

Supplementary Figure 1

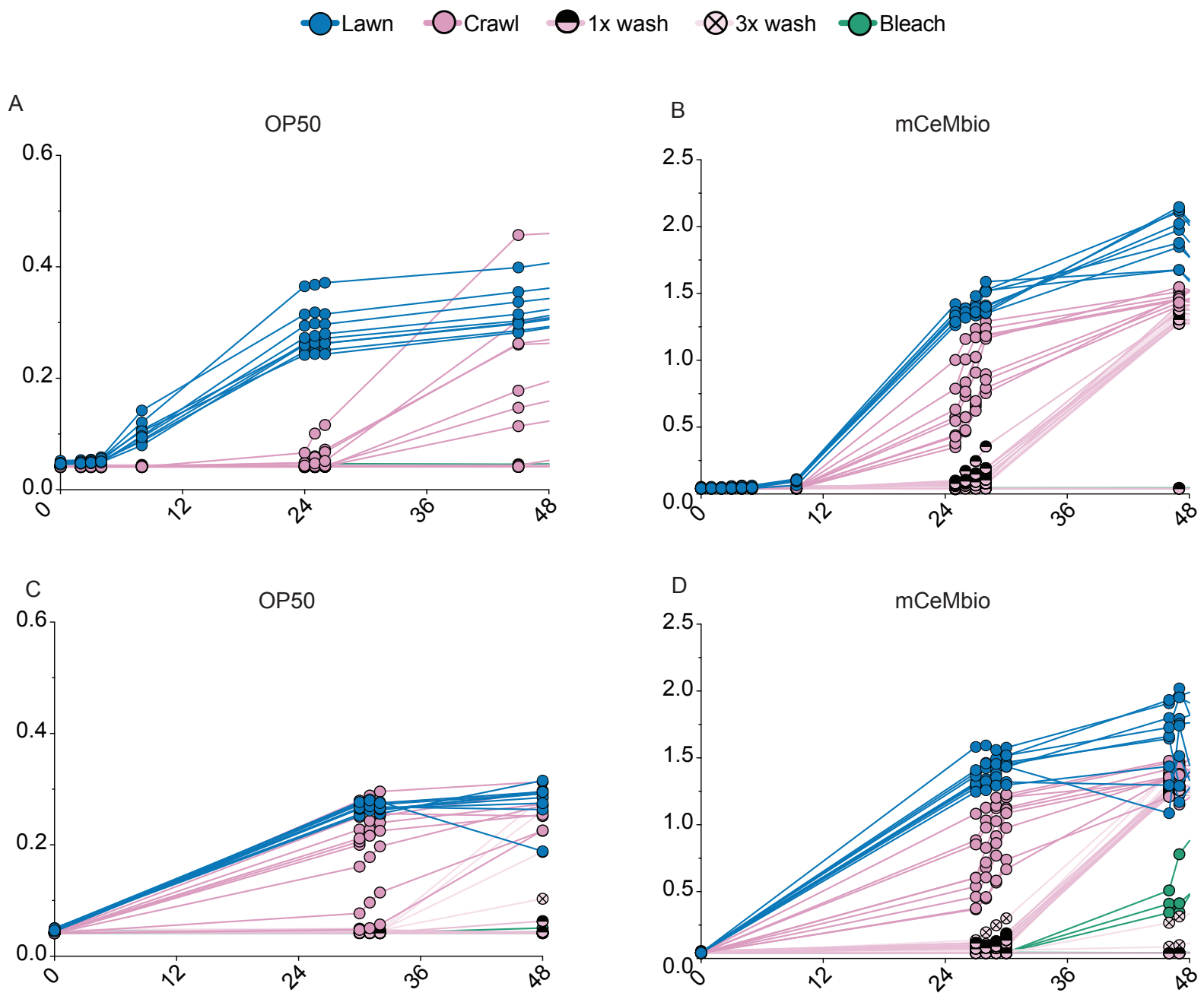


Figure S1: Growth curves of swabbed bacteria reveal mCeMbio, but not OP50 grows after washing.

