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Supplemental information

Genomic and functional characterization of a mucosal symbiont involved in early-stage colorectal cancer

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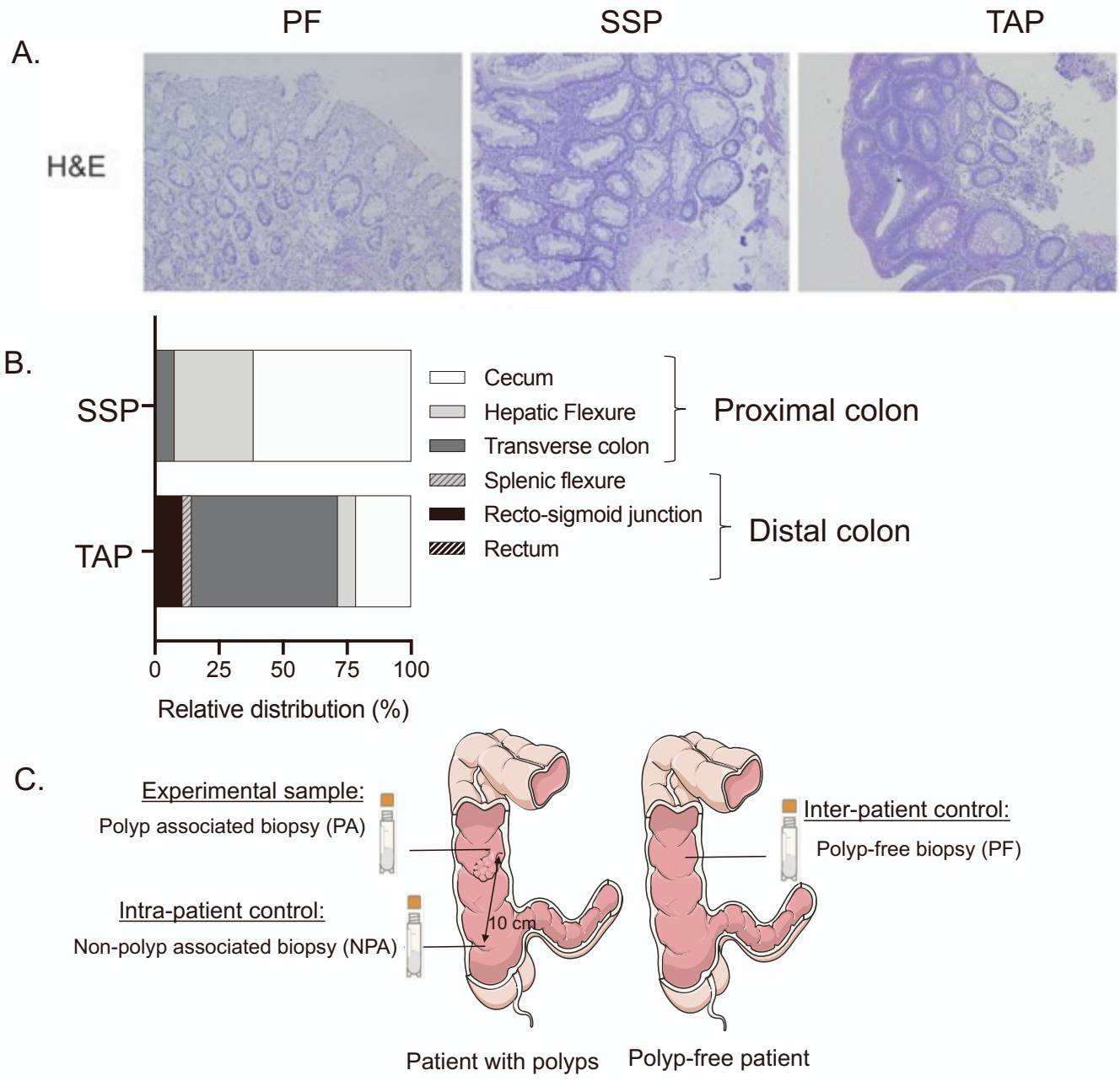
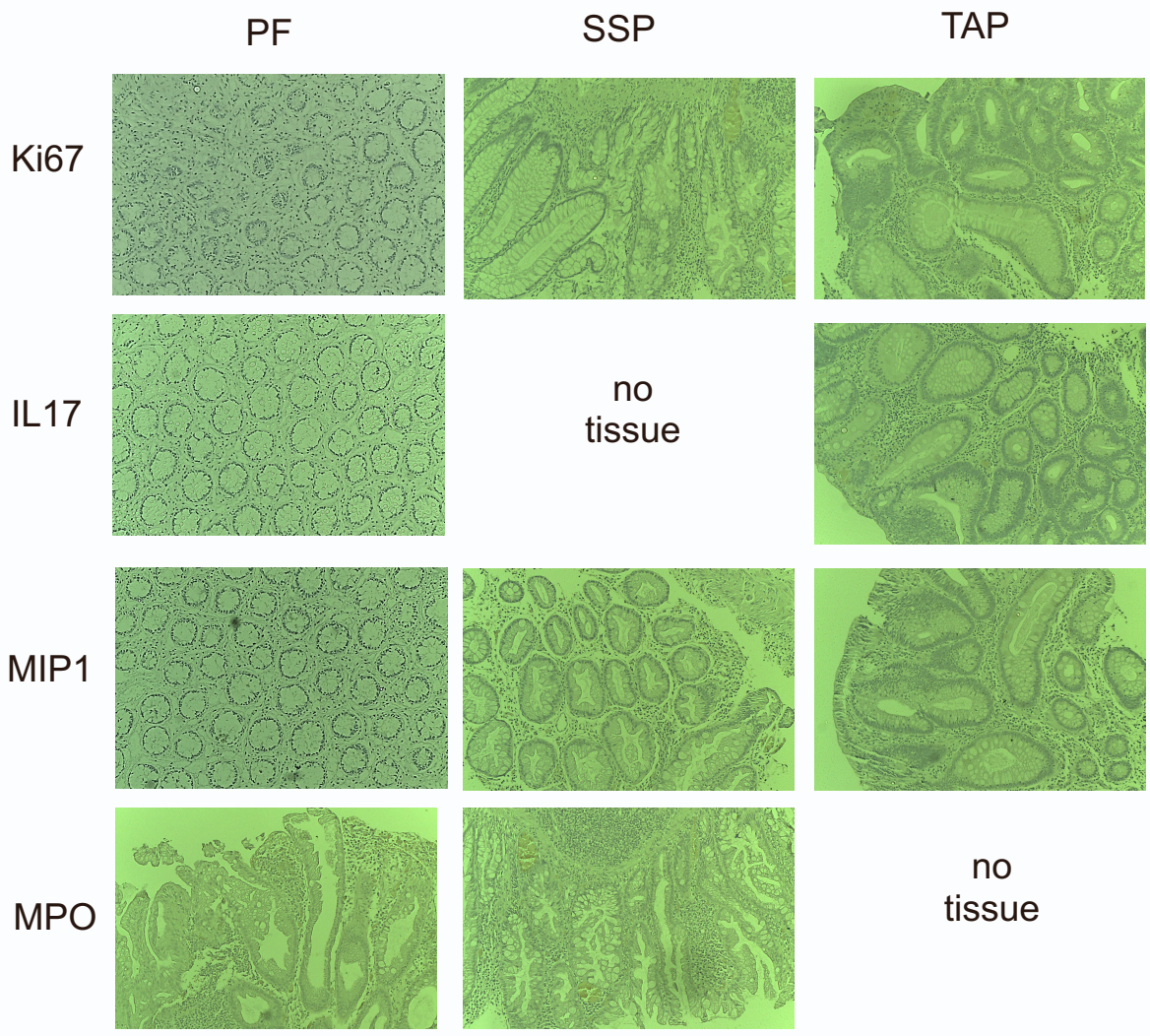
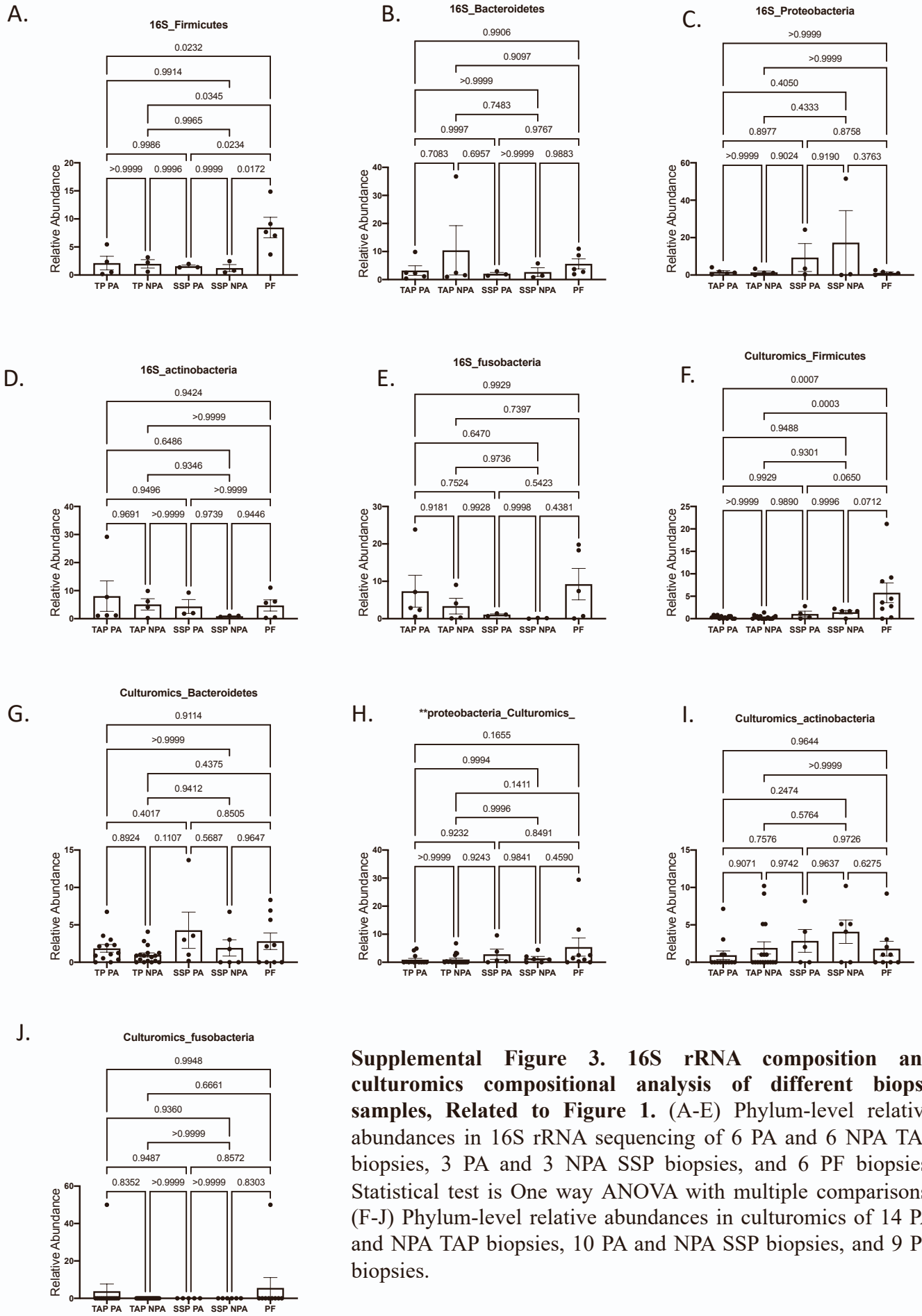


