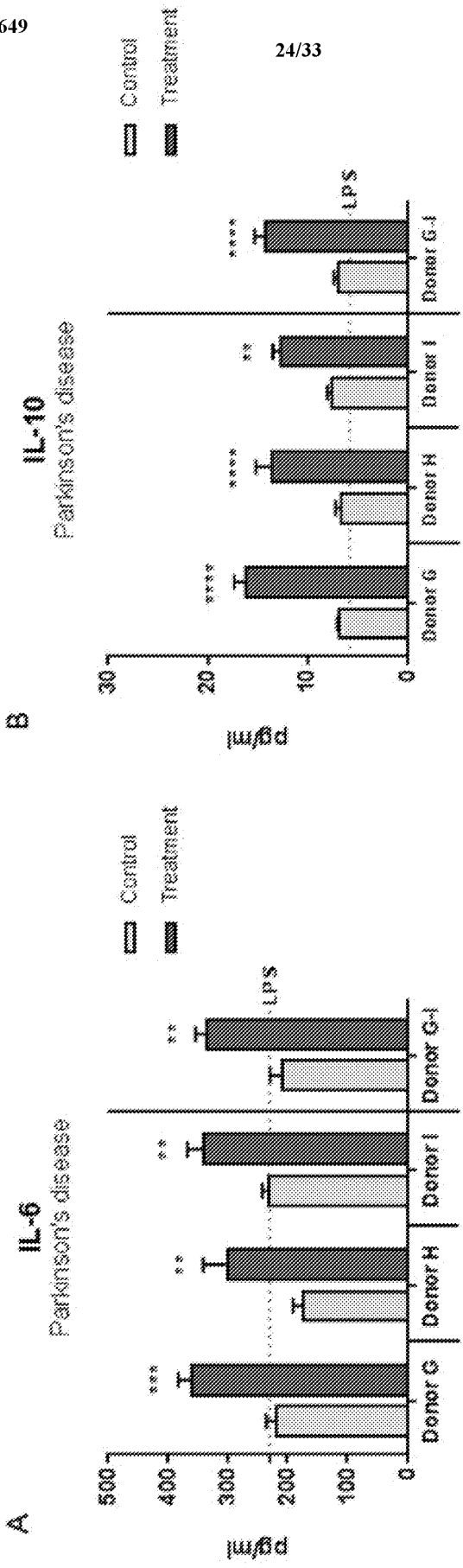


Figure 24

