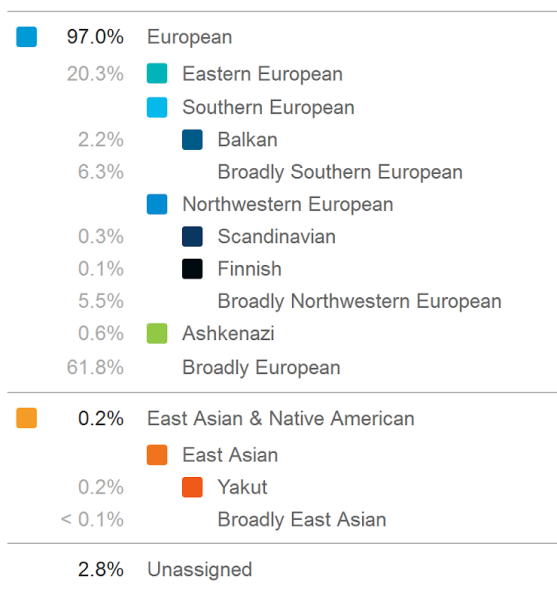


This is a case study of a 35 year old caucasian Male of European ancestry living in the United States, a maternal Haplogroup of H1e1a and a paternal haplogroup of I1*. NOD2 Genotype SNP(rs2066844) CC indicating decreased risk of Crohn's disease. The subject presented with increased bowel movements(3+ times a day) Bristol type stool 5-7, mainly 6. Blood in stool more than 2 but less than 5 times a month. Experiences nausea, abdominal cramps and pain 2 or more days a week with no correlated inducers besides stress. Diet consists mainly of rice, vegetables and meat protein(chicken or pork). Eats out 1-2 times per week. Average kilocalories consumed per day ~2100. Height 5'9"(1.75 m) weight before experiment 167 lbs (76 kg). Exercises 1-2 days per week. Subject also presents with type II bipolar disorder and takes clonazepam as needed to help sleep. Subject has chronic sinusitis with no clear cause and has been tested for allergies and nasal polyps both coming back negative or inconclusive. Subject has been diagnosed with chronic prostatitis and was treated with ciprofloxacin and then bactrim in Dec. 2013(also last time antibiotics were taken) which did not relieve symptoms. Acute symptoms resolved to mild pain during urination.



Subjects Ancestry Analysis from 23andMe

The subject attempted a full body microbial transplant from a healthy donor Male caucasian ~30 year of age using fresh stool samples, skin, mouth and nasal swabs. Bacterial swabs were taken from, skin, mouth, nose, poop and environment before and throughout the experiment using sterile swabs and stored in 150mM NaCl and 0.01% Tween.

The subject self treated with 500 mg Tetracycline and 500 mg Ciprofloxacin, four doses over 2.5 days. Subject also performed a complete body scrub with soap and tetracycline, including a nasal rinse. The subject proceeded to stay in a precleaned hotel room using new untouched sheets. The subject did not touch another person during the course of the transplant without the use of nitrile gloves. The subject stayed in the hotel room for 3 days and 3 nights during which

he ingest 3-6 grams of donor feces enclosed in gelatin pills. He coated himself with 20-50mL saline solution containing swabs from the donors skin. He also inoculated his mouth and nasal passages no less than 6 times with the donors swabs. Patient returned home and attempted to clean and sterilize ~700 sq ft (65 sq m) apartment and inoculate it with donor skin bacterial cultures.

Within one week of the experiment the subject's bowel movements were consistently reduced to 1 time per day. Stomach pains and cramps reduced almost completely within 2 weeks. Subjects weight reduce to an average of ~ 160 lbs(73 kg) 2 months after the experiment. Diet has remained very similar(rice, veg, meat) except subject notices more meat(no craving) and a newfound craving for sugary foods. Prostatitis resolved completely. Symptoms from post nasal drip seem reduced but uncertain, symptoms still flare up at least 2-5 times a month. Bipolar disorder not affected.

