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# A Pig Model of the Human Gastro-intestinal Tract

Giovanni Widmer

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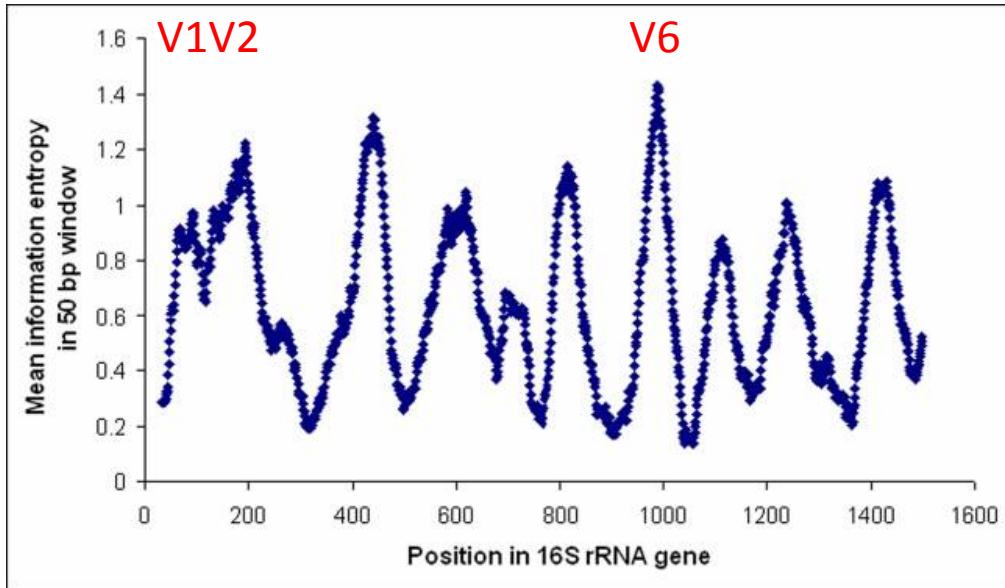
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# **COLLABORATIVE RESEARCH OPPORTUNITIES WITH TUFTS CUMMINGS SCHOOL OF VETERINARY MEDICINE (TCSVM)**

**Moderator:**            **Dr. Sawkat Anwer, PhD, DMVH,** Tufts Cummings School of  
Veterinary Medicine (TCSVM)

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

# 16S amplicon sequencing

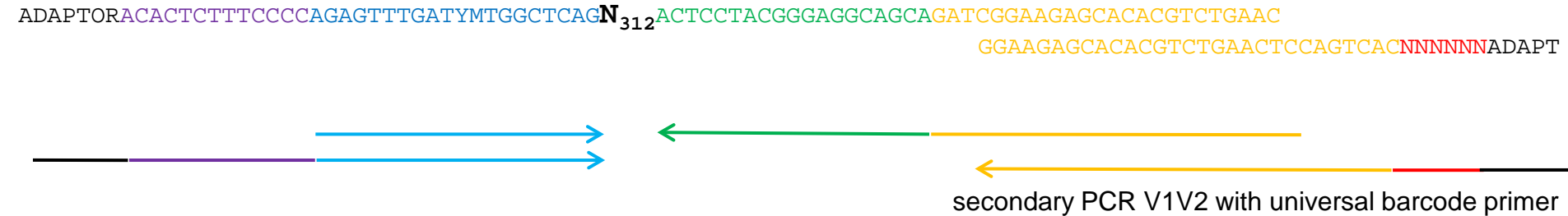
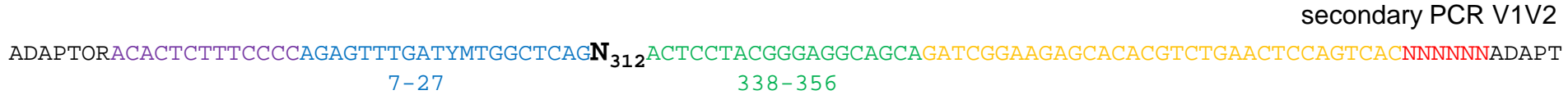
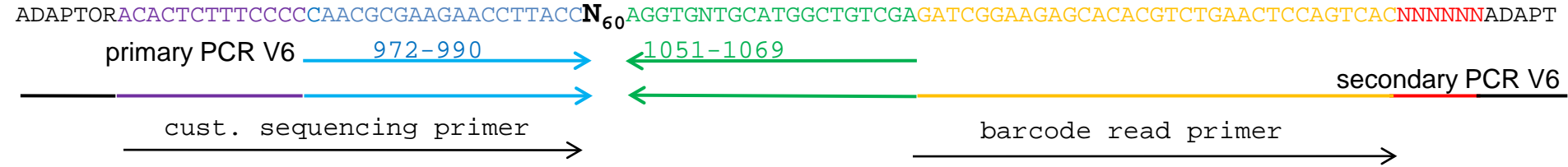