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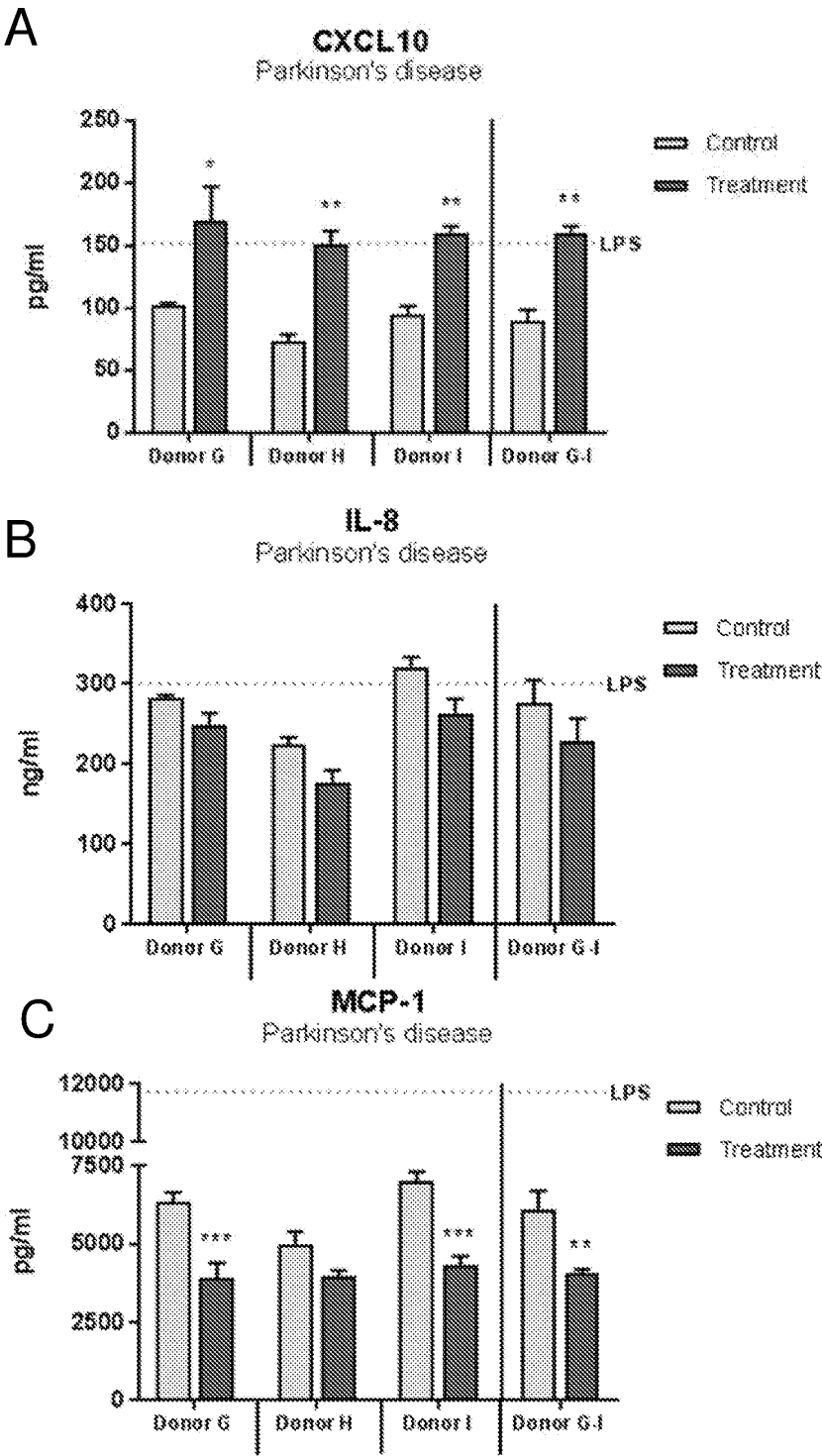


