



## Identification of a gut microbial signature linked to severity of irritable bowel syndrome

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UNIVERSITY OF  
GOTHENBURG



# Identification of a gut microbial signature linked to severity of irritable bowel syndrome

Julien Tap

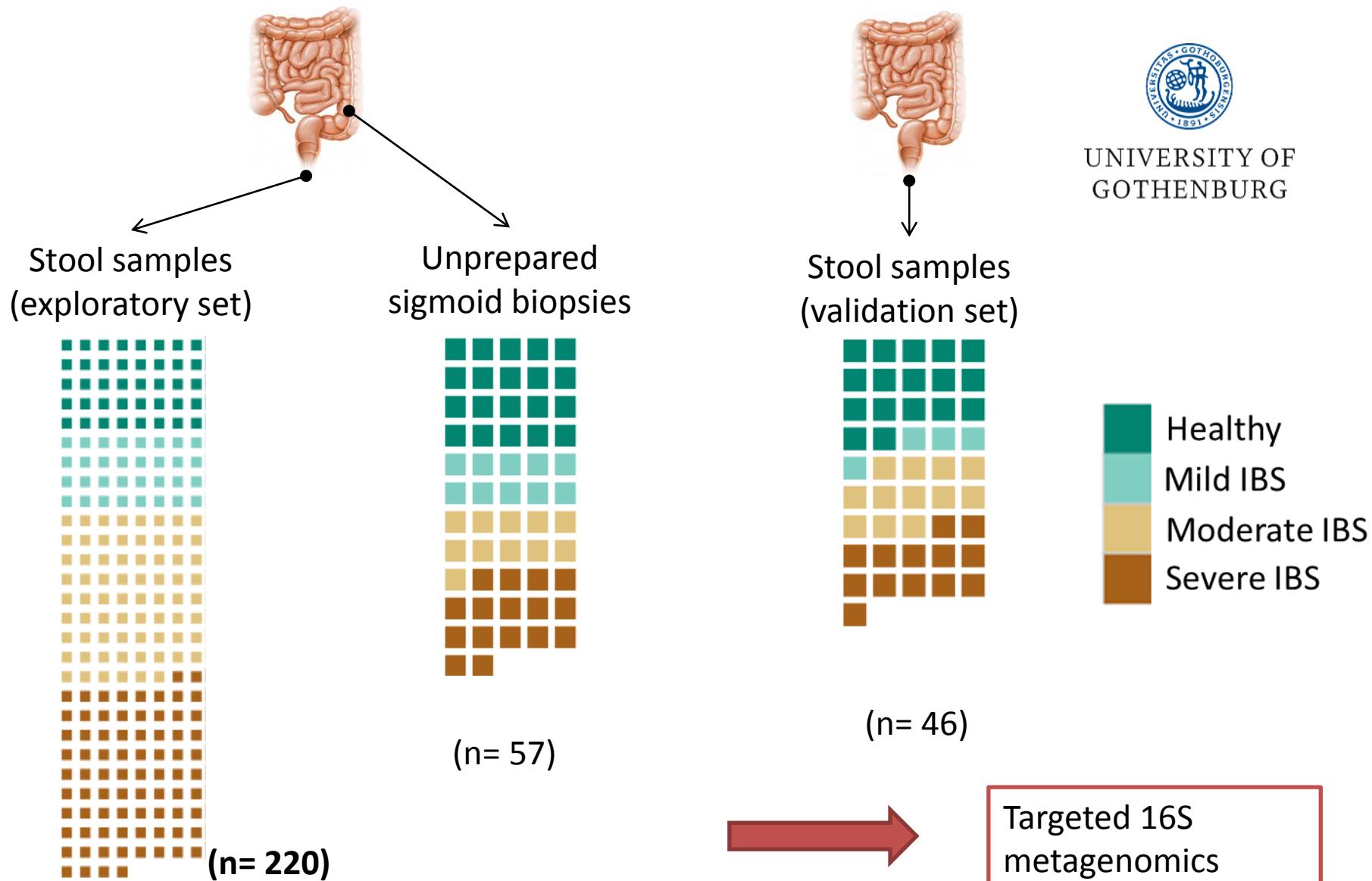
Muriel Derrien, Hans Törnblom, Rémi Brazeilles, Stéphanie Cools,  
Joël Doré, Boris Le Nevé, Lena Öhman, Magnus Simrén