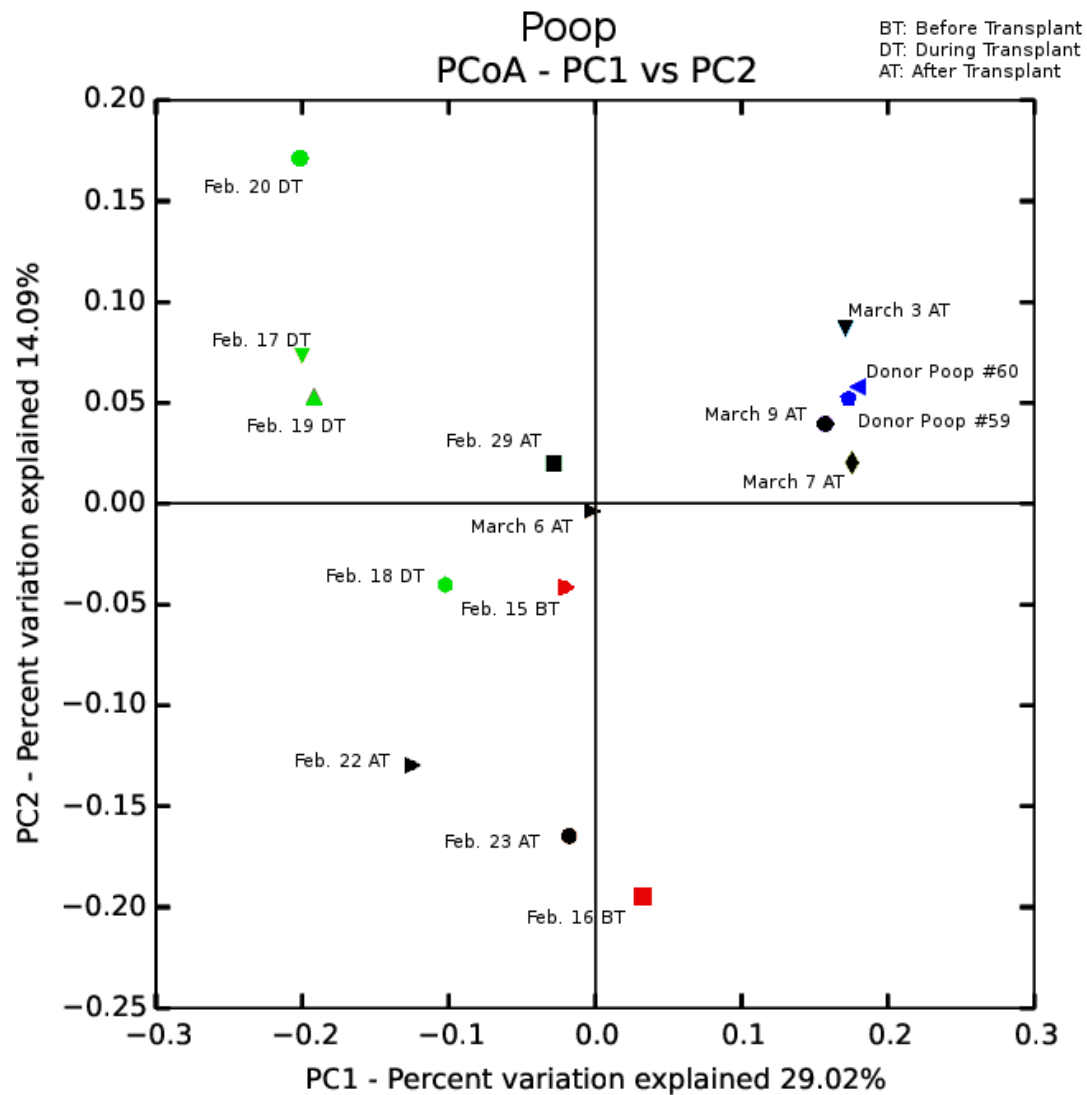
A total of [77 samples were collected before, during and after experiment](#). DNA extraction, 16s amplicon library prep using 515f and 806r and Illumina MiSeq 151x151 sequencing was done by Argonne National Lab in Batavia Illinois. Of the 77 samples 73 had counts.

