

## SUPPLEMENTARY MATERIALS

**Supplementary Table S1.** The top 10 genera chosen with high frequency in the sPLS-DA models for distinguishing between IBD and HC

IBD	Frequency	HC	Frequency
<i>Actinomyces</i>	100	<i>Prevotella</i>	97
<i>Streptococcus</i>	100	<i>Oscillospiraceae</i> UCG-005	97
<i>Rothia</i>	99	<i>Prevotella_9</i>	95
<i>Lactobacillus</i>	96	<i>Alistipes</i>	94
<i>Levilactobacillus</i>	96	<i>Parabacteroides</i>	93
<i>Leuconostoc</i>	93	<i>Paraprevotella</i>	93
<i>Carnobacterium</i>	93	<i>Tuzzerella</i>	93
<i>Gemella</i>	84	<i>Lachnospiraceae</i> UCG-010	92
<i>Atopobium</i>	83	<i>Butyricimonas</i>	91
<i>Mycobacterium</i>	83	<i>Odoribacter</i>	91

**Supplementary Table S2.** The top 10 genera chosen with high frequency in the sPLS-DA models for distinguishing between CD and UC

CD	Frequency	UC	Frequency
<i>[Eubacterium] xylanophilum</i>	94	<i>Sediminibacterium</i>	100
<i>Anaerosporebacter</i>	94	<i>Simkaniaceae_uncultured</i>	94
<i>[Ruminococcus] torques group</i>	94	<i>Undibacterium</i>	94
<i>Lachnospiraceae</i> FCS020 group	94	<i>Lautropia</i>	94
<i>Oscillospiraceae</i> NK4A214	88	<i>Rhodoferax</i>	94
<i>Dorea</i>	88	<i>Noviherbaspirillum</i>	94
<i>Herbinix</i>	86	<i>Geothrix</i>	94
<i>Coprococcus</i>	80	<i>Lacunisphaera</i>	94
<i>Lachnospiraceae_uncultured</i>	77	<i>Magnetospirillum</i>	92
<i>Anaerostipes</i>	75	<i>Filifactor</i>	91