

# eScholarship@UMassChan

## A Pig Model of the Human Gastro-intestinal Tract

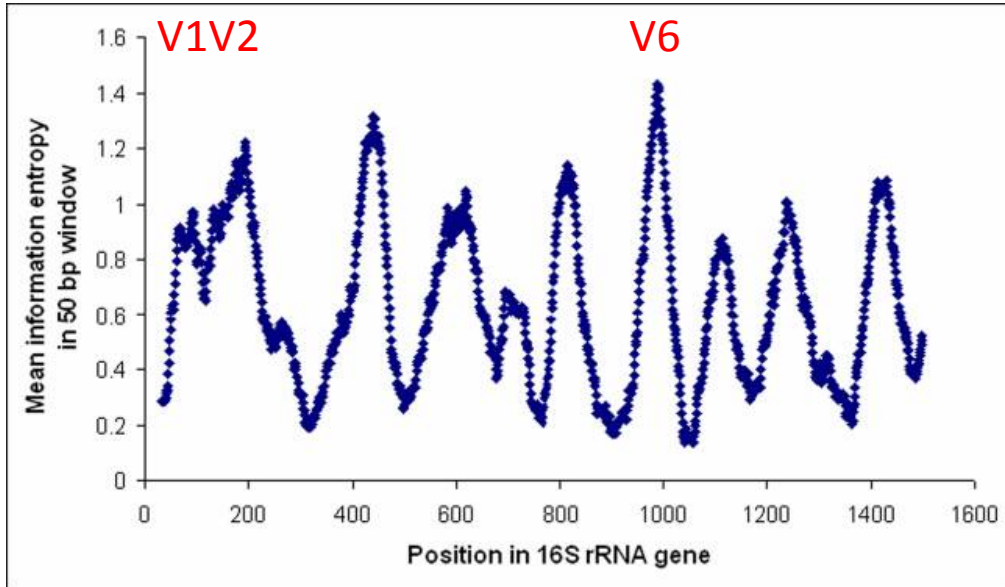
Item Type	Presentation
Authors	Widmer, Giovanni
DOI	<a href="https://doi.org/10.13028/t3d9-kx55">10.13028/t3d9-kx55</a>
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# **COLLABORATIVE RESEARCH OPPORTUNITIES WITH TUFTS CUMMINGS SCHOOL OF VETERINARY MEDICINE (TCSVM)**

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Veterinary Medicine (TCSVM)

**Presenter:**            **Dr. Giovanni Widmer, PhD, TCSVM**

# 16S amplicon sequencing

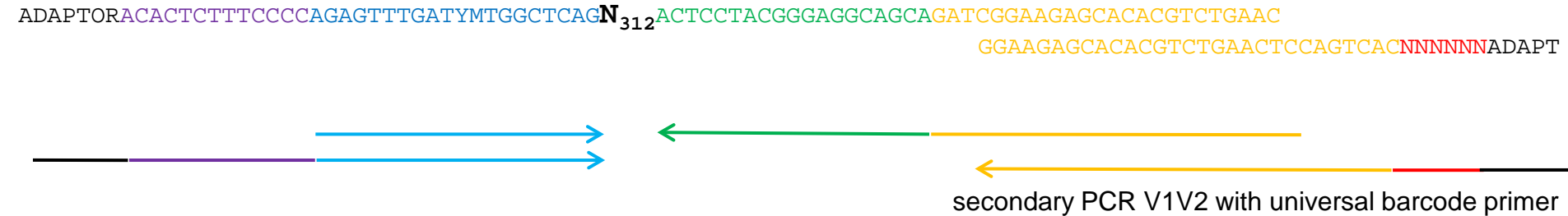
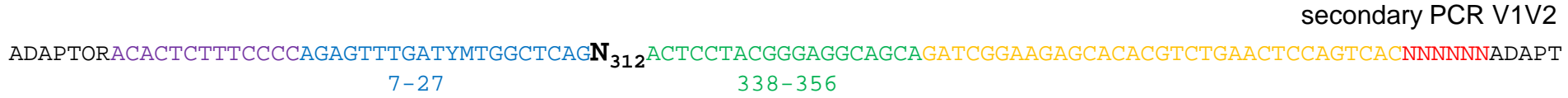
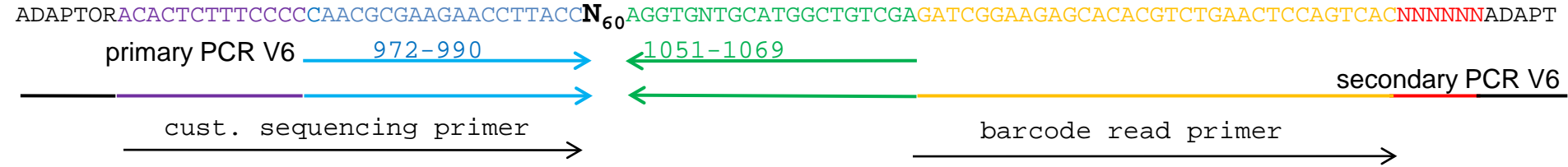


