Location and surface materials drive differences in microbial communities in the confined HI-SEAS IV habitat

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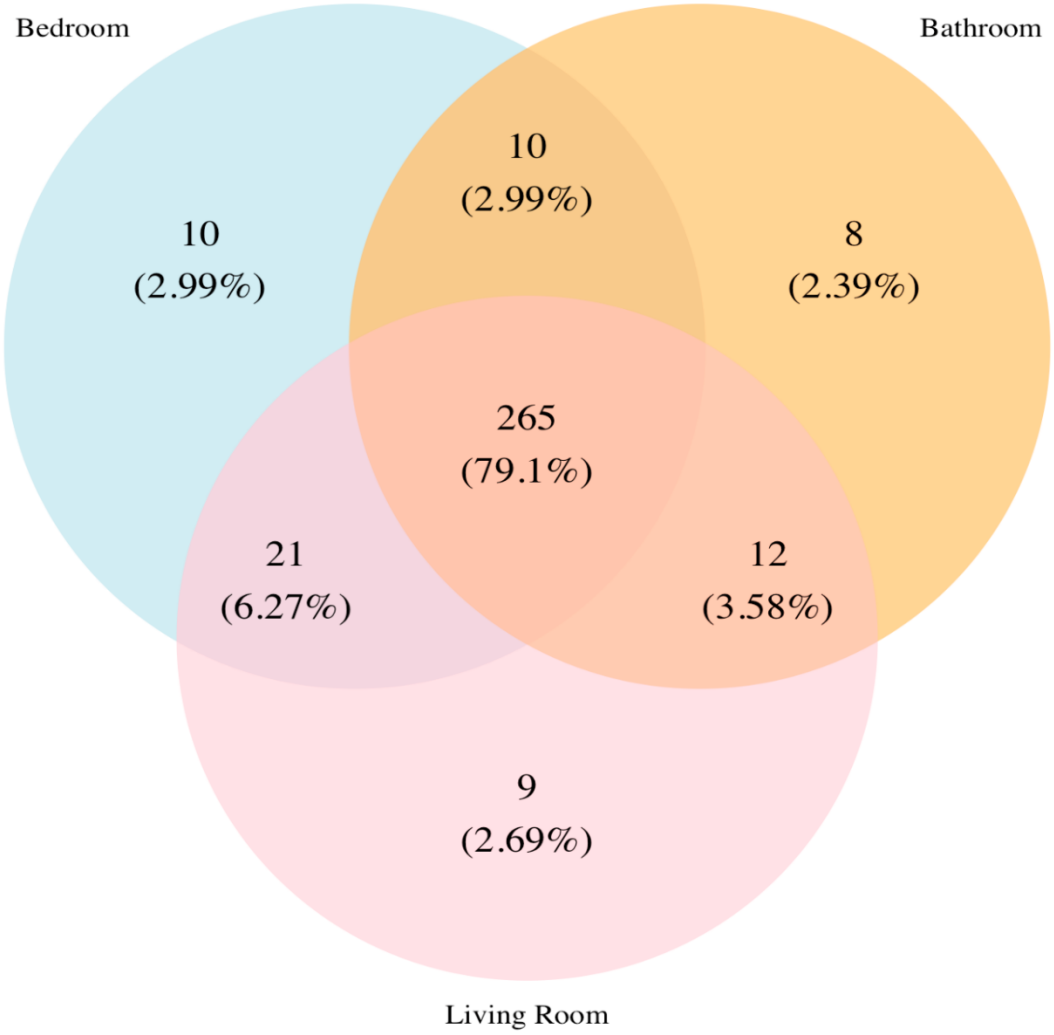
SUPPLEMENTAL FIGURES



Supplemental Figure 1. Number of unique and shared species on plastic surfaces found different dome locations. Venn diagram of 335 species found in the bedroom (blue), bathroom (yellow), and living room (pink) obtained from a QIIME2 taxonomic analysis for plastic surface samples.

Supplemental Table 1. PERMANOVA analyses between surface types and locations with corresponding q values and pseudo-F values (α = 0.05).