Figure 25

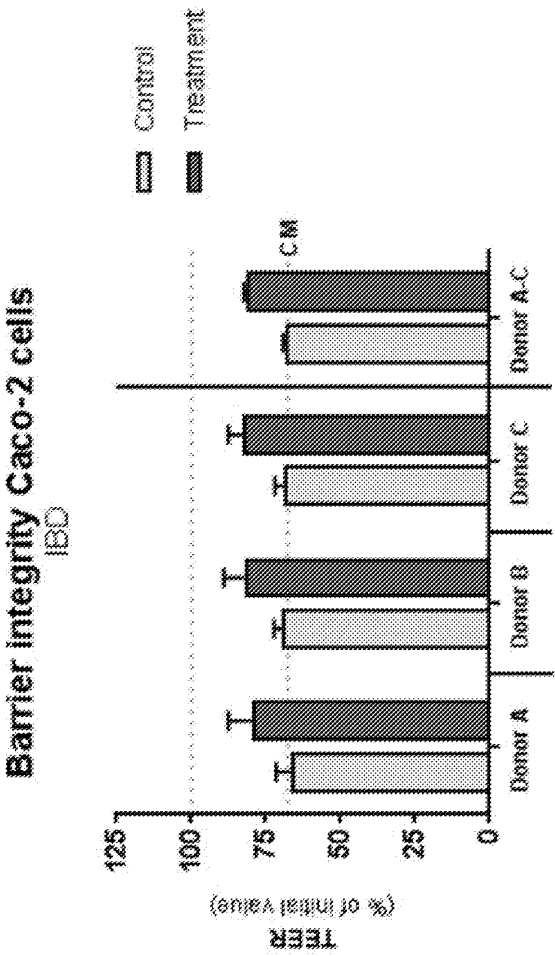


Figure 26

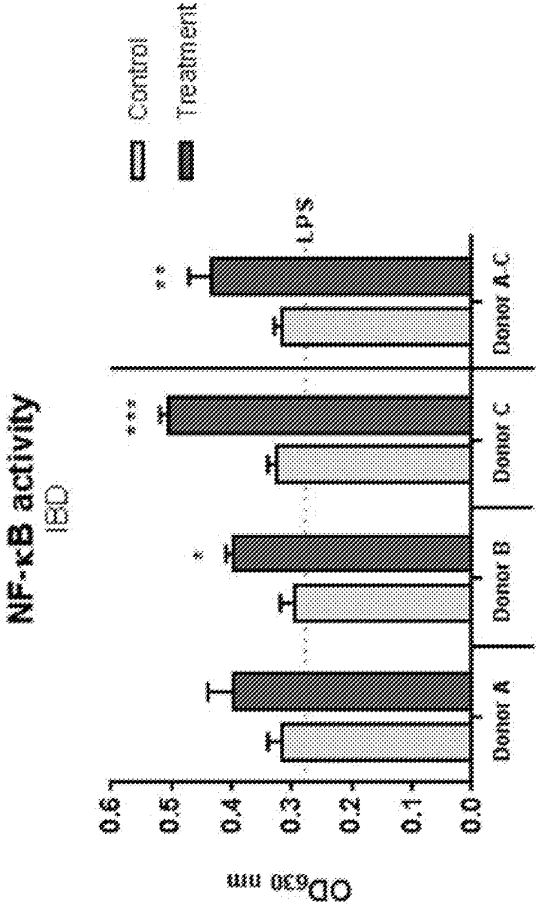