sequencing

V6: Illumina HiSeq2000  
100-nt single-end sequencing

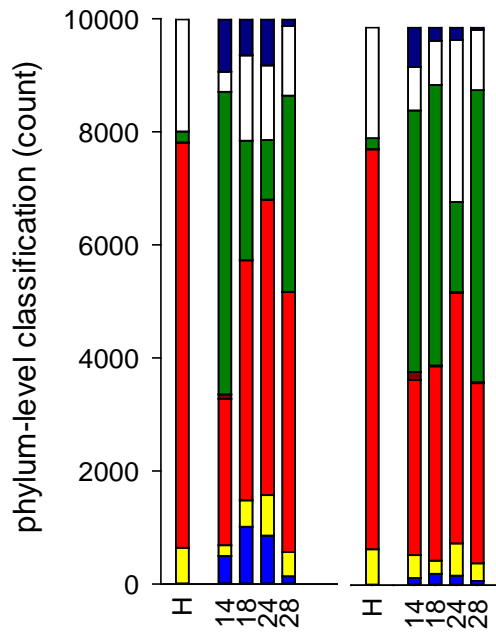
V1V2: Illumina HiSeq2500  
150-nt single-end sequencing

# 16S rRNA PCR strategy

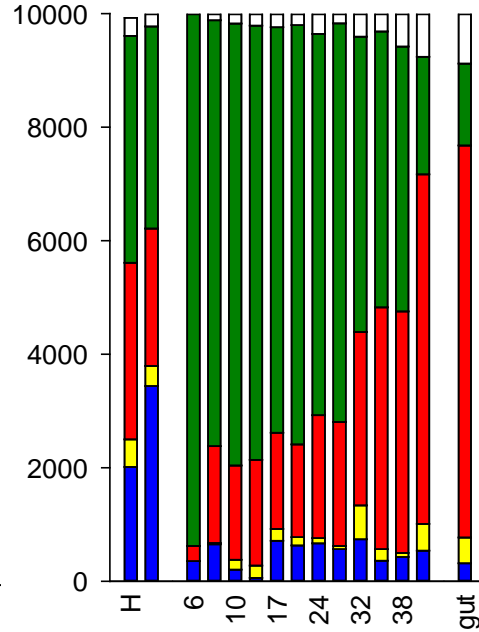


# fecal transplants: human -> pig taxonomy

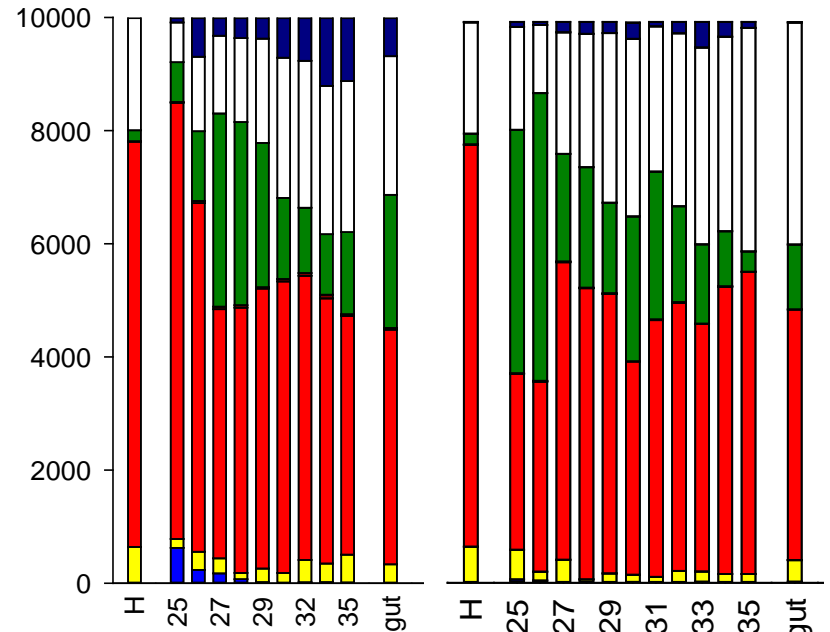
experiment 1  
adult-Similac



experiment 2  
infant-Similac



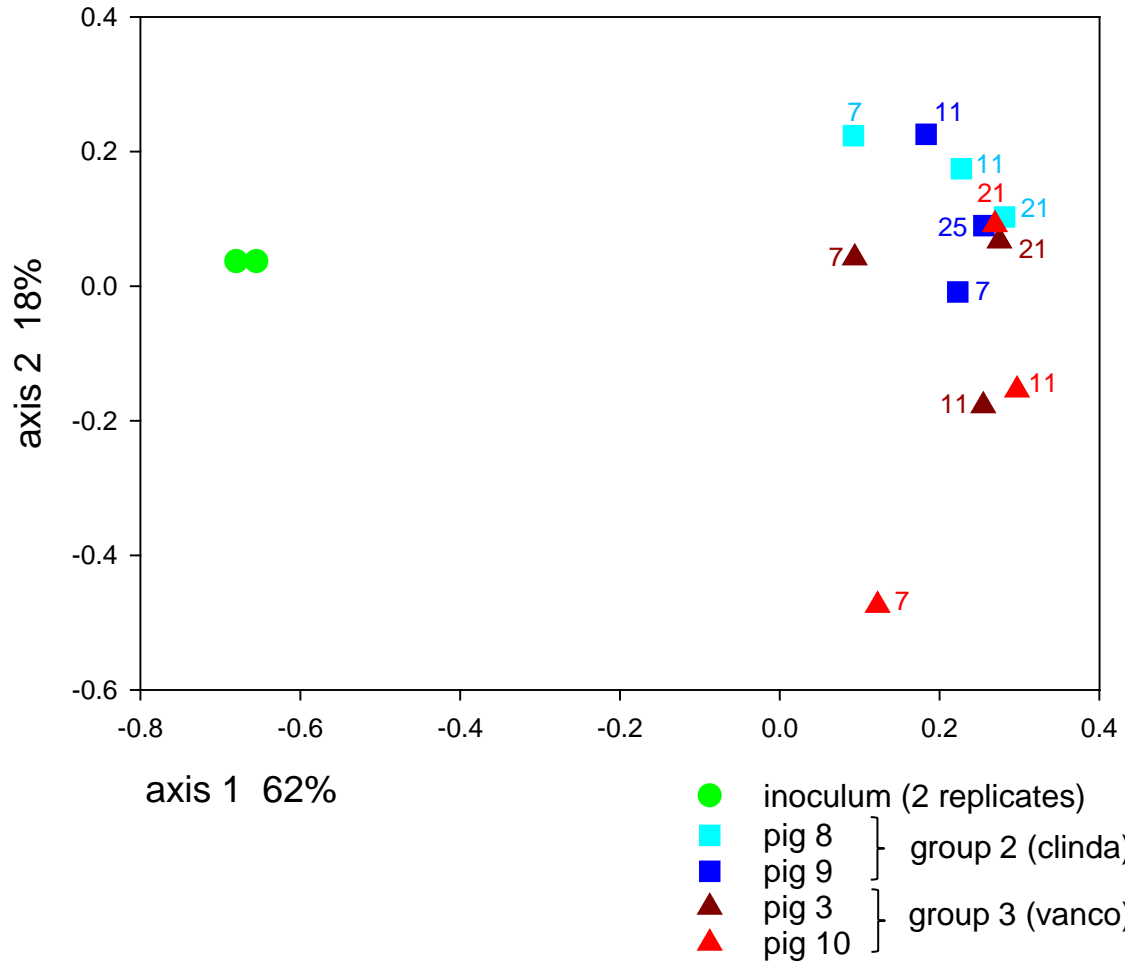
experiment 3  