sequencing

V6: Illumina HiSeq2000  
100-nt single-end sequencing

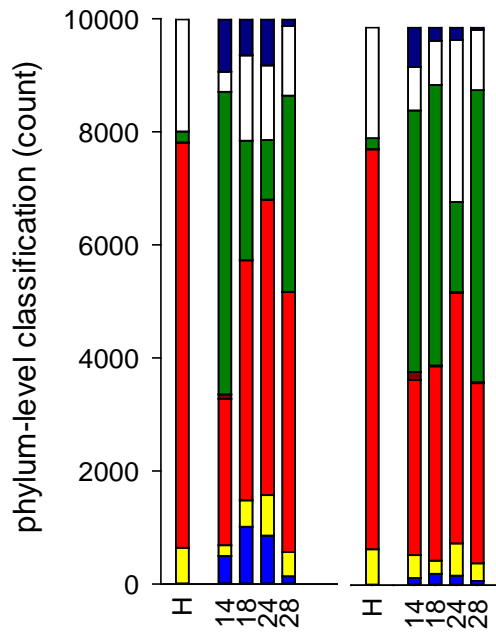
V1V2: Illumina HiSeq2500  
150-nt single-end sequencing

# 16S rRNA PCR strategy

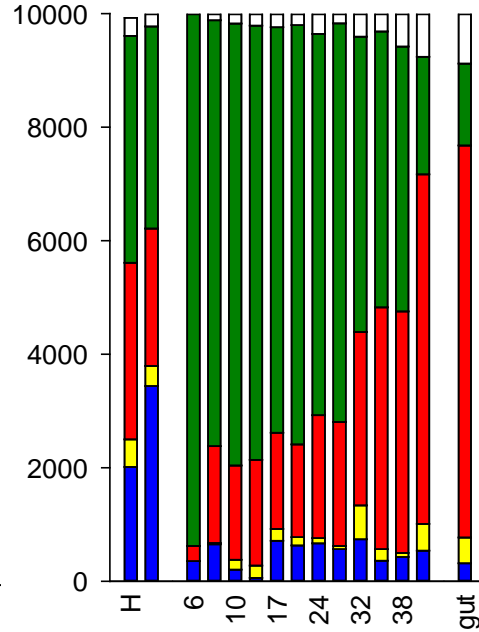


# fecal transplants: human -> pig taxonomy

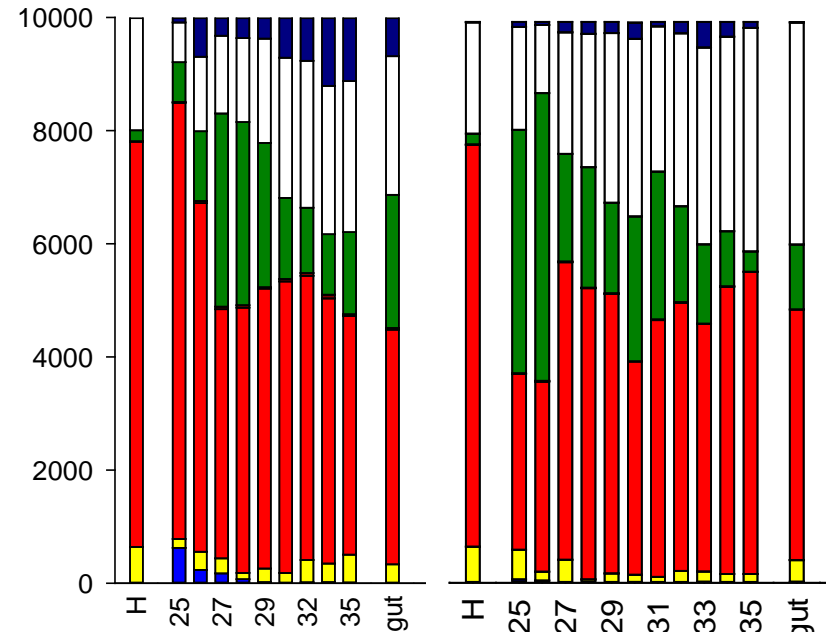
experiment 1  
adult-Similac