Figure 27

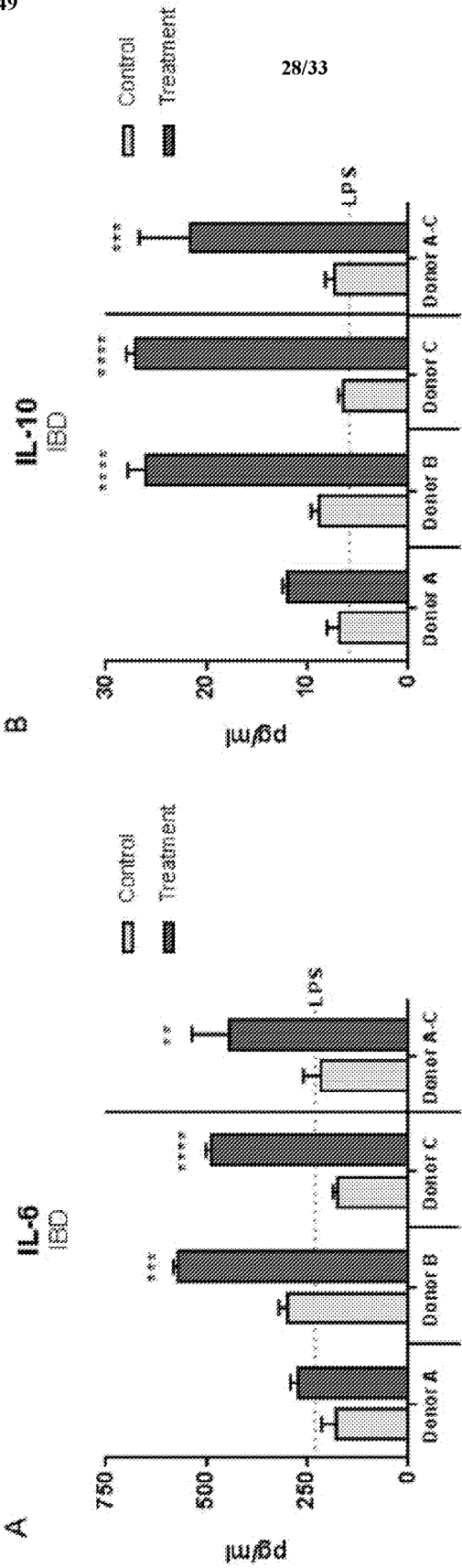


Figure 28