@julientap  
#UEGWeek

# Disclosure

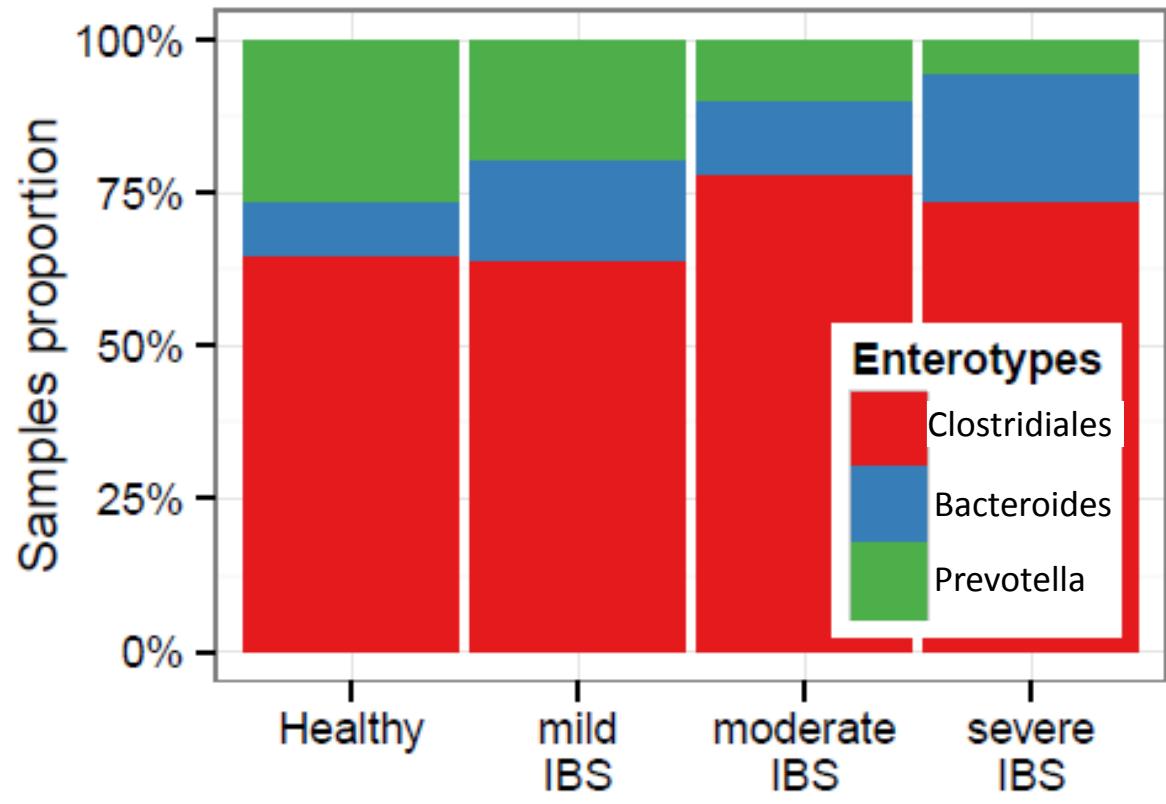
- Employee of Danone Research

# Healthy and IBS dataset



# Link between IBS severity score and enterotypes distribution

3 enterotypes found  
in the stool dataset  
equivalent to those  
published  
elsewhere

