

Figure S1 Boxplots of alpha diversity, i.e. Amplicon Sequence Variants (A), Shannon index (B), Faith's PD (C), according to cigarette and opium use status. The Dunn tests were used for Kruskal-Wallis multiple comparisons for alpha-diversity of never users of cigarette nor opium with ever cigarette only smokers, ever opium only users, and ever users of both cigarette and opium. P-values were adjusted using Bonferroni correction.

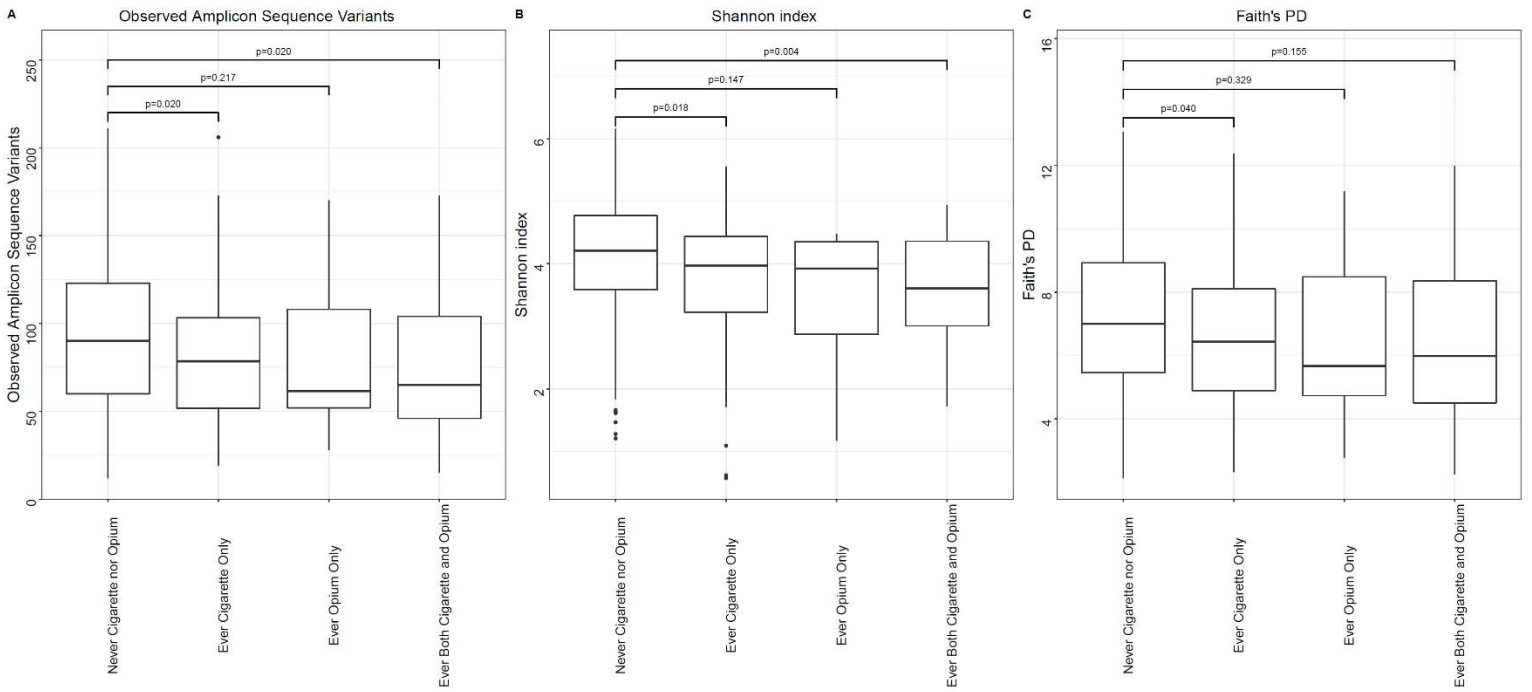


Figure S2 Boxplot of Amplicon Sequence Variants (A), Shannon index (B), Faith's PD (C), according to cigarette smoking and Amplicon Sequence Variants (D), Shannon index (E), Faith's PD (F), according to opium use history. The Dunn tests were used for Kruskal-Wallis multiple comparisons for alpha-diversity with former, current, and never cigarette smoker or opium user. P-values were adjusted using Bonferroni correction. ASVs: Amplicon sequence variants.