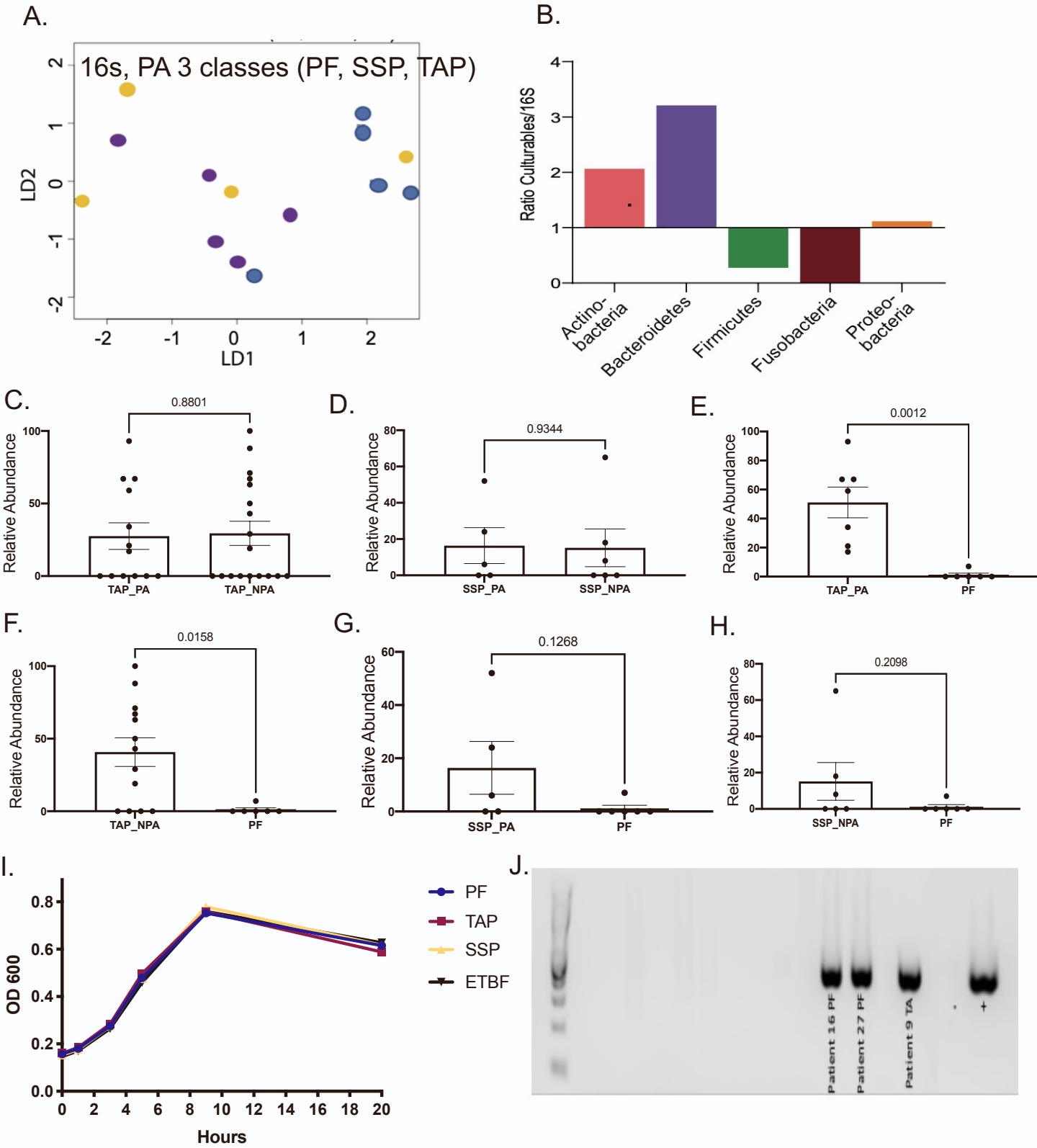
Supplemental Figure 1. Lesions' characterization and sampling of biopsies, related to Table 2 (A) H&E staining of Normal Mucosa, Sessile Serrated Polyp, and Tubular Polyp Biopsies from patients recruited for the study. **(B)** Relative distribution of tubular polyps and sessile serrated polyps in the colon of patients recruited for the study. **(C)** Diagram of biopsies sampling and processing for culturomics.