adult-solid



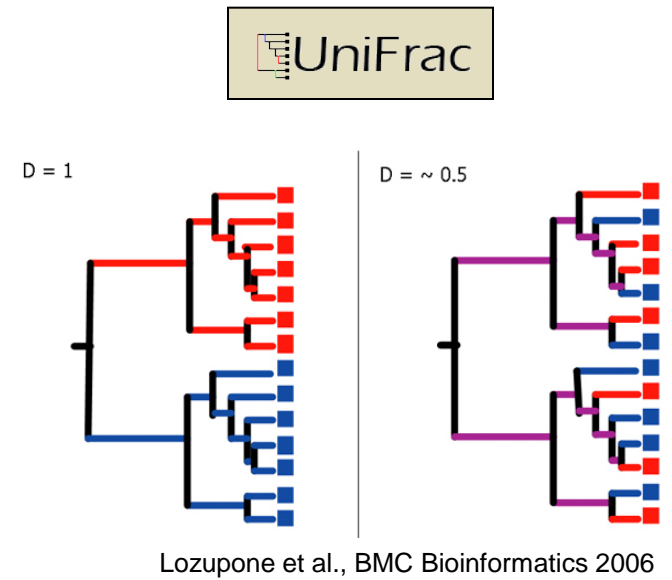
age (days)

- Actinobacteria
- Bacteroidetes
- Firmicutes
- Tenericutes
- Proteobacteria
- unclassified
- Verrucomicrobia

# fecal transplant: PCoA based on Unifrac distance



numbers indicate day post-inoculation



UniFrac distance



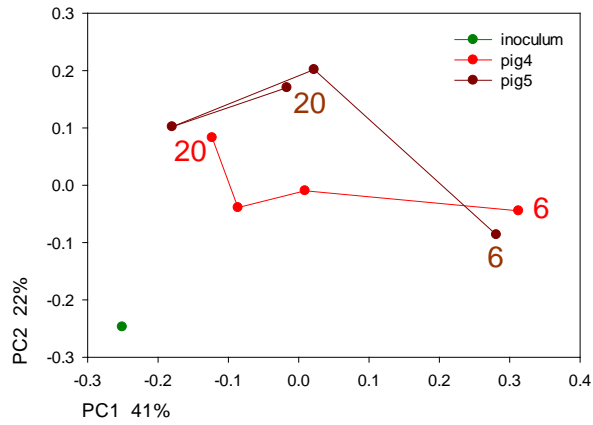
distance matrix



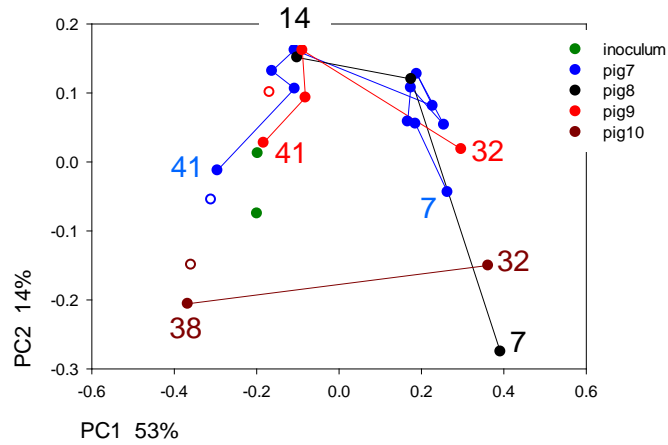
PCoA

# fecal transplant: effect of diet

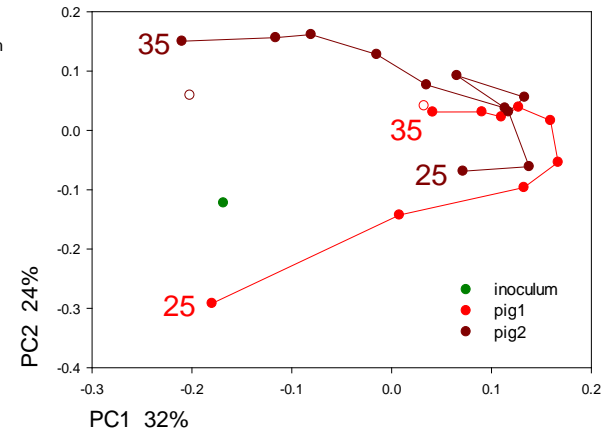
## experiment 1 adult-Similac



## experiment 2 infant-Similac



## experiment 3 adult-solid



# ACKNOWLEDGMENTS

Quanshun Zhang	sample prep, animal experiments
Alex Walker	DNA extraction, library prep
Kevin Huynh	DNA extraction, library prep
Rachel Sora	animal care
Patty Boucher	animal care
Albert Tai	Tufts Genomics Core
Kip Bodi	Tufts Genomics Core
Huyen Bum Kim	data analysis
Durwood Marshall	UIT support