experiment 2  
infant-Similac



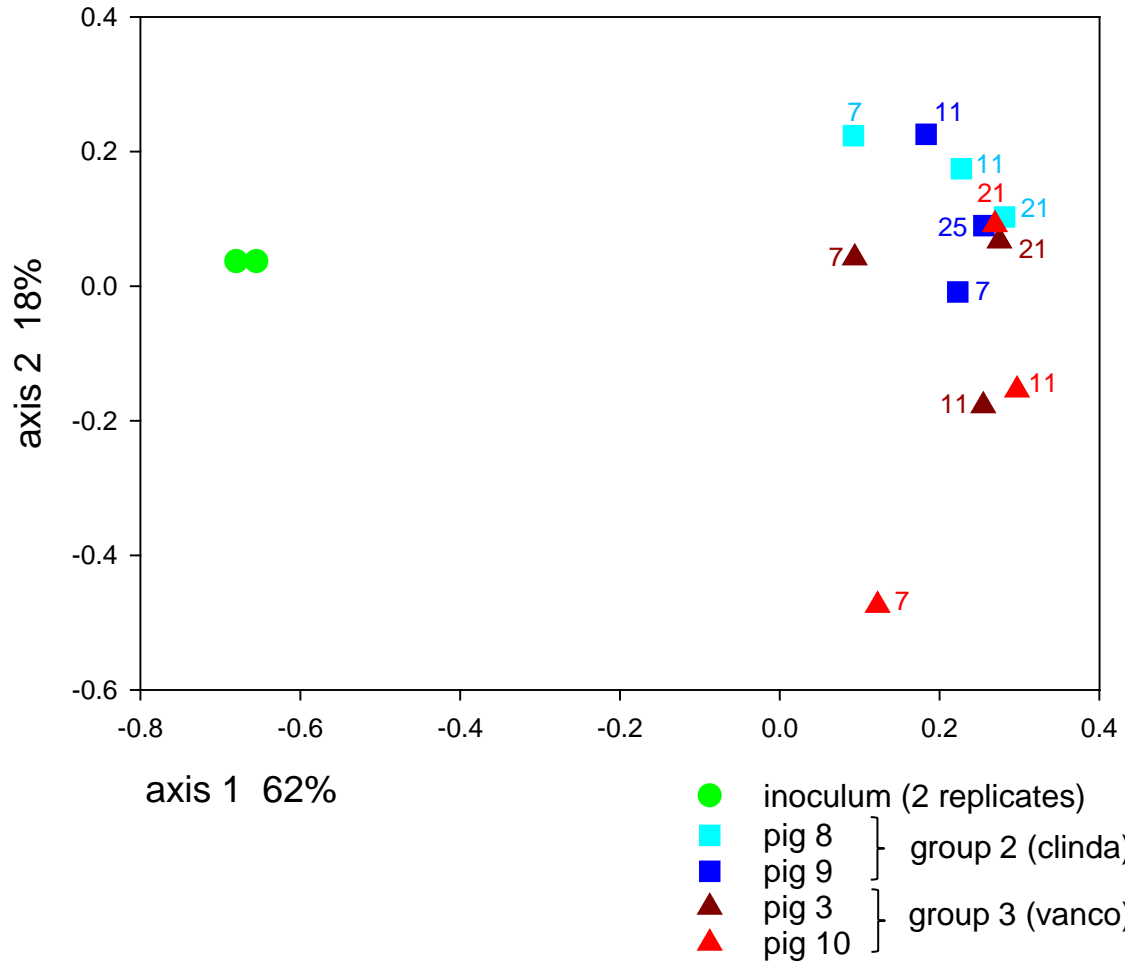
experiment 3  
adult-solid



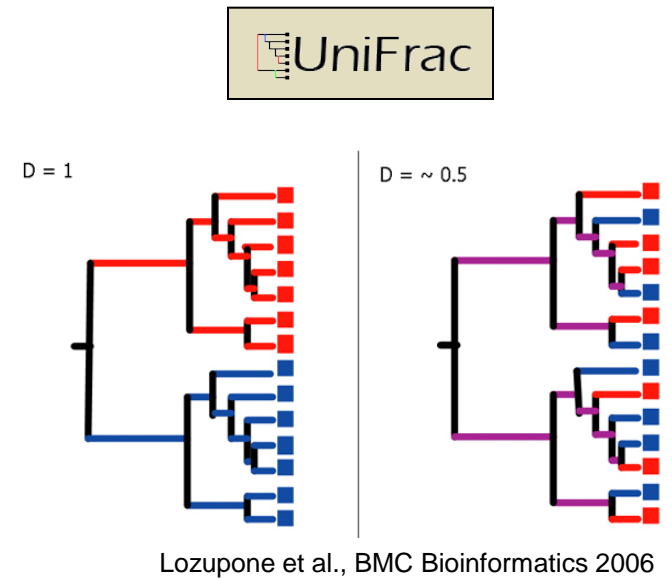
age (days)

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

# fecal transplant: PCoA based on Unifrac distance

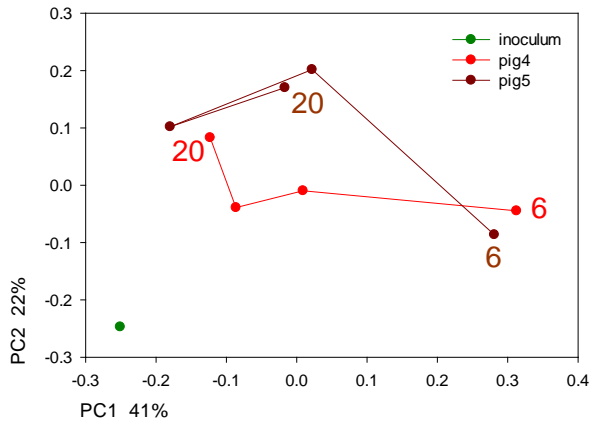


numbers indicate day post-inoculation