Supplemental Figure 2, **related to Figure 1** Original slides with isotype controls for hyperproliferation and inflammation markers expression revealed by immunohistochemistry (IHC) in polyp biopsies and PF control mucosal biopsies (10x objective).

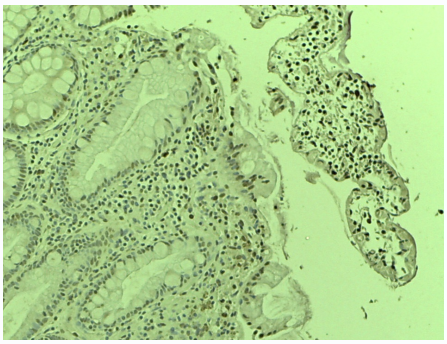


Supplemental Figure 3. 16S rRNA composition and culturomics compositional analysis of different biopsy samples, Related to Figure 1. (A-E) Phylum-level relative abundances in 16S rRNA sequencing of 6 PA and 6 NPA TAP biopsies, 3 PA and 3 NPA SSP biopsies, and 6 PF biopsies. Statistical test is One way ANOVA with multiple comparisons. (F-J) Phylum-level relative abundances in culturomics of 14 PA and NPA TAP biopsies, 10 PA and NPA SSP biopsies, and 9 PF biopsies.



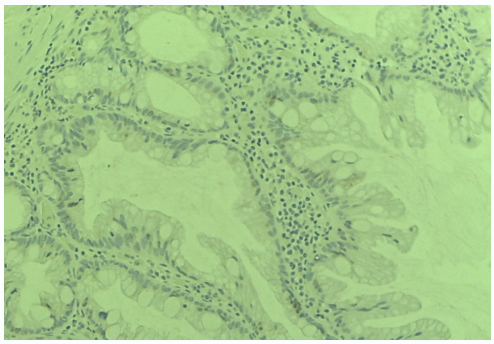
Supplemental Figure 4. 16S rRNA composition and culturomics compositional analysis of different biopsy samples, Related to Figure 1 and 3. (**A**). LDA analysis of Phylum-level abundance in 16S rRNA sequencing of mucosal biopsies in TAP PA, SSP PA, and PF biopsies. (**B**) Ratio of total phyla recovered in culturomics relative to total phyla identified by 16S (**C-H).** Relative abundances of *Bacteroides fragilis* in Culturomics in 14 PA and NPA TAP biopsies, 10 PA and NPA SSP biopsies, and 9 PF biopsies. **(I)** Growth curves of *Bacteroides fragilis* isolates in Blood media. (**J**) *bft* detection by colony PCR with primers specific for *bft* gene.

A.



