

# **Longitudinal multi-omics analysis of host microbiome architecture and immune responses during short-term spaceflight**

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**Supplementary Figure 1:** Top 10 bacterial genera identified by site by GTDB in metagenomic sequencing. A) Raw alignment data. B) Decontaminated reads.

**Supplementary Figure 2:** Top 10 bacterial genera identified by site by GTDB in metatranscriptomic sequencing. A) Raw alignment data. B) Decontaminated reads.

**Supplementary Figure 3:** Top 10 viral genera identified by site by GenBank alignment in metagenomic sequencing. A) Raw alignment data. B) Decontaminated reads.

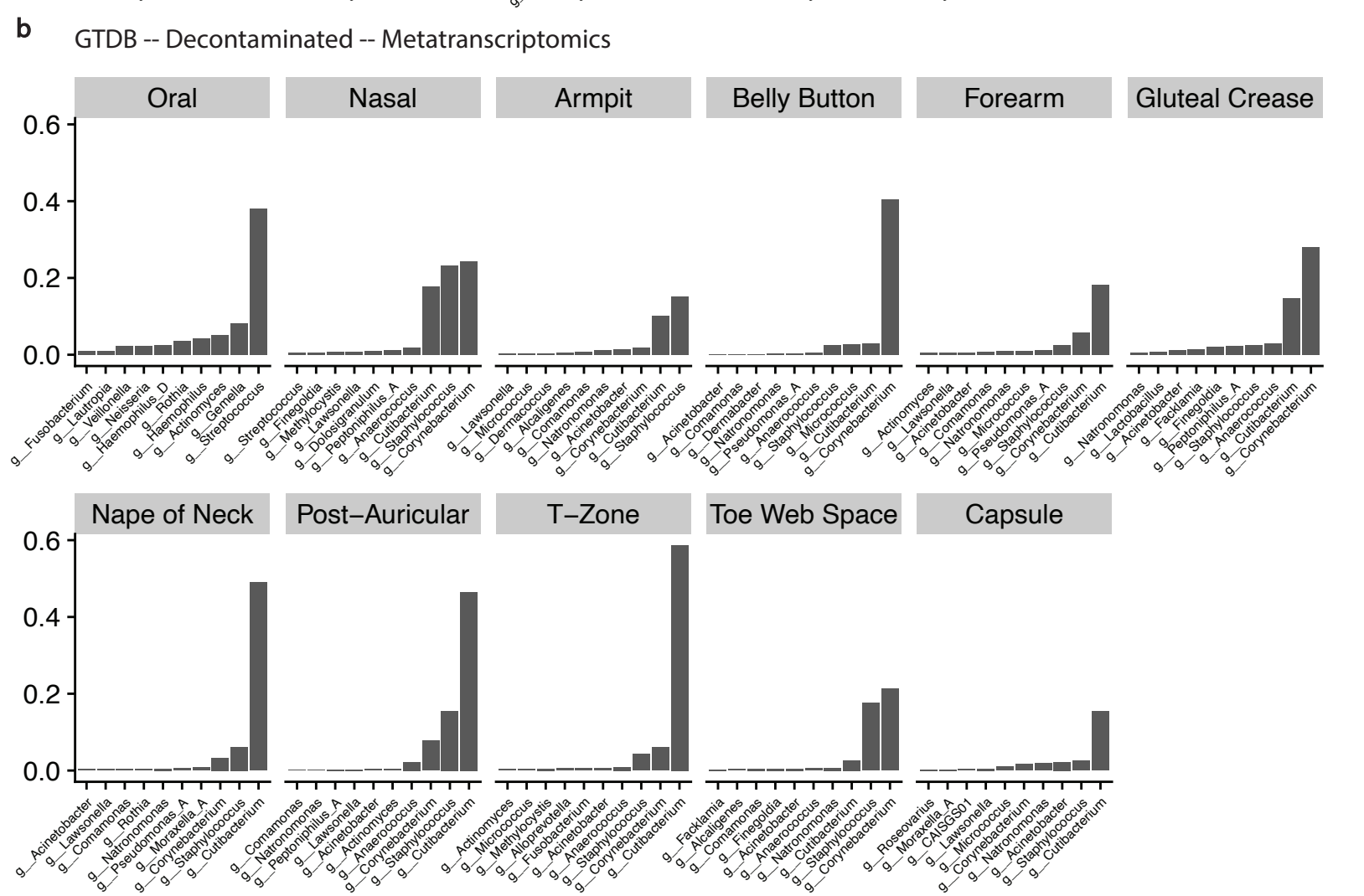
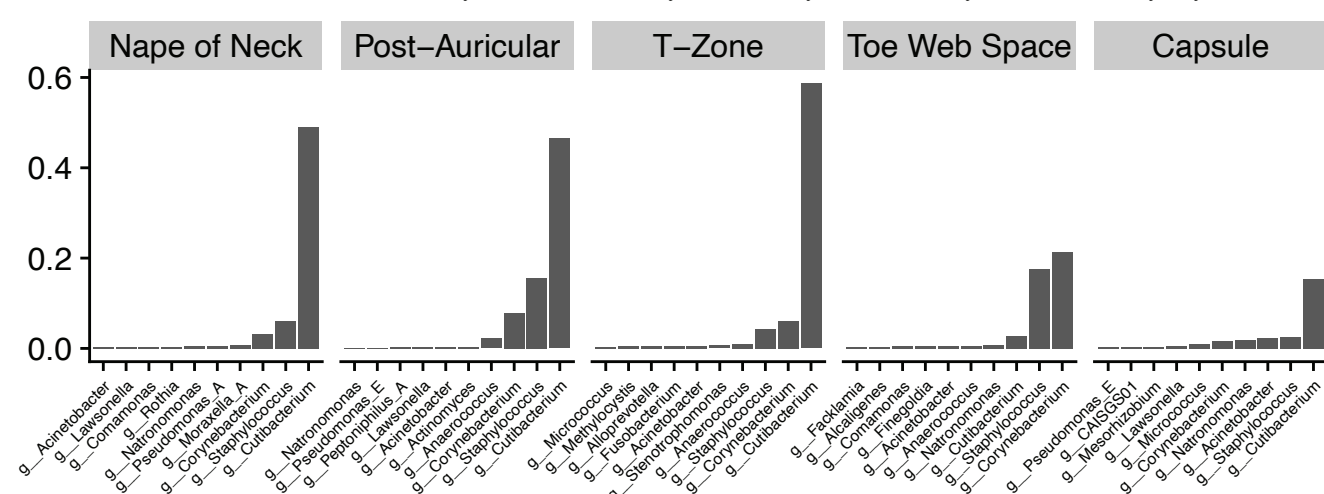
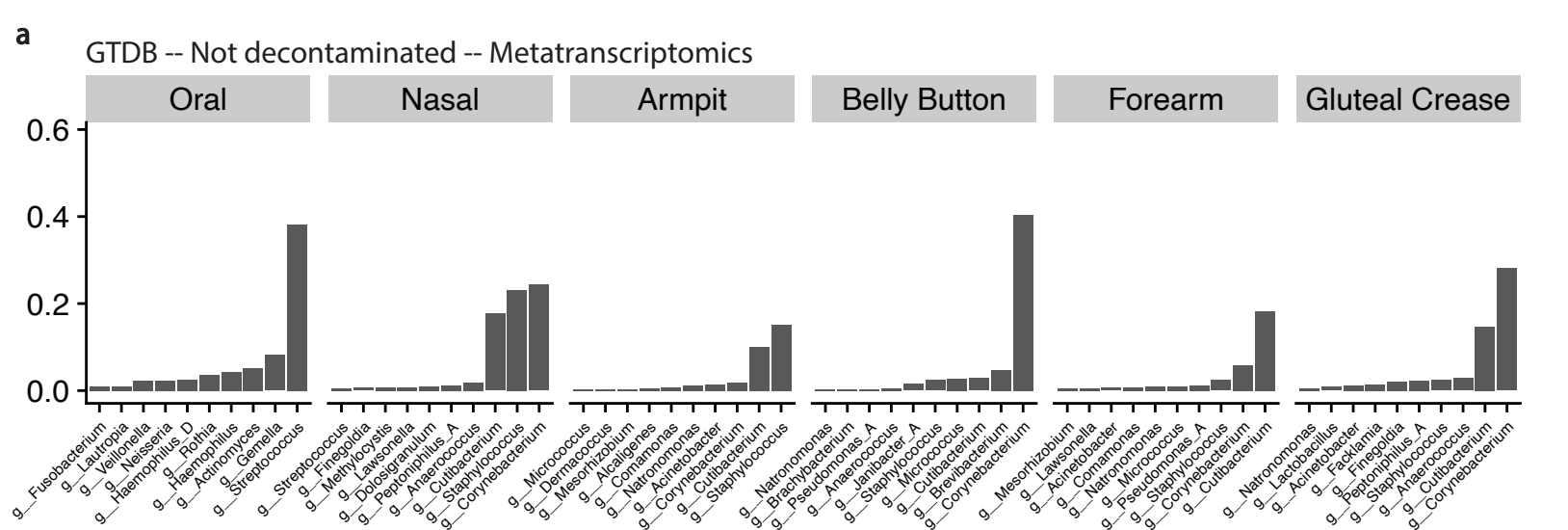
**Supplementary Figure 4:** Top 10 viral genera identified by site by GenBank alignment in metatranscriptomic sequencing. A) Raw alignment data. B) Decontaminated reads.