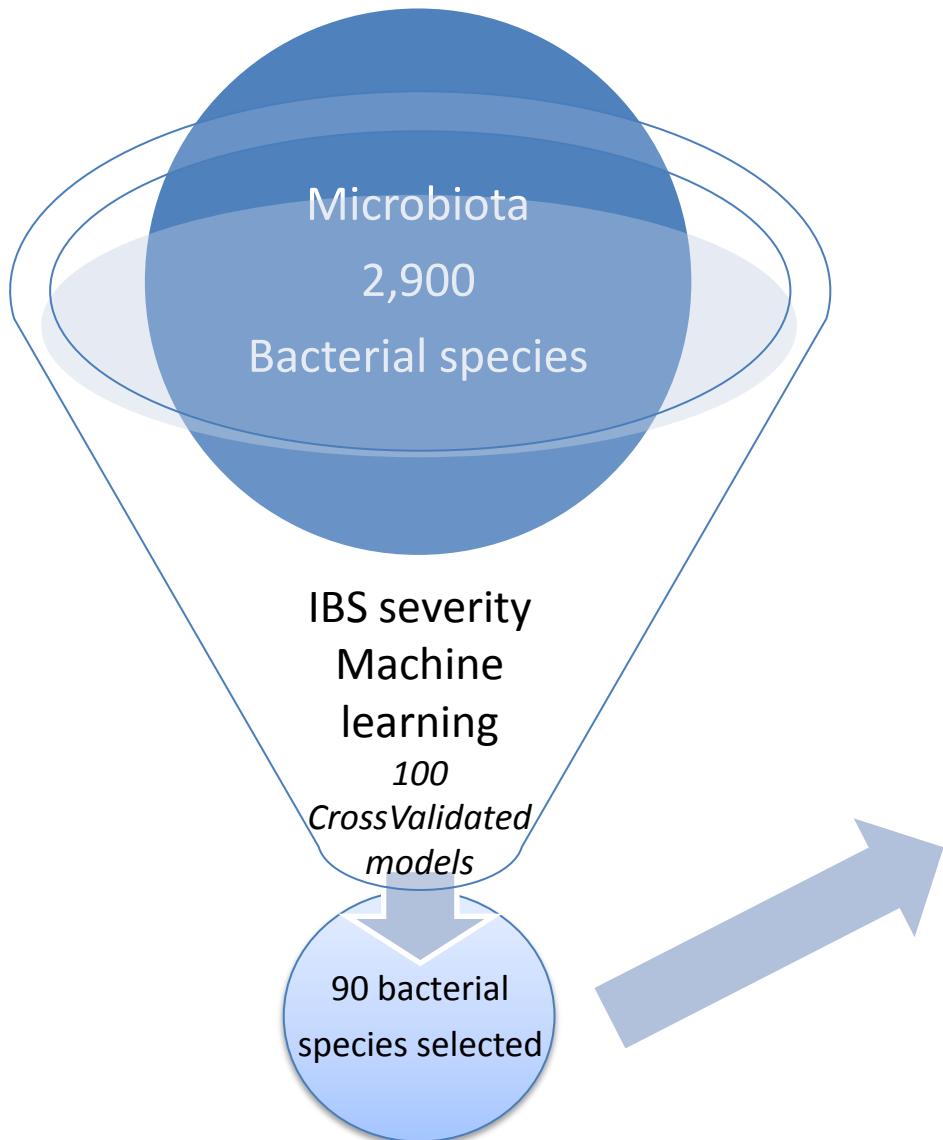


IBS-SSS

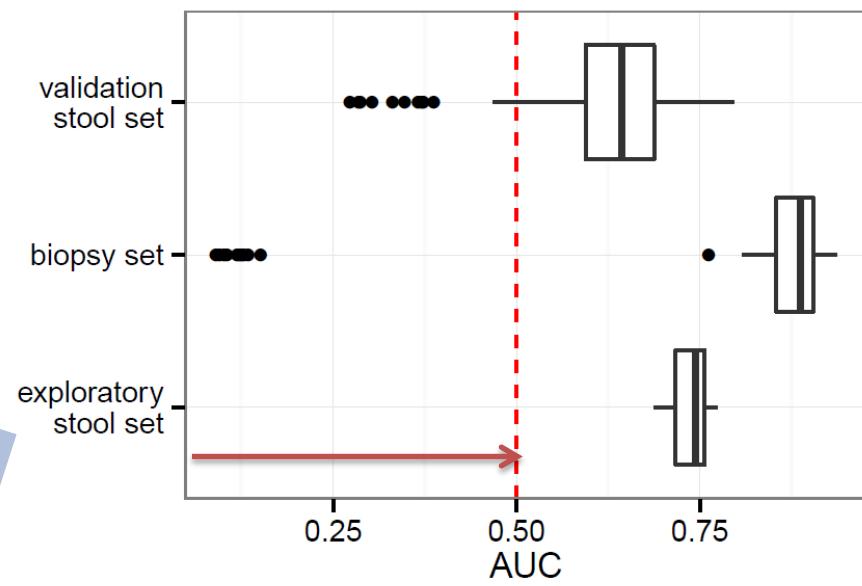
Higher Severity

Less Prevotella-type More Bacteroides-type

# Towards a gut microbial signature for IBS severity

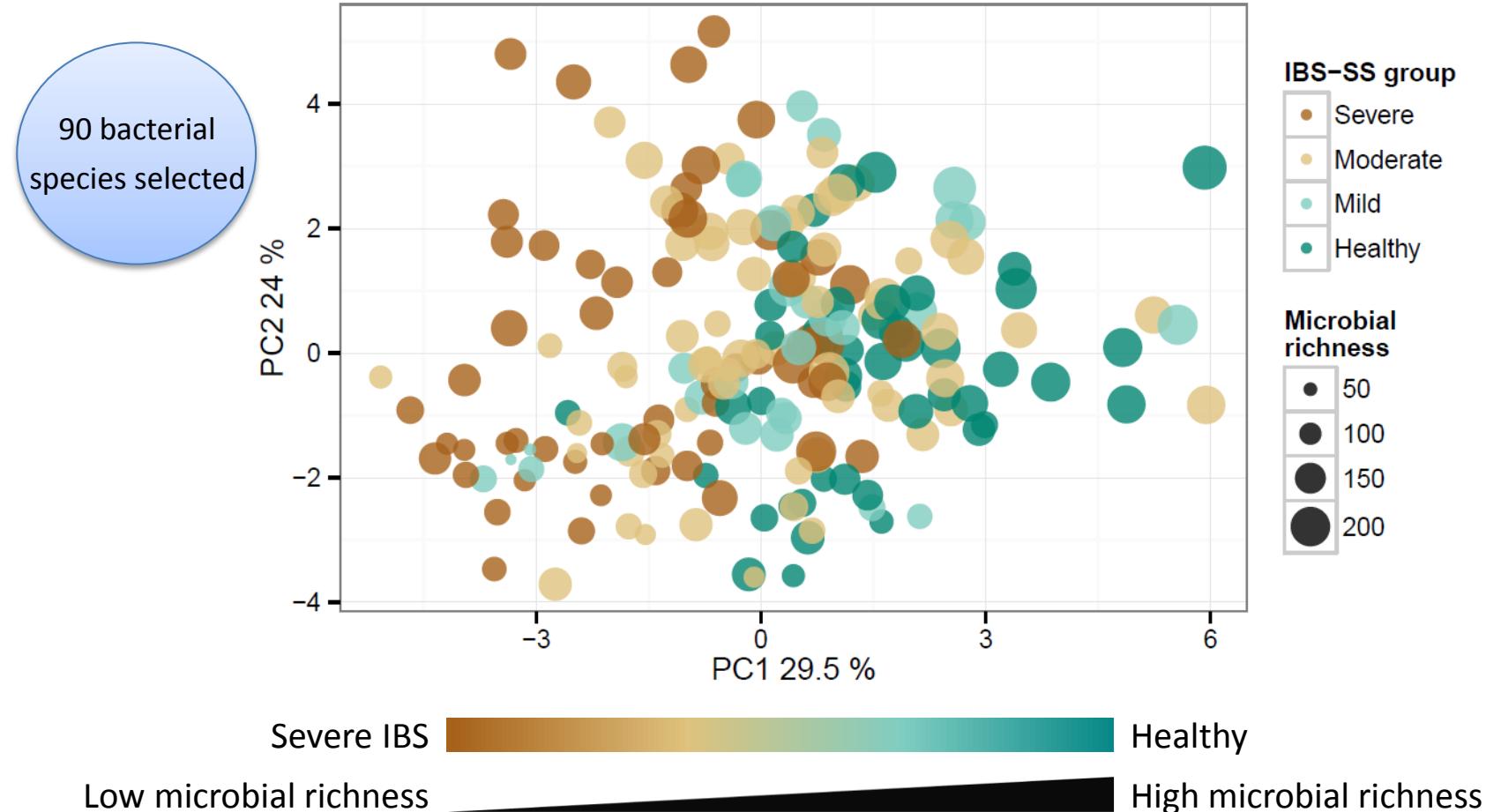


