Exploring the core microbial commonalities of alcoholics and CRC patients’

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Origins of alcohol consumption traced to ape ancestor

Eating fermented fruit off the ground may have paved way for ability to digest ethanol

BYERIN WYMAN FEBRUARY 10, 2013
Is there any missing link?
Study of gut microbiota diversity

Culture independent techniques

Molecular fingerprinting techniques (16S rDNA based)

DGGE/NGS

Culture based techniques

≥50% of the gut bacteria can not be cultivated (Brown et al., 2015)
Methodology used for the study

1. Build molecular profiles for CRC
2. Calculate CRC-metabolite profile similarity
3. Build molecular profiles for metabolites
Analysis based on gut microbiome profiles of both Alcoholics and CRC patients

A

B

Ruminococcus
Ruminococcaceae
Eubacterium
Enterobacteriaceae
Bifidobacterium
Fusobacterium
Faecalibacterium
Streptococcus
Lactobacillales
Lactobacales
Porphyromonadaceae
Bacteroidales
Bacteroides
Actinomyces
Collinsella
Sutterella
Turibacter
Lachnospira
Megamonas
Klebsiella
Helicobacter
Prevotella
Lactobacillus
Lachnospiraceae
Clostridiales

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Analysis based on metabolome profiles of both Alcoholics and CRC patients
Findings …

- Bacteroides sp.
- Helicobacter sp.
- Porphyromonas sp.
- Clostridium sp.
- Klebsiella sp.
- Oscillospira sp.
- Firmicutes/Bacteroidetes
- Bacteroides/Prevotella

- Bifidobacterium sp.
- Prevotella sp.
- Ruminococcus sp.

- IL1-b
- TNF-a
- Tetradecane derivatives
- Tridecane derivatives
- Acetic acid
- Palmitic acid/hexadecanoic acid
- Stearic acid/octadecanoic acid
- Palmitoleic acid
- Linoleic acid
- Arachidonic acid
- Isoleucine
- Glycine
- Alanine
- Valine
- Butyric acid
- Propionic acid

Colon Cancer

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Thank You for listening..