**Supplementary Figure 5:** Top 10 genera identified by site by Kraken2 in metagenomic sequencing. A) Raw alignment data. B) Decontaminated reads.

**Supplementary Figure 6:** Top 10 genera identified by site by Kraken2 in metatranscriptomic sequencing. A) Raw alignment data. B) Decontaminated reads.

**Supplementary Figure 7:** Top 25 bacterial genera identified by site by GTDB in (A) metagenomic sequencing and (B) metatranscriptomic sequencing in the ground control and mid-flight capsule swabs.

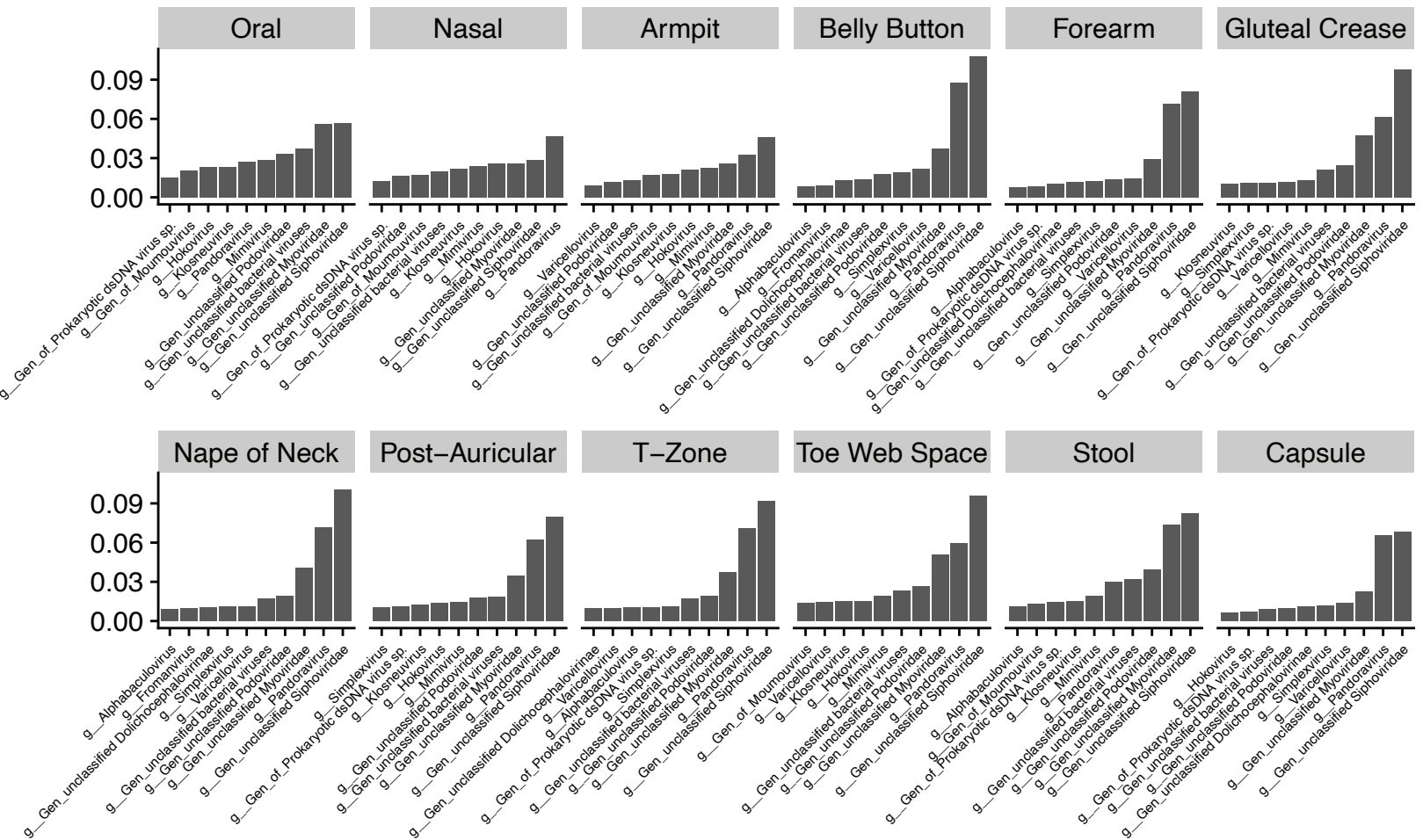




## GenBank Viral-- Not decontaminated -- Metagenomics



## GenBank Viral -- Decontaminated -- Metagenomics



## GenBank Viral-- Not decontaminated -- Metatranscriptomics



GenBank Viral -- Decontaminated -- Metatranscriptomics