This signature is validated in biopsies and an independent stool samples set

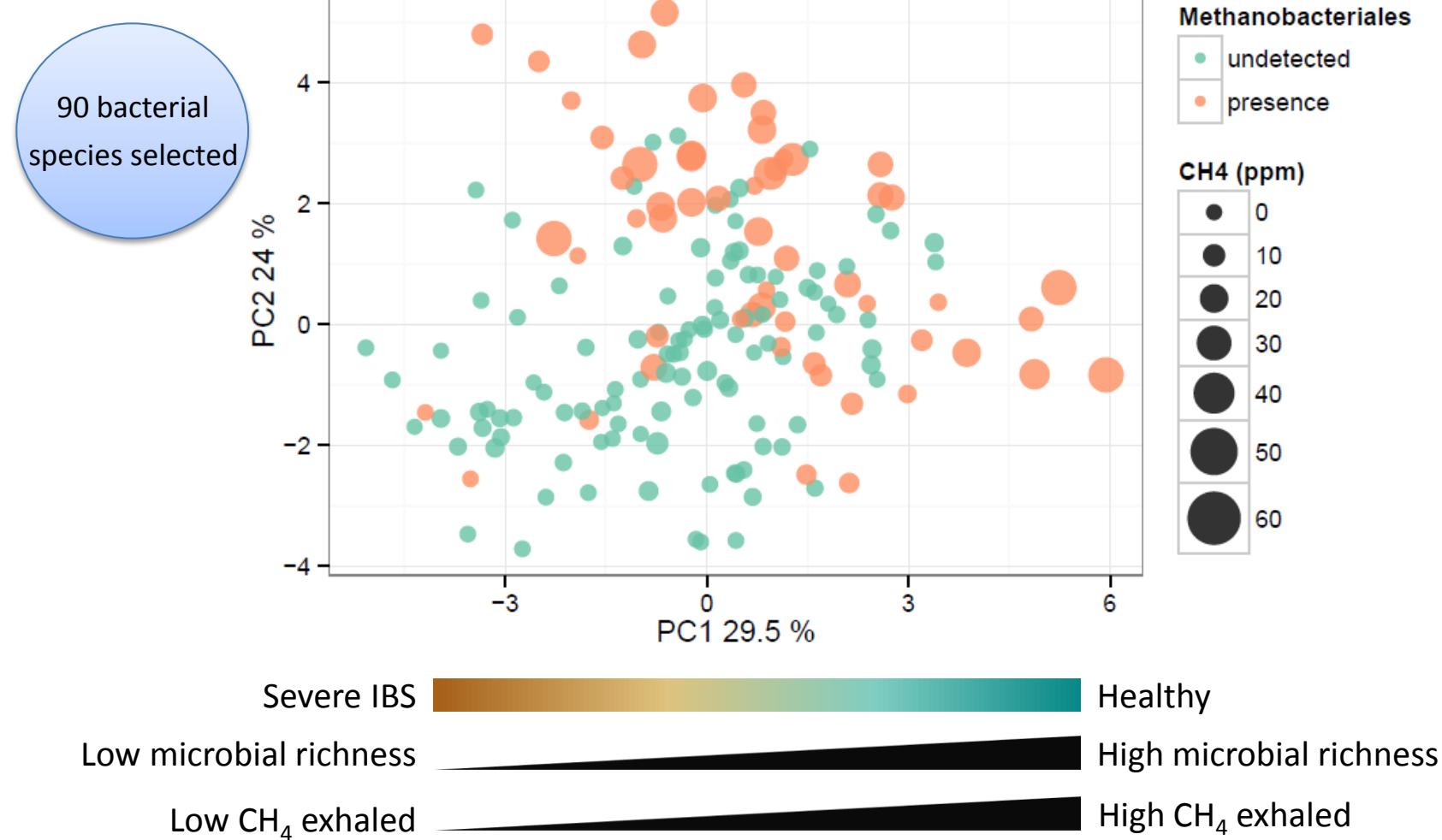


Above Random expectation

# Gut microbial signature for IBS severity is linked with lower microbial richness

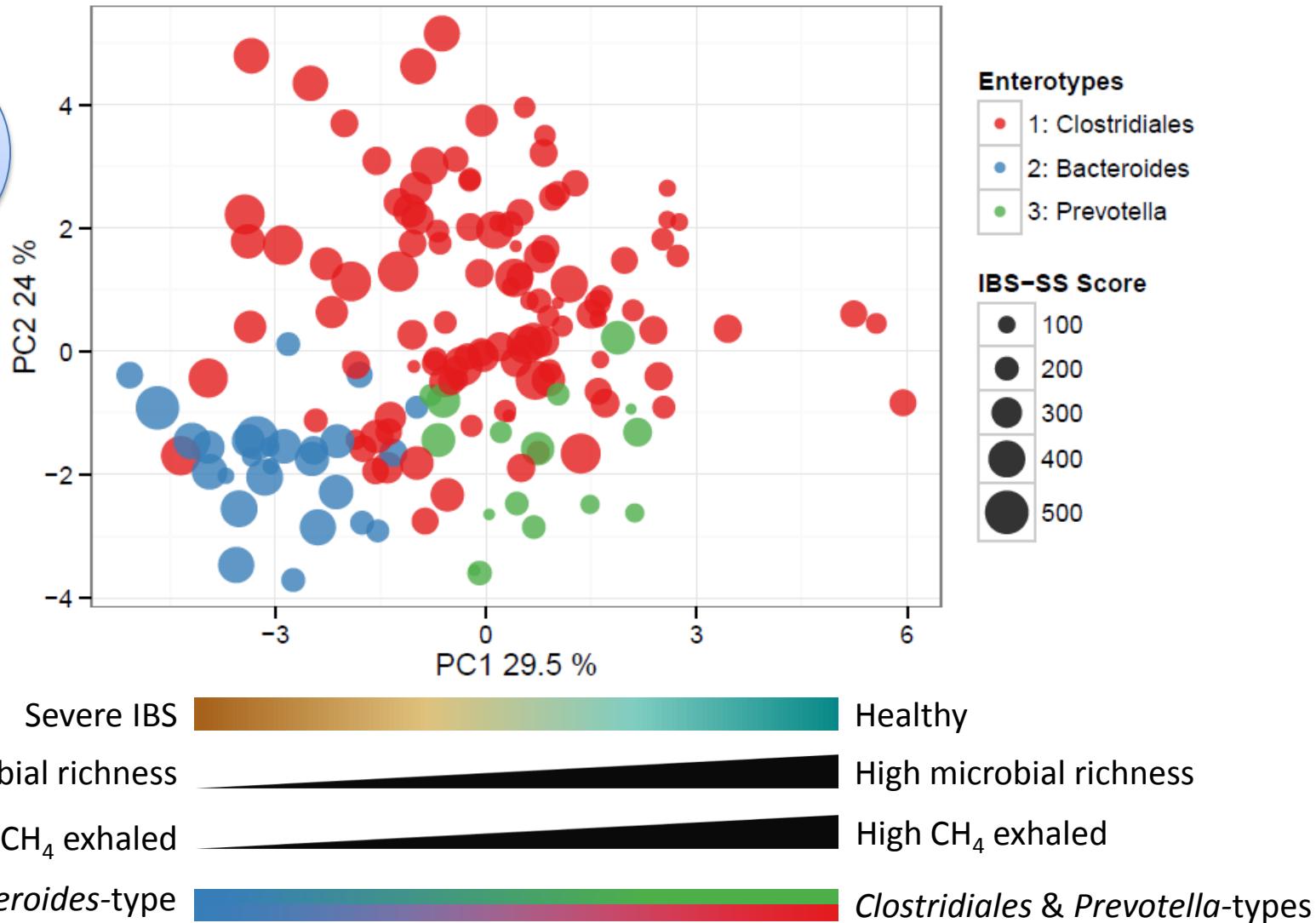


# Gut microbial signature for IBS severity is