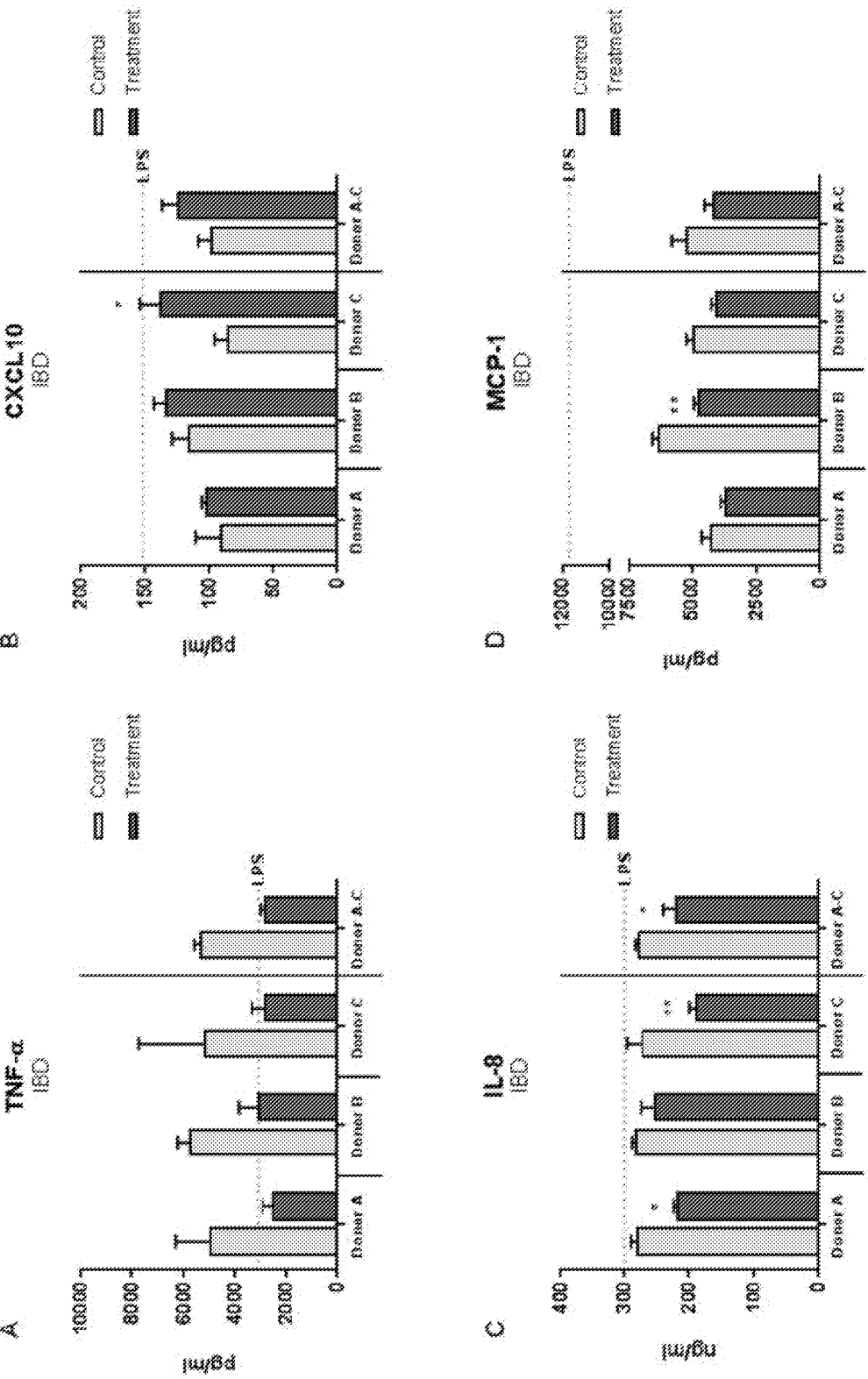


Figure 29

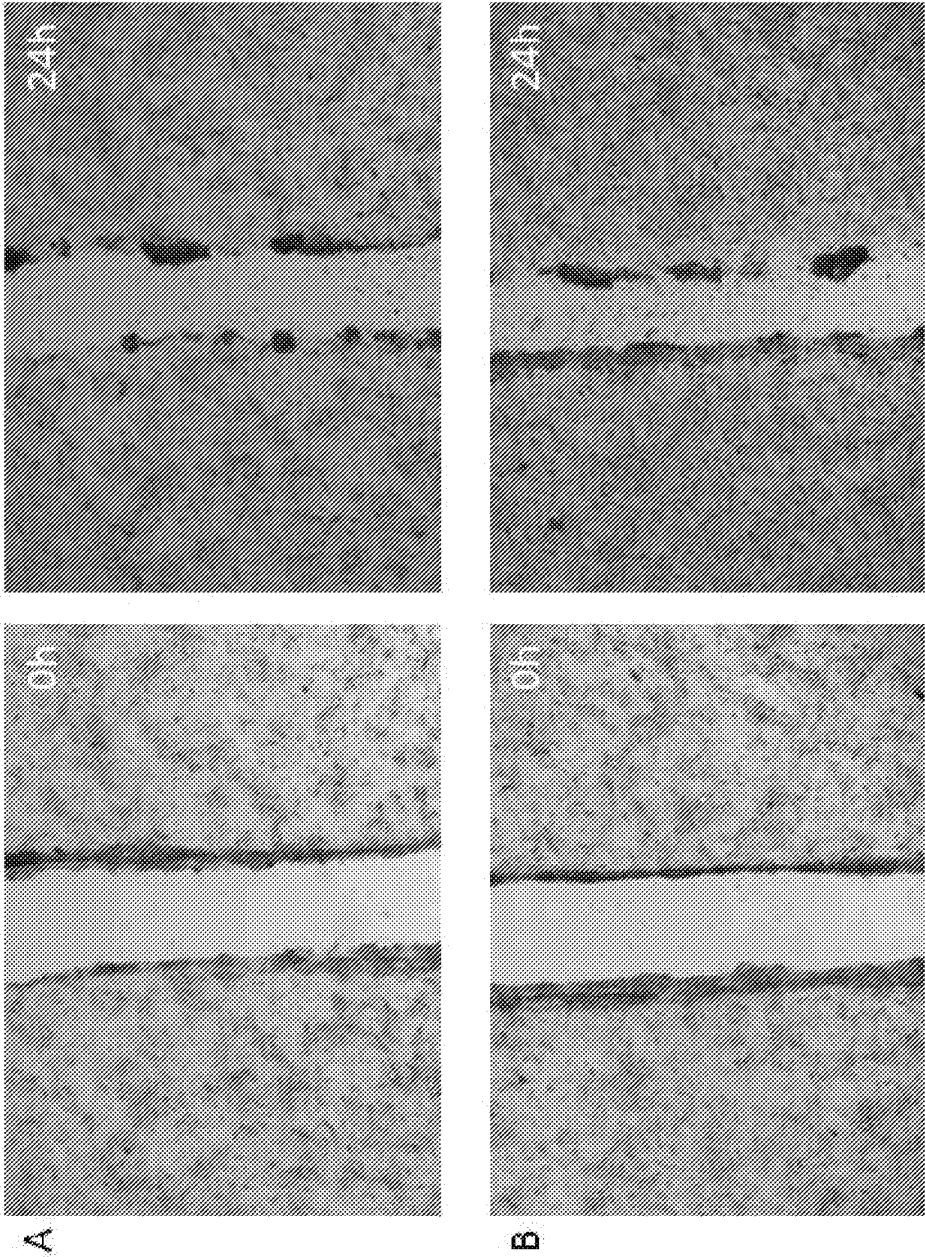