	Surface Type (Wood vs Plastic) [q-value, pseudo-F value]	**Location** (Bathroom, Living Room, Bedroom) [q-value, pseudo-F value]	
Jaccard's	0.0012, 17.56	0.0012	Bath-LR: 10.33 Bath-Bed: 5.80 LR-Bed: 2.50
Bray-Curtis	0.0012, 23.16	0.0013	Bath-LR: 19.74 Bath-Bed: 7.63 LR-Bed: 4.68
Unweighted UniFrac	0.0012, 29.29	0.0013	Bath-LR: 11.71 Bath-Bed: 6.62 LR-Bed: 2.56
Weighted UniFrac	0.0015, 30.82	0.0012	Bath-LR: 27.42 Bath-Bed: 11.87 LR-Bed: 4.91

Supplemental Table 2. Unique and shared genera in different locations around the habitat.

Location	Genus
Bedroom	*Thermaerobacter, Salinisphaera, Sphingobacteriaceae; Dechloromonas, Eubacterium (siraerum)*
Bathroom	*Legionella, 1174-901-12, env.OPS_17, Acidiphilium*
Living Room	*WPS-2, Rhodopseudomonas, Bdellovibrio, MB-A2-108*
Bedroom and Bathroom	*Pseudolabrys, W5053, Actinophytocola, Dolosigranulum, Moraxella, uncultured Carnobacteriaceae, Xanthobacter, Variovorax*
Bedroom and Living Room	*Methanobrevibacter, Eneterobacterales, Sphingopyxis, Blastomonas, Herbinix, Serratia, Carnobacterium, Dyadobacter, Proteiniphilum, Exiguobacterium, Eubacterium eligens, JG30-KF-CM45, Verticella, Ignavigranum, Aeromicrobium, Brumimicrobium*
Living Room and Bathroom	*Saccharopolyspora, Terrimicrobium, Undibacterium, Bryocella, Candidatus Xiphinematobacter, Tsukamurella*

Supplemental Table 3. Significant differentially abundant genera on plastic surfaces in different locations around the HI-SEAS IV habitat ($p < 0.01$).

Change in bacterial abundance	Living room compared to bathroom	Bedroom compared to bathroom	Living room compared to bedroom
Decrease	*Bifidobacterium* *Subdoligranulum* *Bacteroides* *Parvimonas* *Anaerococcus* *Ezakiella* *Dialister* *Finegoldia* *Fastidiosipila* *Agathobacter* *Atopobium* *Prevotella* *Varibaculum* *Peptoniphilus* *Fenollaria* *Gardnerella* *Lactobacillus* *Megasphaera* *Coriobacteriales (DNF00809)* *Ralstonia* *Altererythrobacter* *Delftia* *Corynebacterium* *Porphyromonas*	*Subdoligranulum* *Bifidobacterium* *Ezakiella* *Finegoldia* *Anaerococcus* *Varibaculum* *Lactobacillus* *Peptoniphilus* *Fenollaria* *Prevotella* *Ralstonia* *Corynebacterium*	*Megasphaera* *Dialister* *Atopobium* *Coriobacteriales (DNF00809)* *Gardnerella* *Fastidiosipila* *Prevotella* *Anaerococcus* *Peptoniphilus*
Increase	*Curtobacterium* *Methylophilus* *Chryseobacterium* *Ochrobactrum* *Novosphingobium* *Neisseria* *Granulicatella* *Roseomonas* *Rothia* *Acinetobacter* *Abiotrophia* *Lactococcus* *Haemophilus* *Stenotrophomonas* *Fusobacterium* *Rhizobium* *Gemella* *Streptococcus* *Actinobacillus* *Paracoccus* *Alloprevotella* *Actinomyces* *Aeromonas* *Kocuria* *Cutibacterium*	*Methylophilus* *Ochrobactrum* *Acinetobacter* *Nobosphingosbium* *Paracoccus* *Neisseria* *Granulicatella* *Fusobacterium* *Chryseobacterium* *Lactococcus* *Haemophilus* *Abiotrophia* *Rothia* *Streptococcus* *Aeromonas* *Gemella* *Micrococcus*	*Rhizobium* *Chryseobacterium* *Streptococcus*

Supplemental Table 4. Significant differentially abundant genera on plastic surfaces in the living room and bedroom compared to the bathroom.

Change in bacterial abundance	Genus
Increase	*Subdoligranulum, Bifidobacterium, Ezakiella, Finegoldia, Anaerococcus, Varibaculum, Lactobacillus, Peptoniphilus, Fenollaria, Prevotella, Ralstonia, Corynebacterium*
Decrease	*Methylophilus, Ochrobactrum, Acinetobacter, Nobosphingosbium, Paracoccus, Neisseria, Granulicatella, Fusobacterium, Chryseobacterium, Lactococcus, Haemophilus, Abiotrophia, Rothia, Streptococcus, Aeromonas, Gemella*