linked with exhaled methane



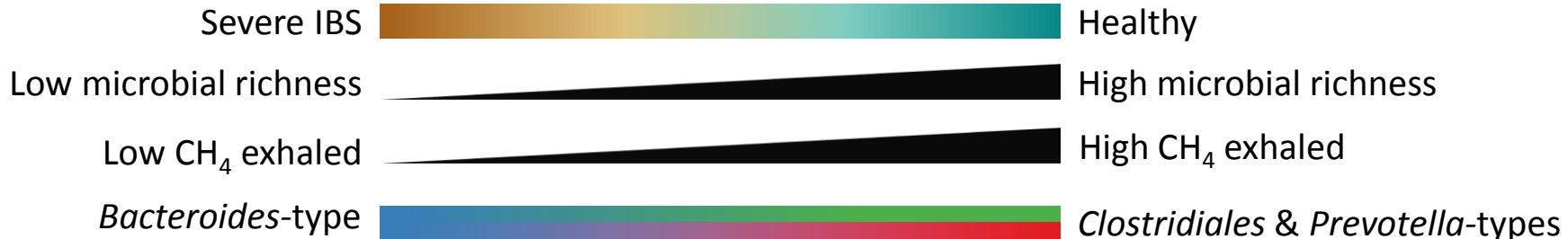
# Gut microbial signature for IBS severity is linked with enterotypes

90 bacterial species selected



# Take home message

- IBS symptom severity is associated with a distinct signature at fecal microbiota level
- Gut microbial signature for IBS severity is linked with
  - low microbial richness
  - *Bacteroides* enriched enterotype
  - low Archea methanogens and exhaled CH<sub>4</sub>



# Acknowledgments



**INRA**  
SCIENCE & IMPACT



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