Figure 30

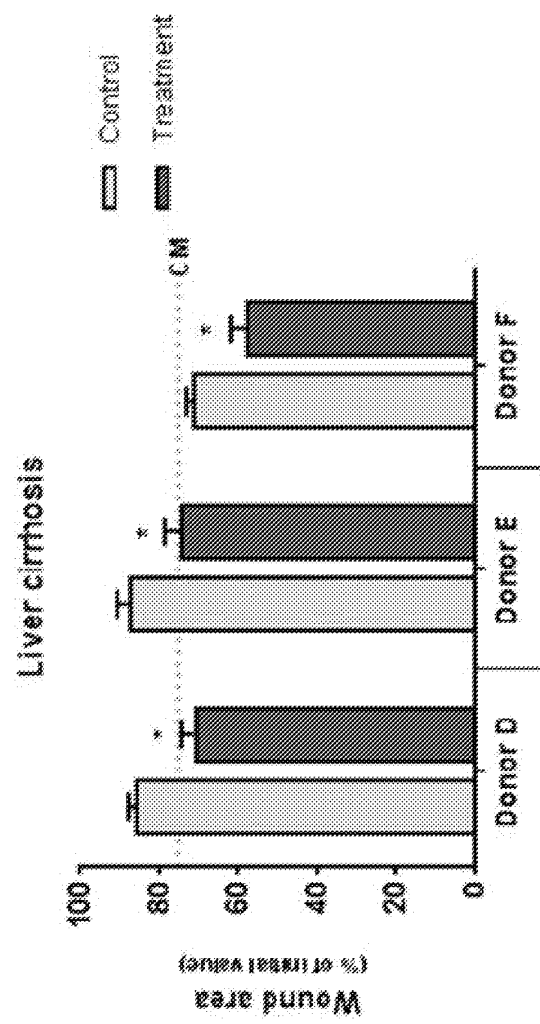


Figure 31