Raw OD600 of swabbed bacteria from animals reared on OP50 (A,C) and mCeMbio (B,D) during 48 hours of growth. Each curve is the growth from swabs of a single worm. Data, along with experiments in Figure 1 D and F are used to generate Area Under Curve for Figure 1E and 1G.

Supplementary Figure 2

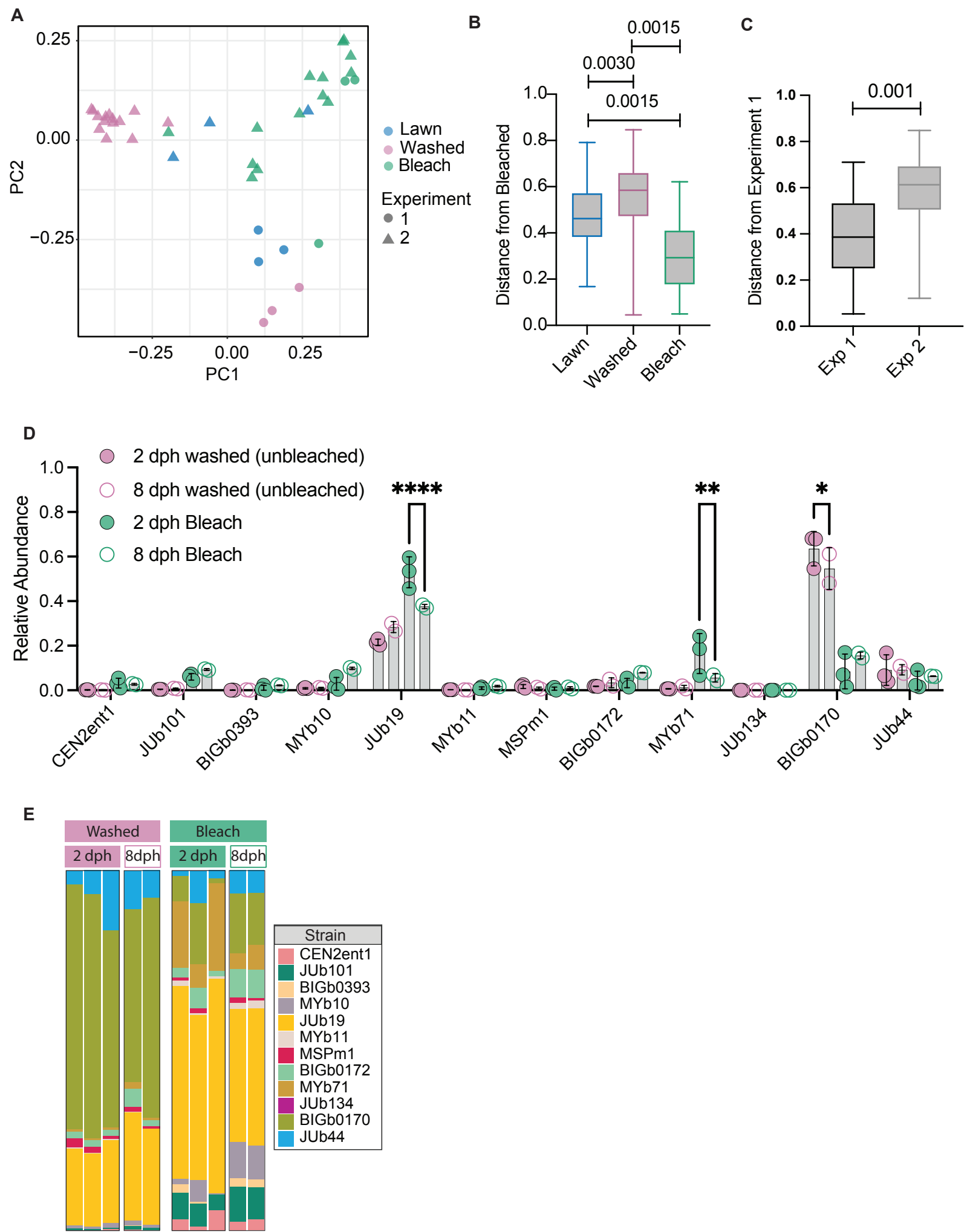


Figure S2: Combined, matched data from both experiments reveals consistent differences between washed and bleached animals. (A) Principal coordinate analysis of Bray-Curtis dissimilarities for matched bleach/washed sets in experiments 1 and 2. B) Bray-Curtis dissimilarities as distance from the bleached group of matched bleach/washed sets in combined experiments 1 and 2 with pairwise PERMANOVA q-values. C) Bray-Curtis dissimilarities as distance from all groups in experiment 1 compared to all groups in experiment 2 with pairwise PERMANOVA q-values. D) Mean proportion of reads for animals that are washed 2 days post hatch (pink), washed 8 days post hatch (pink outline), bleached 2 days post hatch (green), and bleached 8 days post hatch (green outline). Each dot represents one plate of animals. E) Proportion of reads from mCeMbio bacteria in animals that are washed and bleached at 2 days old and 8 days old.

D) 2-way ANOVA – significant difference between bacteria and a significant interaction between the species and the age/treatment ($P < 0.0001$) with Tukey's multiple comparisons test within each bacterial strain. Only significant differences between days within a treatment are shown. * $p < 0.05$, ** $p < 0.01$, **** $p < 0.0001$

