

# Effects of primary producer exudates on coral reef community metabolism

- Planktonic microbial community net heterotrophic and benthic microbial community net autotrophic  
→ *Combined ecosystematic metabolism balanced*
- Coral DOM decreases planktonic heterotrophic character and increases benthic autotrophic character  
→ *Combined ecosystematic metabolism autotrophic*
- Algae DOM increases planktonic heterotrophic character and decreases benthic autotrophic character  
→ *Combined ecosystematic metabolism heterotrophic*

Shifts in benthic primary producer community from coral to algae dominance may change the combined ecosystem metabolism from net autotrophic to net heterotrophic, with potential effects on various ecosystematic parameters (e.g. altered in microbial abundance and community structure, decreased oxygen availability, decreased organic nutrient availability for higher trophic levels)