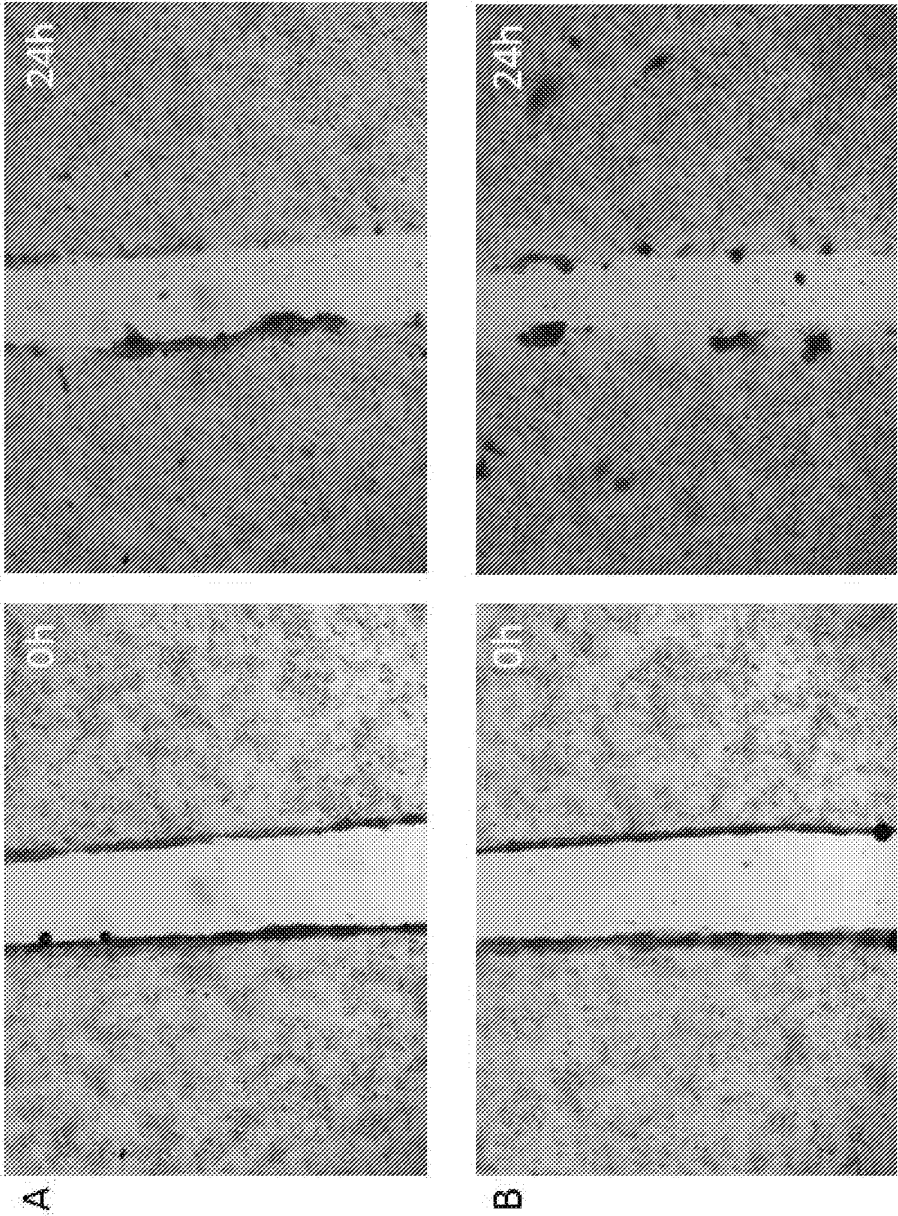


Figure 32

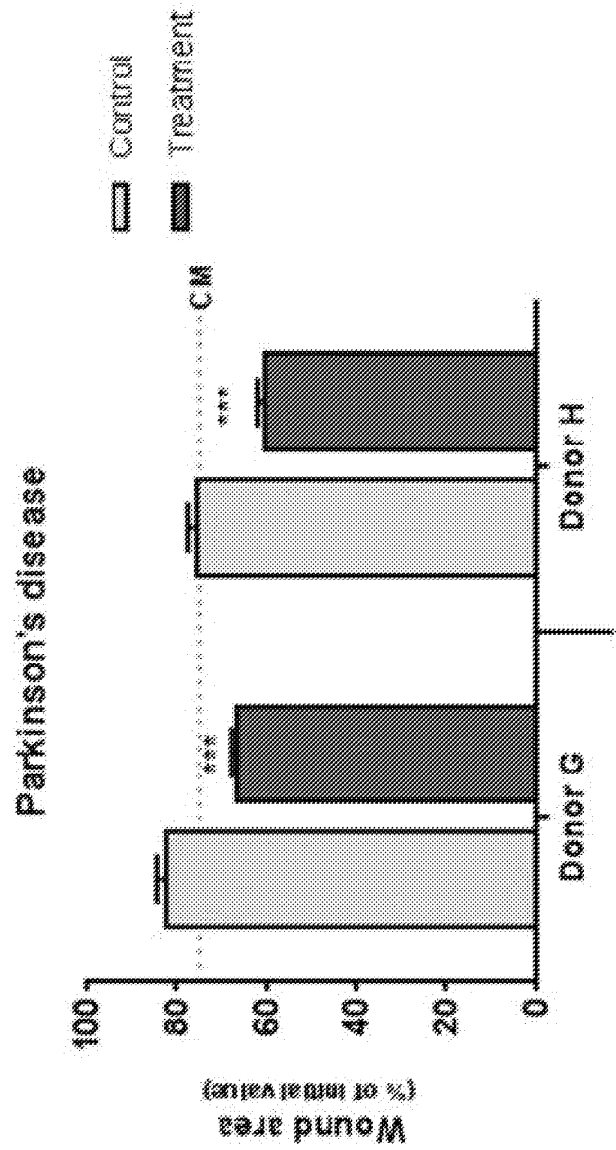


Figure 33