Supplementary Figure 3

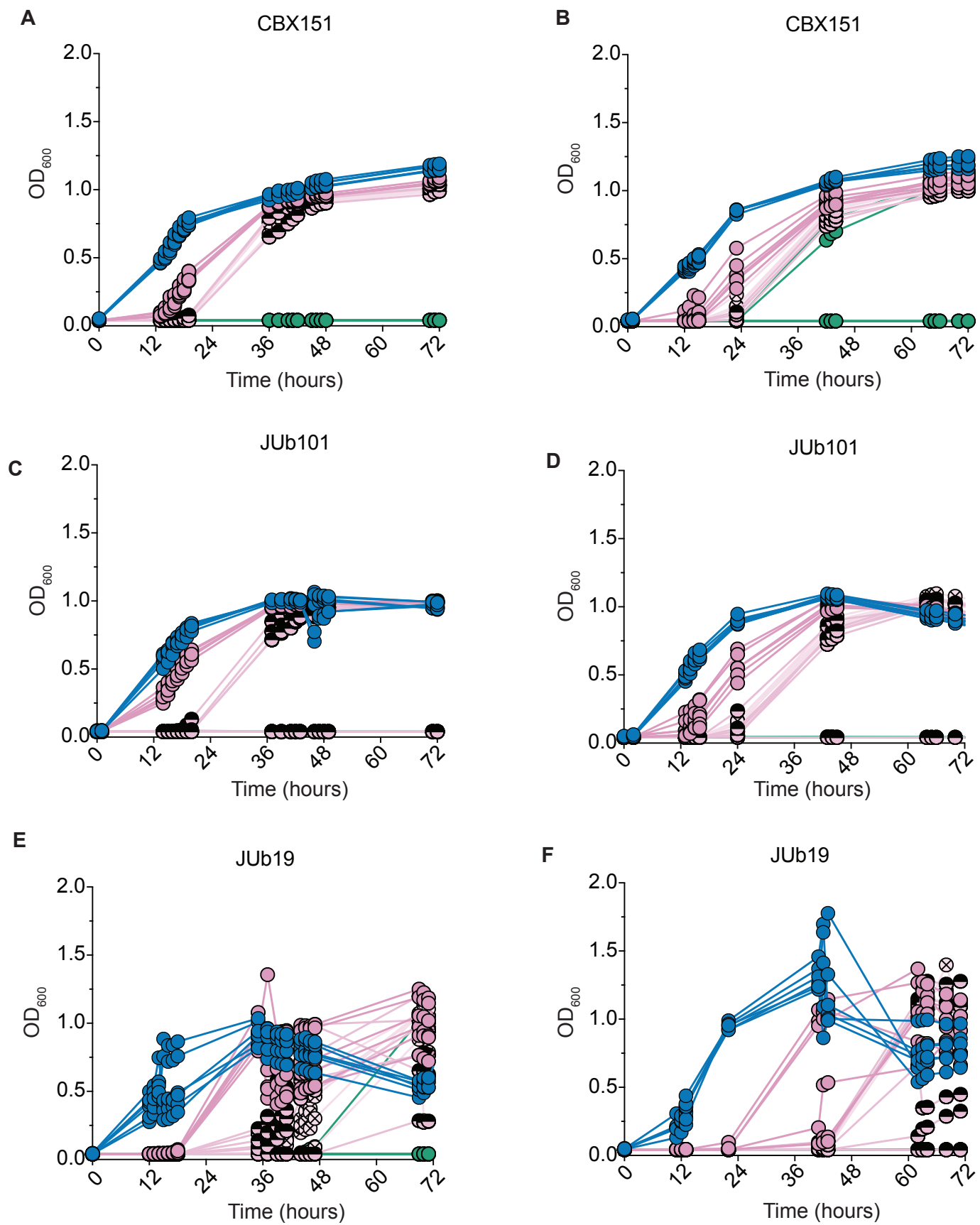


Figure S3: CBX151 and JUb101 remain on *C. elegans* cuticle after washes, while JUb19 does not. Raw OD₆₀₀ of swabbed bacteria from animals reared on CBX151 (A, B), JUb101 (C, D), and JUb19 (E, F) during 72 hours of growth with $n \geq 5$ animals for each condition. Each curve is the growth from a swab of a single worm. These data, together with Figure 3B, D, and F are used to generate Area Under Curves for Figure 3C, E, and G.