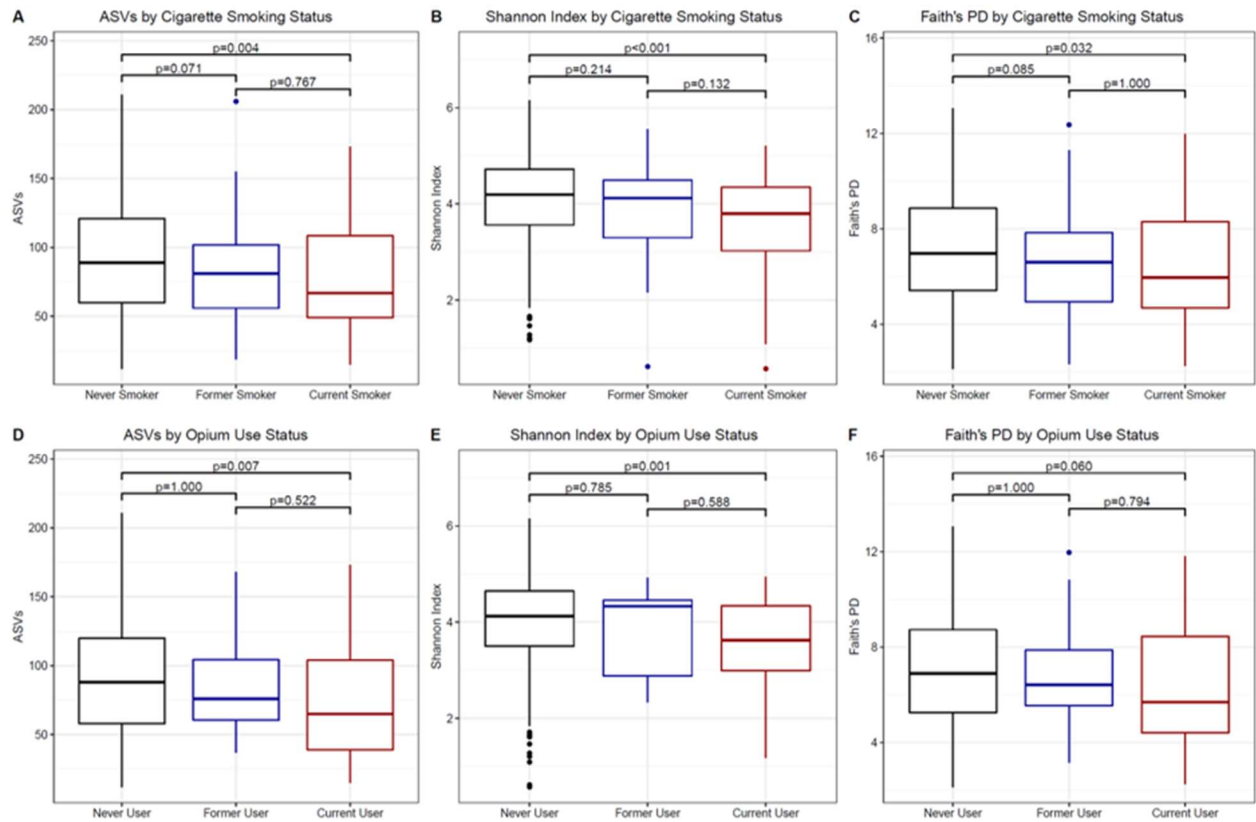


Figure S3 Percent of microbial variability explained by cigarette only, opium only, both cigarette and opium, and other demographic factors (age, BMI, case status, education, gender, alcohol consumption, and residence) using a distance-based coefficient of determination R^2 for beta-diversity estimates from Bray Curtis, weighted Unifrac, unweighted Unifrac distance.