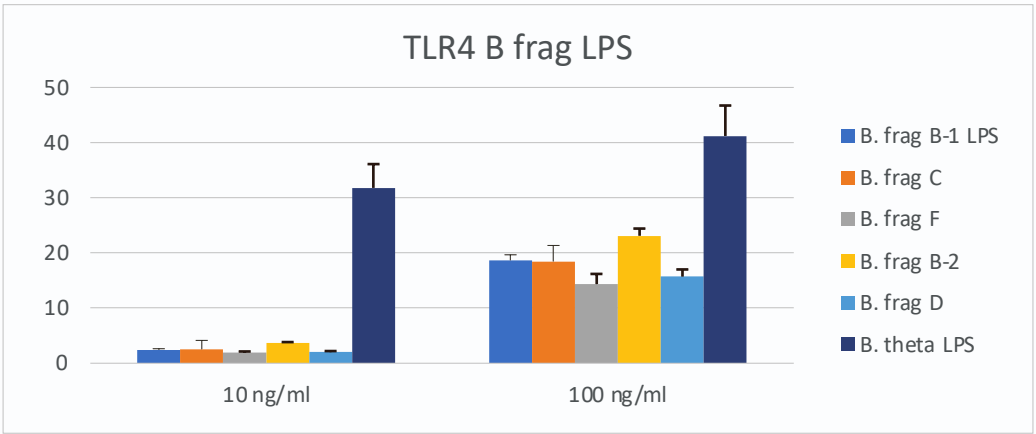
With LPS antibody

B.

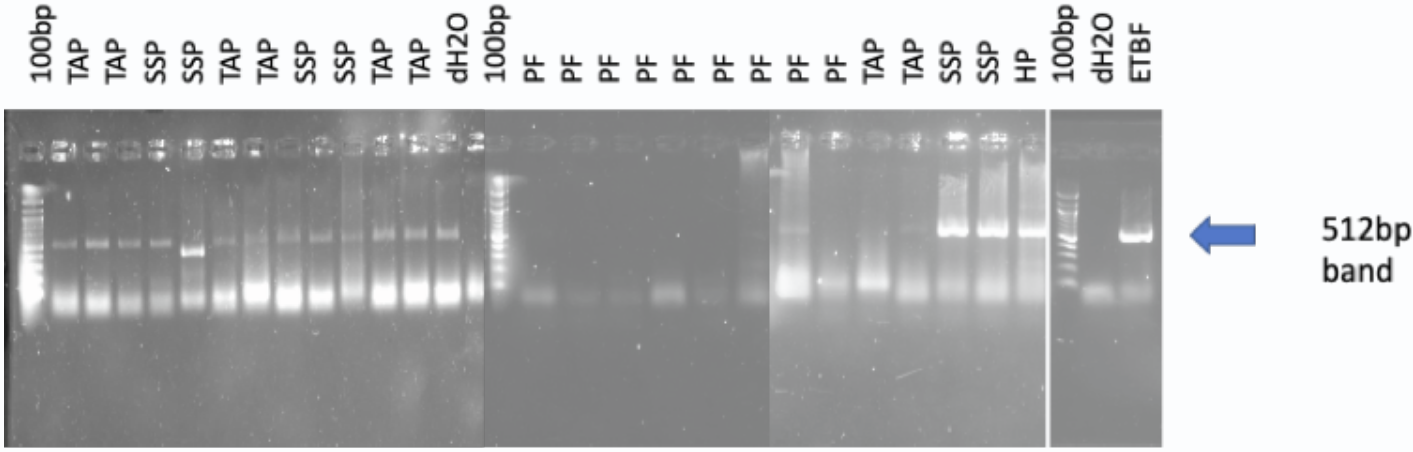


Isotype control

C.



D.



Supplemental Figure 5. *B. fragilis'* LPS pro-inflammatory potential, Related to Figure 4. Original slides with **(A)** LPS antibody and **(B)** isotype controls for LPS revealed by immunohistochemistry (IHC) in polyp biopsies and PF control mucosal biopsies (10x objective). **(C)** Fold change NF-kB stimulation of HEK293 cells transfected with TLR4 and infected with LPS extracted from *B. fragilis* isolates relative to unstimulated control. Results are means ± s.e.m from 2 independent experiments including 5 different *B. fragilis* isolates from 5 different patients**.** *B. theta* LPS represents the positive control LPS extracted from *Bacteroides thetaiotamicron***. (C)** Glycosyltransferase detection by conventional PCR with primers specific for the bacterial gene in host gut biopsy tissue from 7 TAP patients, 6 SSP patients and 9 PF patients.