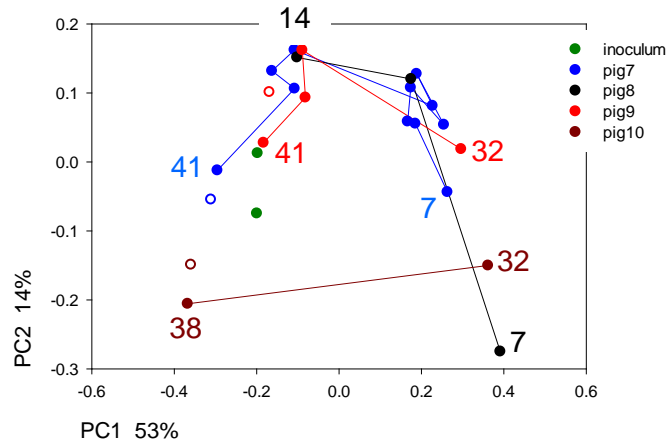


# fecal transplant: effect of diet

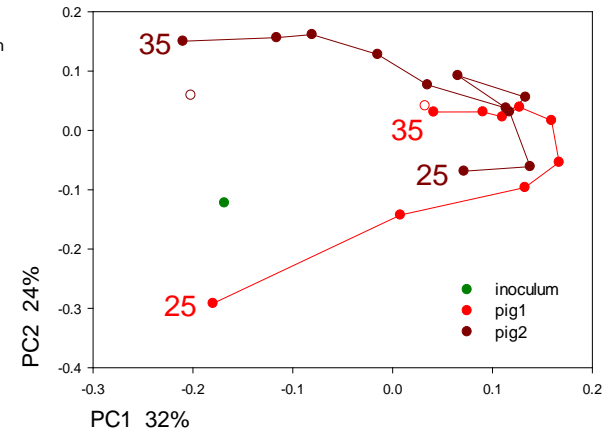
## experiment 1 adult-Similac



## experiment 2 infant-Similac



## experiment 3 adult-solid



# ACKNOWLEDGMENTS

Quanshun Zhang	sample prep, animal experiments
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