Supplementary Figure 4

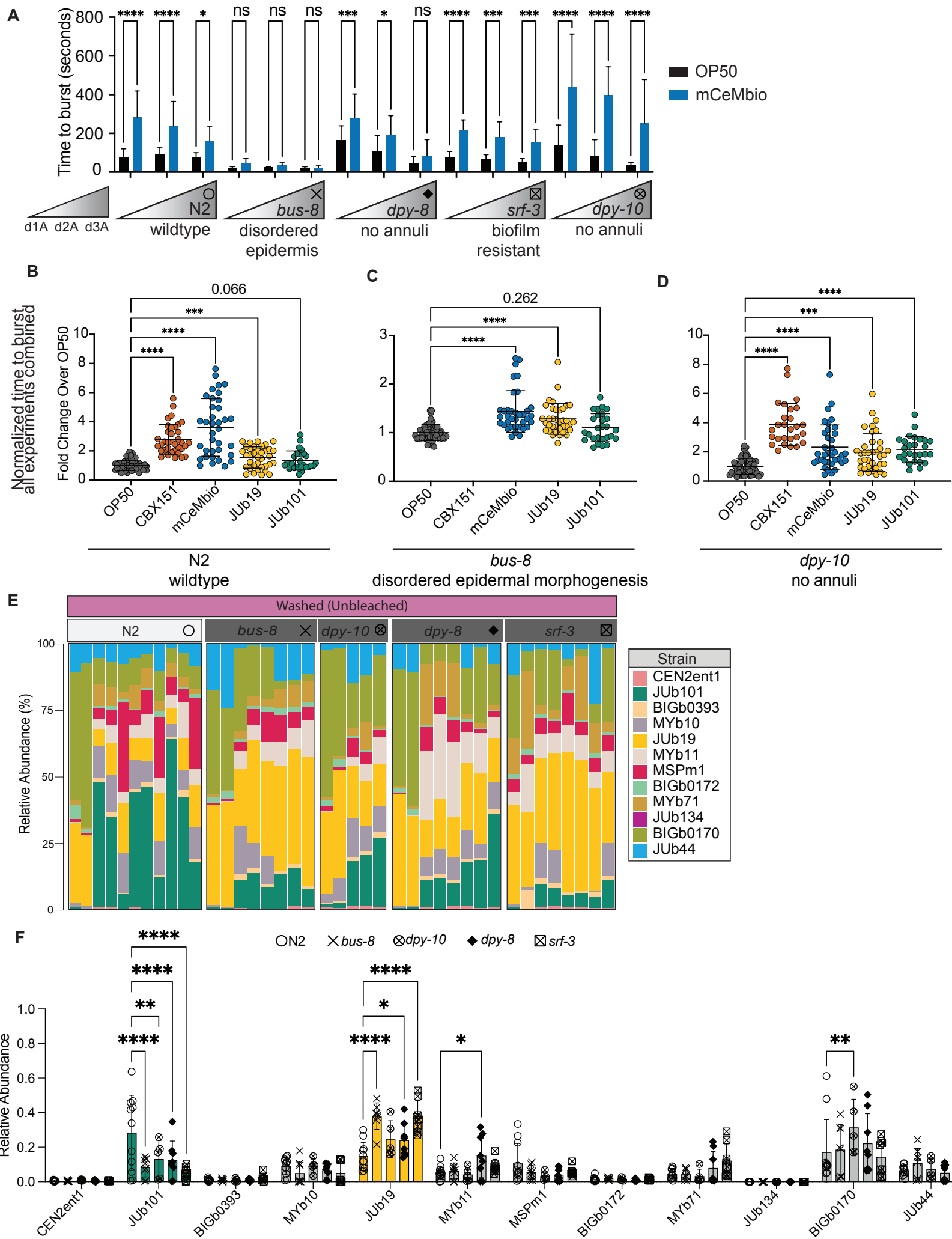


Figure S4: CBX151, mCeMbio and some individual species protect wildtype and mutant *C. elegans* from harsh bleach. A) Average time to burst for N2, *bus-8*, *dpy-8*, *srf-3*, and *dpy-10* animals raised on OP50 or mCeMbio at days 1, 2, and 3 post adulthood. N=3, n=9 animals in experiment. Mean with standard deviation. B-D) Time to burst normalized to OP50 control for N2 (B), *bus-8* (C), and *dpy-10* (D) animals raised on OP50, CBX151, mCeMbio, JUb19, or JUb101, mean with standard deviation. Each dot is an individual animal, normalized to the average of the OP50 controls on the day it was tested. N=3 experiments with n = 9 animals in each experiment. E) . Proportion of reads from mCeMbio bacteria in *bus-8*, *dpy-10*, *dpy-8*, and *srf-3* mutants and paired N2 animals. F) Mean proportion of reads from washed (unbleached) *bus-8*, *dpy-10*, *dpy-8*, and *srf-3* animals compared to reads from washed (unbleached) N2 animals collected at the same time. Each dot represents one plate of animals.

A) Two-Way ANOVA with significance between the age/strain, bacteria, and the interaction between them with Šídák's multiple comparisons test between OP50 and mCeMbio for each age/genotype. B-D) Brown-Forsythe One-Way ANOVA with Dunnett's T3 Multiple Comparisons Test F) 2-way ANOVA – significant difference between bacterial species and a significant interaction between the bacterial species and the genotype ($P < 0.0001$) with Dunnett's multiple comparisons test within each bacterial strain across genotypes. Only significant differences are shown. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, **** $p < 0.0001$.

Supplementary Table 1: *C. elegans* strains used in this study

ID	gene (allele)	Phenotype
N2		Wildtype
CB130	<i>dpy-8 (e130)</i>	no annuli
VC2985	<i>dpy-10(gk3075)</i>	no annuli
CB6627	<i>srf-3(e2689)</i>	resistant to biofilms
CB6177	<i>bus-8(e2883)</i>	disordered epidermal morphogenesis