Data Analysis

QIIME 1.9.1 was used for data analysis

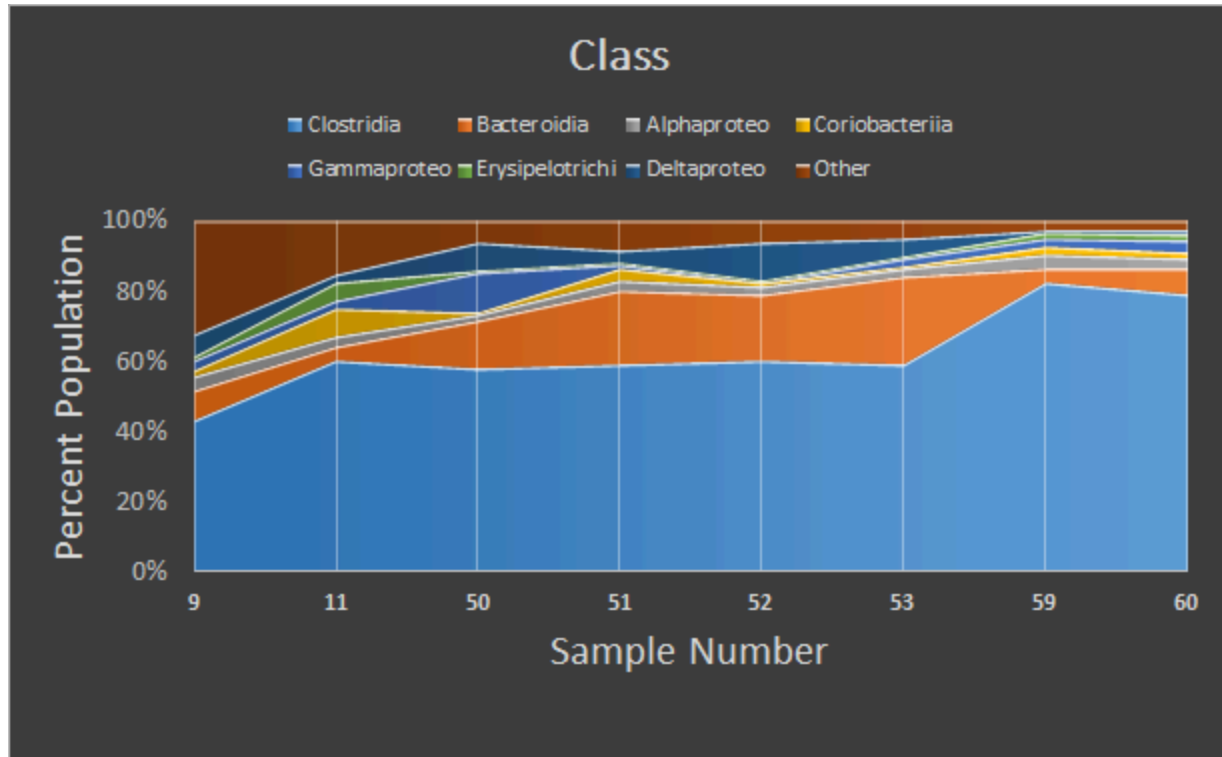
Samples 65(storage buffer) and 66(storage buffer and sterile swab) were control samples and used to filter out contamination using standard QIIME workflow. Afterward sample #55 had below 1000 counts and so was removed from the rest of the study.

Beta diversity was calculated for poop samples using a jack-knifed subset of 5000 sequences. PCoA plots of weighted UniFrac are displayed below.



Less than two weeks after the transplant the microbiota in the gut of the subject became more closely related to the donors gut microbiota than to the subjects gut microbiota before the experiment.

Observing the different types of bacteria in the samples both on the Class and Family levels, the subjects gut had increased diversity before the transplant (#9 and #11) as compared to after the transplant (50, 51, 52, 53) but was consistent with becoming similar to the donor's samples (59, 60). This is shown by a larger portion of the before (#9 and #11) belonging to species "other", which is a number of species that are not a significant percentage of the population.



Family

